PORT OF OAKLAND

September 30, 1991

Mr. Dennis Byrne
Alameda County
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621

MF 23/24

SUBJECT: UNDERGROUND TANK REMOVALS AT UNITED AIRLINES, 1100 AIRPORT DRIVE, OAKLAND, CALIFORNIA

Dear Mr. Byrne:

Enclosed please find the report on underground tank removal activities at 1100 Airport Drive in Oakland, California. A copy of the report has also been forwarded to the Regional Water Quality Control Board, San Francisco Bay Region.

If you have any questions or require additional information, please contact me at 272-1178.

Sincerely,

Andrew Clark-Clough
Environmental Scientist

ABC/abc

cc: Tom Gandesbery - RWQCB

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (415) 272-1100 ■ Fax 272-1172 ■ Telex 336-334 ■ Cable address, PORTOFOAK, Oakland

BASELINE

ENVIRONMENTAL CONSULTING

30 July 1991
S9-134.36

Mr. Andrew Clark-Clough
Environmental Department
Port of Oakland
530 Water Street
Oakland, CA 94607

Subject: Report on Underground Jet Fuel Storage Tank Removals and Preliminary Groundwater Investigation Work Plan, George P. Miller Aviation Hangar (United Airlines Maintenance Hangar), 1100 Airport Drive, Metropolitan Oakland International Airport, Oakland, California

Dear Mr. Clark-Clough:

Please find enclosed our report documenting the field activities conducted in association with the removal of two jet fuel storage tanks (Tank Numbers MF23 and MF24) located north of the George P. Miller Aviation Hangar and a work plan for a preliminary groundwater investigation. Should you have any questions regarding this report, please do not hesitate to contact us at your convenience. A copy of this report should be submitted to the Alameda County Department of Environmental Health, Hazardous Materials Division, and the San Francisco Bay Regional Water Quality Control Board.

Sincerely,

Yane Nordhav
Principal
Reg. Geologist #4009

Geneva Randall
Geologist

YN/GR/ss:S91b
Enclosures

5900 Hollis Street, Suite D • Emeryville, CA 94608 • (415) 420-8686 • FAX (415) 420-1707

Report on

TANK REMOVAL ACTIVITIES AND WORK PLAN FOR PRELIMINARY GROUNDWATER INVESTIGATION

George P. Miller Aviation Hangar
(United Airlines Maintenance Hangar)
1100 Airport Drive
Metropolitan Oakland International Airport
Oakland, California

Prepared for:

Port of Oakland
Oakland, California

July 1991

Prepared by:

BASELINE ENVIRONMENTAL CONSULTING
5900 Hollis Street
Emeryville, California 94608
(415) 420-8686

S9-134.36

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TANK REMOVAL ACTIVITIES AND WORK PLAN FOR PRELIMINARY GROUNDWATER INVESTIGATION
George P. Miller Aviation Hangar
Metropolitan Oakland International Airport

INTRODUCTION

This report provides documentation for the removal of two 10,000-gallon underground jet fuel tanks and associated soil sampling activities conducted at the George P. Miller Aviation Hangar, 1100 Airport Drive, Metropolitan Oakland International Airport in Oakland, California (Figure 1). The site is also known as the United Airlines Maintenance Hangar. The tanks were owned by the Port of Oakland and identified by tank identification numbers MF23 and MF24. The two jet fuel tanks were removed from the site on 6 June 1991. Soil samples and one groundwater sample were collected from the tank excavation. Additional soil excavation and verification sampling were conducted following tank removal.

This report contains a summary of previous investigations at the site, a description of field activities related to the tank removals, sample test results, and recommendations for further investigation at the site.

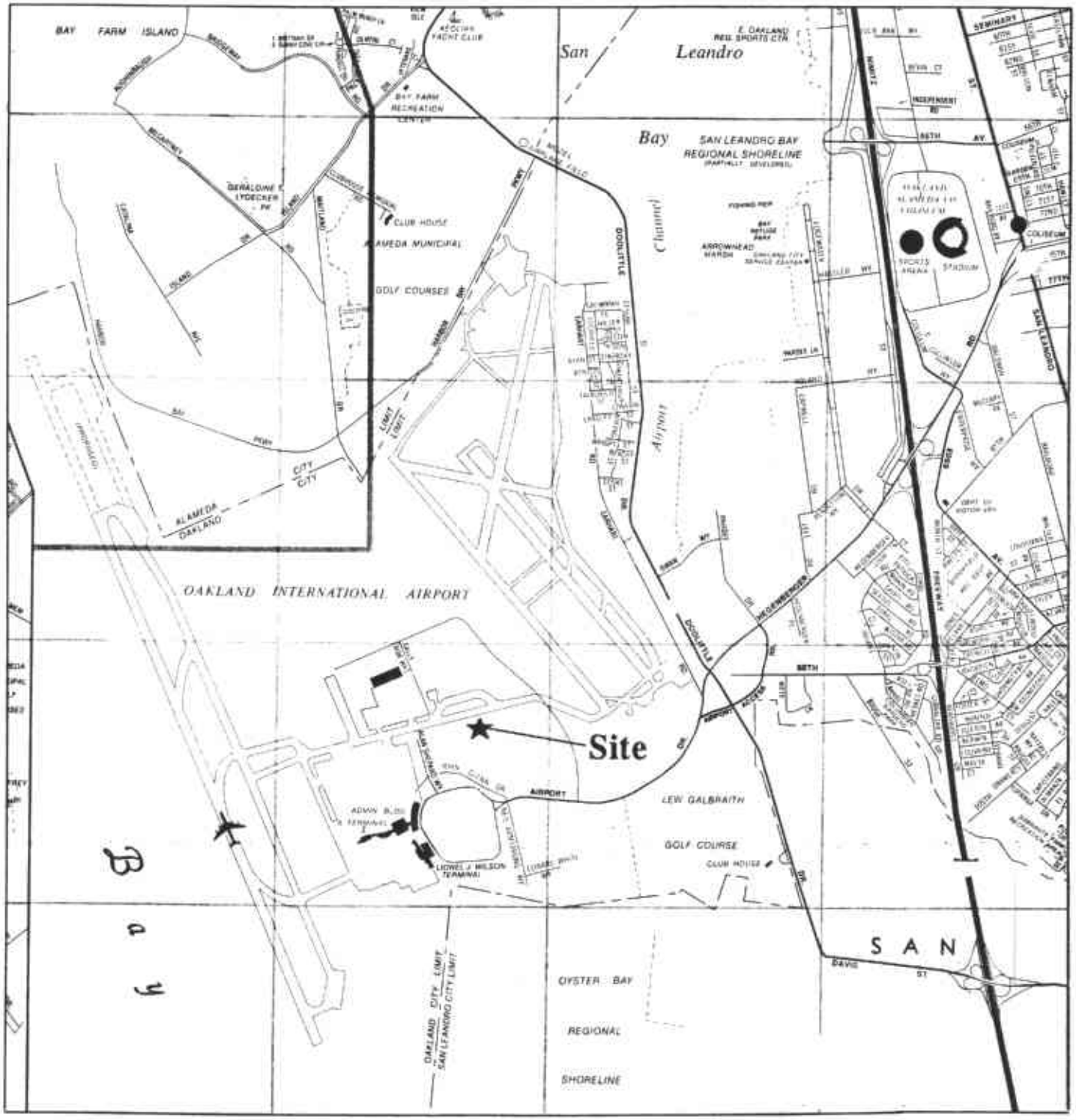
BACKGROUND

The George P. Miller Aviation Hangar was formerly the World Air Center. The site currently is leased by United Airlines and is used for airplane maintenance activities. The two 10,000-gallon jet fuel tanks were located north of the hangar, as shown on Figure 2. The tanks were reported to have been installed in the 1970s by R.J. Miller Company of Richmond, California, and were used by World Airways to contain jet fuel drained from airplanes that were undergoing maintenance activities (Brown, 1991). The tanks have not been used since at least 1988, prior to the time United Airlines began operations at the site.

In October 1988, BASELINE conducted a Phase I soil investigation in the vicinity of the tanks to determine if unauthorized releases had occurred from the tanks. Four soil samples (UHJ-1 through UHJ-4) were collected from the locations shown on Figure 3. Analytical results of the soil samples indicated the presence of elevated concentrations of total petroleum hydrocarbons (TPH) as jet fuel (up to 2,200 mg/kg) and volatile aromatic hydrocarbons, benzene, toluene, xylenes, and ethylbenzene (BTXE). Table 1 summarizes the analytical results of soil samples collected in the vicinity of the tanks. The details of the Phase I investigation were documented in BASELINE's *Report on Soil Sampling Activities, Jet Fuel, Waste Oil, and Safety Solvent Tanks, United Airlines Maintenance Hangar, Oakland International Airport, Oakland, California*, dated October 1988.

REGIONAL LOCATION

Figure 1



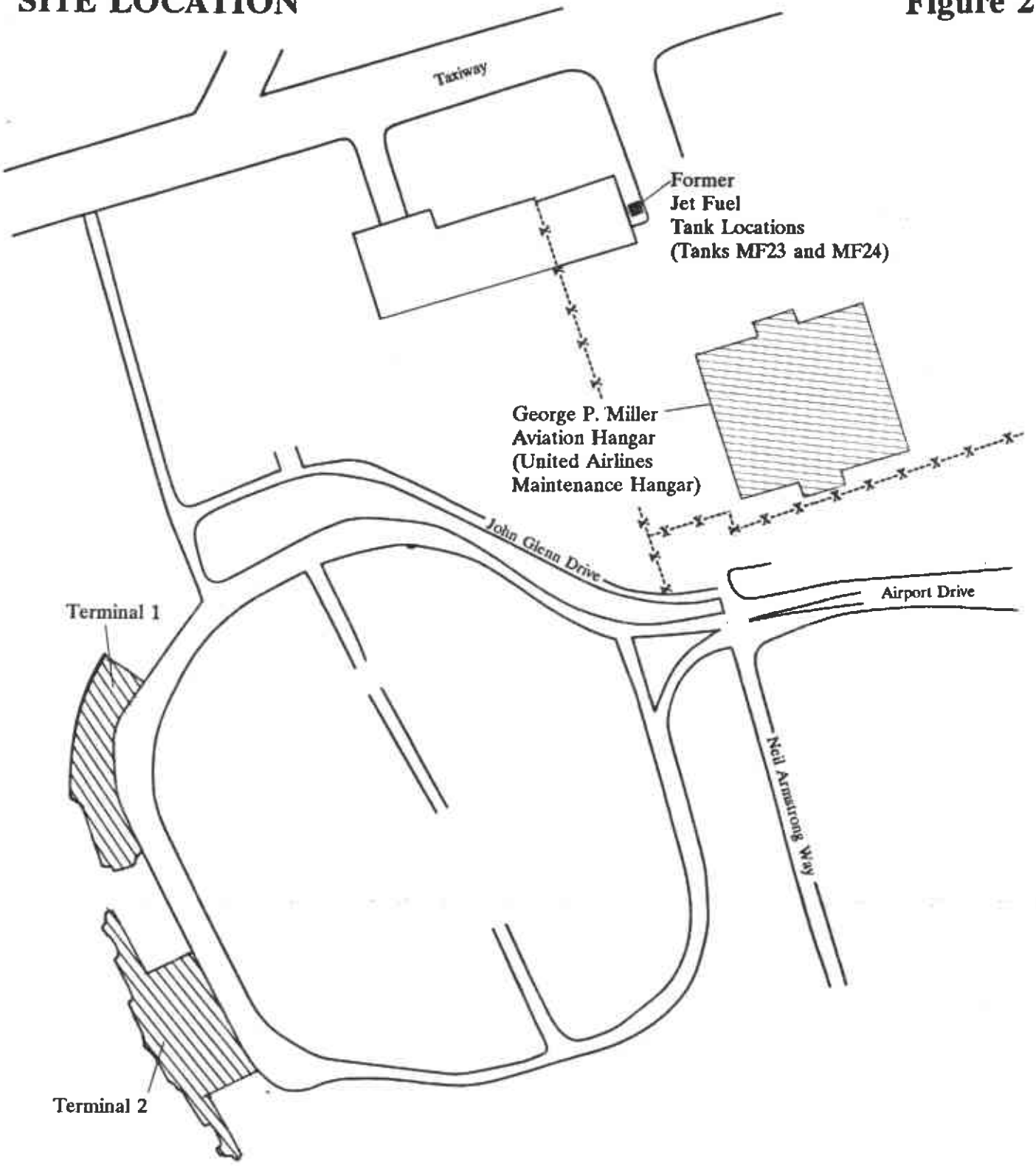
Jet Fuel Storage Area
George P. Miller Aviation Hangar
(United Airlines Maintenance Hangar)
Metropolitan Oakland International Airport
Oakland, California

0 3000 Feet

BASELINE

SITE LOCATION

Figure 2



Jet Fuel Storage Area
George P. Miller Aviation Hangar
(United Airlines Maintenance Hangar)
Metropolitan Oakland International Airport
Oakland, California

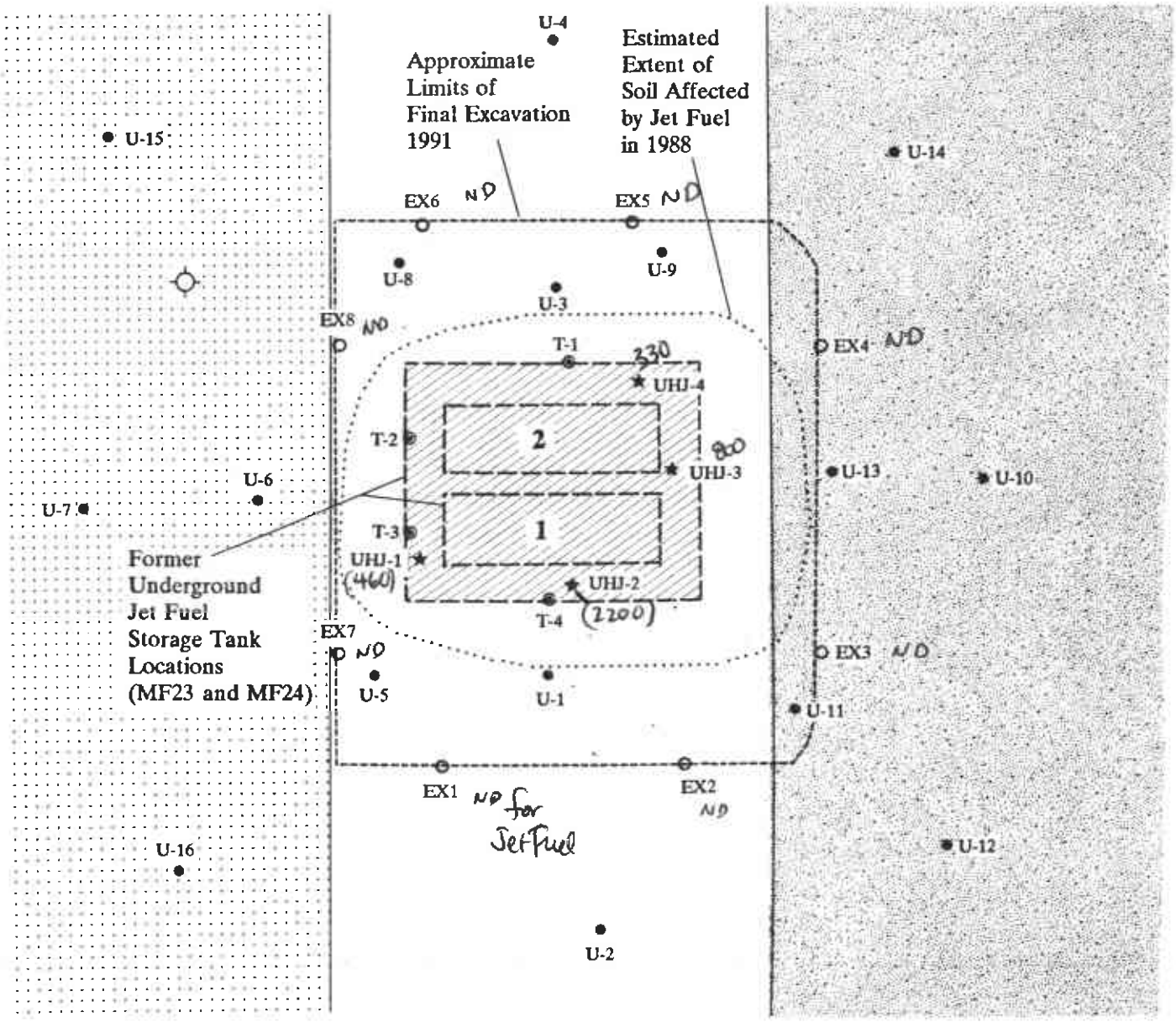
Approximate

0 400 Feet

BASELINE

SOIL SAMPLE LOCATIONS

Figure 3



U1-U16 <10 For Jet Fuel

Legend

- Tank Excavation Location
- Concrete Apron
- Taxiway

UHJ-1	★	Soil Sample Location	10/4/88
U-1	●	Soil Sample Location	12/27/88
T-1	◉	Soil Sample Location	6/6/91
EX1	○	Soil Sample Location	6/12/91
	⌖	Proposed Monitoring Well Location	

Jet Fuel Storage Area
George P. Miller Aviation Hangar
(United Airlines Maintenance Hangar)
Metropolitan Oakland International Airport
Oakland, California

0 20 Feet

BASELINE

TABLE 1

SUMMARY OF ANALYTICAL RESULTS, SOIL
George P. Miller Aviation Hangar
Metropolitan Oakland International Airport
(mg/kg)

Location	Date	Depth (feet)	TPH as Jet Fuel[1]	Benzene[2]	Toluene[2]	Xylenes[2]	Ethyl-benzene[2]
Soil Borings:							
UHJ-1	10/04/88	4.0	**460**[3]	--	--	--	--
UHJ-2	10/04/88	4.0	**2,200**	--	--	--	--
UHJ-3	10/04/88	4.0	**800**	**0.200**	**0.500**	**1.300**	**4.500**
UHJ-4	10/04/88	4.0	**330**	**0.270**	**0.375**	**0.290**	**2.250**
U-1 through U-16	12/27/88	1.0-4.0	<10	--	--	--	--
Tank Excavation:							
T-1	06/06/91	6.0	**2,200**	**1.100**	**0.770**	**11.00**	**7.800**
T-2	06/06/91	6.0	**600**	<0.100	<0.100	**4.400**	**1.200**
T-3	06/06/91	6.0	**22**	<0.005	<0.005	<0.005	<0.005
T-4	06/06/91	6/0	**90**	<0.005	<0.005	**2.500**	**0.850**
Stockpile:							
Stockpile 1[4,5]	06/06/91	0.5	**3,300**	**0.380**	<0.500	**0.480**	**1.900**
LDV-1[6]	07/02/91	--	--	--	--	--	--
Excavation Verification Samples:[7]							
EX1	06/12/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX2	06/12/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX3	06/13/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX4	06/13/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX5	06/17/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX6	06/17/91	5.0	<1.0	**0.011**	<0.005	<0.005	<0.005
EX7	06/17/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005
EX8	06/17/91	5.0	<1.0	<0.005	<0.005	<0.005	<0.005

1 Test Method = EPA 8015M for 1988 samples; DHS-LUFT for 1991 samples.
2 Test Method = EPA 8240 for Stockpile-1 sample; EPA 8020 for all other samples.
3 Other reported as TPH by the analytical laboratory.
4 Sample also analyzed for Title 26 metals; barium (39.1 mg/kg), beryllium (0.11 mg/kg), chromium (23.1 mg/kg), cobalt (4.9 mg/kg), copper (7.0 mg/kg) nickel (23.2 mg/kg), vanadium (16.3 mg/kg), zinc (21.3 mg/kg) detected; all concentrations are below TTLCs and less than ten times STLC values.
5 Sample also analyzed for hazardous waste fish bioassay (100% survival), ignitability (not ignitable) and pH (7.19).
6 Sample was analyzed for ignitability (not ignitable).
7 Samples were collected from the side walls of the excavation above the water table.

Notes: <x.x = Not detected at stated detection level.
x.x = Constituent identified above detection level.
-- = Constituent not analyzed.
The soil sample locations are shown on Figure 3.
The laboratory report for the 1991 samples are included in Appendix C.

A Phase II investigation was conducted to determine the potential extent of soil affected by the release of jet fuel near the tanks. BASELINE conducted additional soil sampling in the vicinity of the tanks in December 1988. A total of 16 soil samples (U-1 through U-16) were collected from 14 soil borings at depths above the groundwater table and at distances ranging from 12 to 45 feet from the tanks. The analytical results of the soil samples did not find any petroleum hydrocarbons above detection levels.

Groundwater was encountered at depths ranging from 3.25 to 3.75 feet below ground surface during the Phase II investigation. On the basis of these soil sample results and the depth to groundwater, BASELINE estimated that approximately 180 cubic yards of material (assuming an area of 35 by 40 feet to a depth of 3.5 feet) would need to be excavated and treated or transported to a disposal facility. The results of the Phase II investigation were presented in BASELINE's *Report on Soil Sampling Activities — Phase II, Jet Fuel, Waste Oil/Safety Solvent Tank Areas, United Airlines Maintenance Hangar, Municipal Oakland International Airport, Oakland, California*, dated January 1989.

FIELD ACTIVITIES

Tank Removal

Permits for the tank removals and subsequent excavation were acquired from the City of Oakland, Alameda County Environmental Health Department, City of Oakland Fire Marshal, and California Division of Occupational Health and Safety by the tank removal contractor, Ramcon, of Sacramento, California. Bay Area Air Quality Management District was also notified of tank excavation activities prior to work. Copies of the permits and notification are included in Appendix A.

On 4 June 1991, Refineries Services of Patterson, California, under the supervision of Ramcon, removed the residual fuel from the two tanks. A total of approximately 15 gallons of jet fuel was removed from the two tanks and transported off-site under Uniform Hazardous Waste Manifest. A copy of the manifest is included in Appendix B. The fuel dispenser and piping located at the west end of the tanks were removed by Ramcon.

On 5 June 1991, the tanks were uncovered and the excavated material was stockpiled on plastic, covered, and secured on-site. The tanks were inerted with dry ice on 6 June 1991 prior to removal. Steven Hallert of the City of Oakland Fire Department and a BASELINE geologist were present at the site during the tank removals. The steel tanks were covered with deteriorating tar wrap. No obvious holes were observed in either tank, but staining was observed near the fill ports on top of the tanks. The tanks were hauled off-site by H & H Ship Service Company of San Francisco under Uniform Hazardous Waste Manifests. Copies of the manifests are included in Appendix B.

The tank excavation measured approximately 29 feet (north-south) by 37 feet (east-west) and approximately 6 feet deep. Approximately 93 cubic yards of material were removed from the excavation. The soil in the excavation was visibly stained and had a petroleum odor. Groundwater filled the bottom of the excavation, and was observed entering the excavation at a depth of approximately 5.5 feet below ground surface.

Soil Sampling — Tank Excavation

Four soil samples (T-1 through T-4) were collected from the sidewalls of the excavation on 6 June 1991 by a BASELINE geologist. The sample locations were specified by Dennis Byrnes of Alameda County Environmental Health Department. The sample locations are shown on Figure 3. The soil samples were collected by removing material from the excavation sidewalls with an excavator bucket at a depth of approximately six feet, just above the standing water in the excavation. A few inches of soil was removed and a clean brass sample tube was driven into the soil. The ends of the sample tube were then covered with aluminum foil and plastic caps, labeled, placed in a ziplock plastic bag, and stored in a plastic cooler containing blue ice. The soil samples were submitted under chain-of-custody to Curtis & Tompkins, Ltd., a state-certified analytical laboratory in Berkeley, California for TPH as jet fuel and BTXE analyses.

Soil Sampling — Stockpile

A soil sample was collected from the stockpiled soil removed from the tank excavation on 6 June 1991. The purpose of this sample was to identify whether the soil excavated would be classified as hazardous. To identify the area containing the highest fuel concentrations, the stockpiled material was screened by removing a few inches of soil approximately every five feet along each side of the pile and checking the soil with a photoionization detector (PID). A soil sample was collected in the area of the highest PID readings by removing a few more inches of soil and driving a clean brass sample tube into the pile. The sample was handled as described above and submitted to Curtis & Tompkins, Ltd. for analyses of TPH as jet fuel, volatile and aromatic hydrocarbons (EPA Method 8240), Title 26 metals, and hazardous waste fish bioassay. Tests for ignitability and pH were also performed.

Groundwater Sampling

On 10 June 1991, Hydrochem Services Inc., pumped approximately 4,900 gallons of water from the excavation. Ramcon used oil absorbent booms to direct any floating material, such as the dissolved tar wrap from the tanks, toward the vacuum hose. The hose was placed at the water surface to remove any potential floating product.

The water in the excavation was allowed to recover for several hours prior to sample collection. The groundwater sample (T-water) was collected using a clean disposable PVC bailer. The portion of the water sample for volatile analyses was decanted into three VOA sample bottles using a volatile organic compounds (VOC) attachment to minimize volatilization. The remaining portion of the sample was decanted into two 1-liter amber glass sample bottles without the VOC attachment. The groundwater sample was stored in a plastic cooler containing blue ice and submitted under chain-of-custody to Curtis & Tompkins, Ltd. for TPH as jet fuel and BTXE analyses.

Additional Excavation and Soil Sampling

Additional soil excavation was conducted in the vicinity of the tank excavation. The purpose of further excavation was to remove soil affected by jet fuel identified during previous investigations and observed during tank removal activities. On 11 through 17 June 1991, the tank excavation was extended in four directions. The soil being removed was screened visually and with a PID to assess the presence of jet fuel. The original excavation was extended approximately 18 feet to the north, 15 feet to the east, 20 feet to the south, and 8 feet to the west. Two verification soil samples (EX1 through EX8) were collected from each of the four sides of the excavation at depths above the water table, about 5 feet below ground surface. The locations of the soil samples are shown on Figure 3. The soil samples were collected in the same manner as previously described. The samples were submitted to Curtis & Tompkins, Ltd. for the analyses of TPH as jet fuel and BTXE.

Following the completion of soil sampling, on 17 June 1991, an effort was made to remove additional potentially contaminated water from the excavation. An additional volume of approximately 4,900 gallons of water were pumped from the excavation by Refineries Services using the same procedures described previously. A copy of the Uniform Waste Manifest for the water is included in Appendix B.

Backfill Activities

On 24 June through 2 July 1991, the excavation was backfilled by Ramcon. The saturated zone was filled with a layer of pea gravel. This was overlain by compacted aggregate subbase and aggregate base. Consolidated Engineering Laboratories of Pleasanton performed geotechnical testing to confirm that compaction standards were obtained. On 9 July 1991, the shoulder of the taxiway was repaved (Brown, 1991).

Decontamination

All soil sampling equipment was cleaned with a trisodium phosphate (TSP) solution and rinsed with deionized water before each use. The decontamination rinsate was stored on-site in a sealed 55-gallon

drum. A clean disposable bailer was used to collect the groundwater sample; therefore, no rinsate was generated.

HYDROGEOLOGY

Regional

The Oakland Airport is located in the central part of the east shore of San Francisco Bay. Land in the vicinity of the airport is underlain by artificial fill dredged from the Bay and other sources. The fill consists primarily of sand and Bay Mud and may extend up to 25 feet in thickness in some areas (Cygna Energy Services, et. al., 1990). The fill is generally underlain by Bay Mud which consists of organic-rich clay and silty clay with some silt and sand lenses. The thickness of the Bay Mud varies from less than one foot, up to 120 feet beneath the Bay. The Bay Mud overlies the Merritt Sand, a fine- to medium-grained sand with lenses of sandy clay and clay which varies in thickness to a maximum of 65 feet. As much as 1,100 feet of older alluvial deposits are present between the Merritt Sand and the underlying bedrock. Bedrock in the area consists of mostly consolidated sandstone, shale, and chert with some volcanic rock, serpentine, and conglomerate. Groundwater generally occurs in the older alluvium in permeable sand and gravel beds interbedded with layers of silt and clay. If present, groundwater also occurs within the Merritt Sand (ACFC & WCD, 1988).

Site

The site is located approximately one mile east and one third mile north of San Francisco Bay. The soil encountered in the tank excavation is artificial fill, consisting of fine- to medium-grained sand with minor shell fragments. Groundwater was encountered at about six feet below ground surface during tank removal activities, but rose up one foot in the open excavation during the following days. Groundwater had previously been encountered at a depth of approximately 4.5 feet in October 1988, and 3.0 feet in December 1988. This suggests that the unconfined groundwater level at the site may fluctuate seasonally and/or annually in response to rainfall. Data are not available regarding the direction or gradient of groundwater flow. It is expected that the shallow groundwater flow direction is westward toward the Bay.

RESULTS

Tank Excavation

The analytical results of the soil samples, T-1 through T-4, collected from the side walls of the original tank excavation are summarized in Table 1. TPH as jet fuel was detected in all four samples. The

highest concentrations were found in the sample T-1 (2,200 mg/kg), collected from the north side of the excavation adjacent to Tank 2 (Figure 3). The laboratory reports for the soil samples are included in Appendix C.

Excavation Verification

The verification soil samples, EX1 through EX8, collected from the side walls of the final excavation generally confirmed that the soil affected by jet fuel had been removed. TPH as jet fuel, toluene, xylenes, and ethylbenzene were not found above the detection limit in any of the eight samples (Table 1). Only one sample, EX6, collected from the north side of the excavation was found to contain benzene (0.011 mg/kg). The laboratory reports are included in Appendix C.

Stockpile

The soil sample collected from the soil stockpiled from the tank excavation was found to contain TPH as jet fuel (3,300 mg/kg), benzene (0.380 mg/kg), xylenes (0.480 mg/kg) and ethylbenzene (1.900 mg/kg). The Title 26 metals, barium, beryllium, chromium, cobalt, copper, nickel, vanadium, and zinc were all detected at concentrations below total threshold limit concentrations (TTLC), and less than ten times the soluble threshold limit concentrations (STLC) specified in the California Code of Regulations (CCR), Title 26. Results of the hazardous waste fish bioassay test indicated a 100% survival rate. The sample was found to have a relatively neutral pH of 7.19. An ignitability test indicated that the soil was not ignitable.

The analytical laboratory initially erroneously reported to BASELINE that the soil was flammable. BASELINE requested that the sample be reanalyzed. In addition, a second sample was collected from the stockpile on 2 July 1991 to verify the laboratory's results. The soil sample was collected in a similar manner as previously described. The stockpiles were screened every 15 feet along the length of the piles with a PID to determine the area with the highest concentration. The results of the reanalysis of the first stockpile sample and the verification stockpile sample confirmed that the soil was not ignitable. The soil analytical results are summarized in Table 1, and the laboratory reports are included in Appendix C.

Groundwater

The groundwater sample collected from the tank excavation was found to contain TPH as jet fuel (19.0 mg/kg) and BTXE (0.095, 0.014, 0.042, 0.052 mg/kg, respectively). The analytical results of the groundwater sample are summarized in Table 2, and the laboratory report is included in Appendix D.

TABLE 2

SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
George P. Miller Aviation Hangar
Metropolitan Oakland International Airport
(mg/L)

Location	Date	TPH as Jet Fuel[1]	Benzene[2]	Toluene[2]	Xylenes[2]	Ethyl-benzene[2]
T-Water[3]	06/11/91	19.000	0.095	0.014	0.042	0.052

[1] Test Method = DHS-LUFT.
[2] Test Method = EPA 8020.
[3] The water sample was collected from the open tank excavation.

Note: The laboratory report is included in Appendix D.

SOIL MANAGEMENT

The stockpile sample was collected to assess worst case conditions and determine whether the soil from the excavation would be classified as hazardous waste according to CCR Title 26. The results for the TPH, volatile and aromatic hydrocarbons, metals, fish bioassay, pH, and ignitability indicated that the material was not hazardous waste. Therefore, the material removed from the tank excavation and subsequently excavated soil were transported to the Port's soil biotreatment site located near Langley and Doolittle streets in Oakland. A total of 1,530 cubic yards of soil were transported to the Langley and Doolittle site (Brown, 1991). The soil was placed on plastic, covered, and secured with rope and sand bags. The site has been authorized by the Regional Water Quality Control Board (RWQCB) for temporary bioremediation of non-hazardous waste soil. Upon completion of soil treatment and verification sampling, the soil would be used as fill on Port property.

DISCUSSION AND CONCLUSIONS

- The results of analytical testing of soil samples at the tank site confirmed that a release of jet fuel had occurred at the site. An Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report had been submitted to Alameda County Environmental Health Department in October 1988 following the initial (Phase I) investigation. Since the site was not on the RWQCB Fuel Leaks file, another report was submitted in June 1991 (Appendix E). The highest concentrations of jet fuel were detected in soil samples collected near the fill ends of both tanks. In addition, staining was observed near the fill ports when the tanks were removed. This suggests that at least part of the release of fuel resulted from spillage during filling of the tanks.

- The analytical results indicate that the soil affected by jet fuel has been removed with the exception of a low concentration of benzene detected in Sample EX6. Since the excavation remained open for several days prior to being backfilled, it is likely that the benzene volatilized during that time and is therefore probably no longer present.

- The volume of material affected by jet fuel was larger than the volume estimated in 1988. It is possible that the jet fuel migrated within the sand beyond the original estimated extent of contamination in the years following the 1988 investigation. In December 1988, when the samples were collected to define the extent of contamination, the groundwater table was approximately three feet below ground surface. The samples were collected directly above the water table. It is possible that the main zone of contamination was between three and six feet below ground surface, within the zone of groundwater fluctuation. Therefore, the shallow soil samples may have been above the zone of contamination and falsely indicated that the jet fuel had not migrated to those sample locations.

- The groundwater has been affected by the release of jet fuel as indicated by the results of the water sample collected from the tank excavation. Much of the surface water was removed from the open tank excavation in an attempt to remove as much of the affected groundwater as possible. A total of 9,124 gallons of water were removed (Brown, 1991). The extent of groundwater affected by jet fuel away from the tank excavation is unknown.

RECOMMENDATIONS

- A preliminary groundwater investigation should be conducted to assess whether groundwater quality downgradient of the tank excavation has been affected by the release of jet fuel.

- Biotreatment of the soil stockpiled at the Langley and Doolittle site should be initiated.

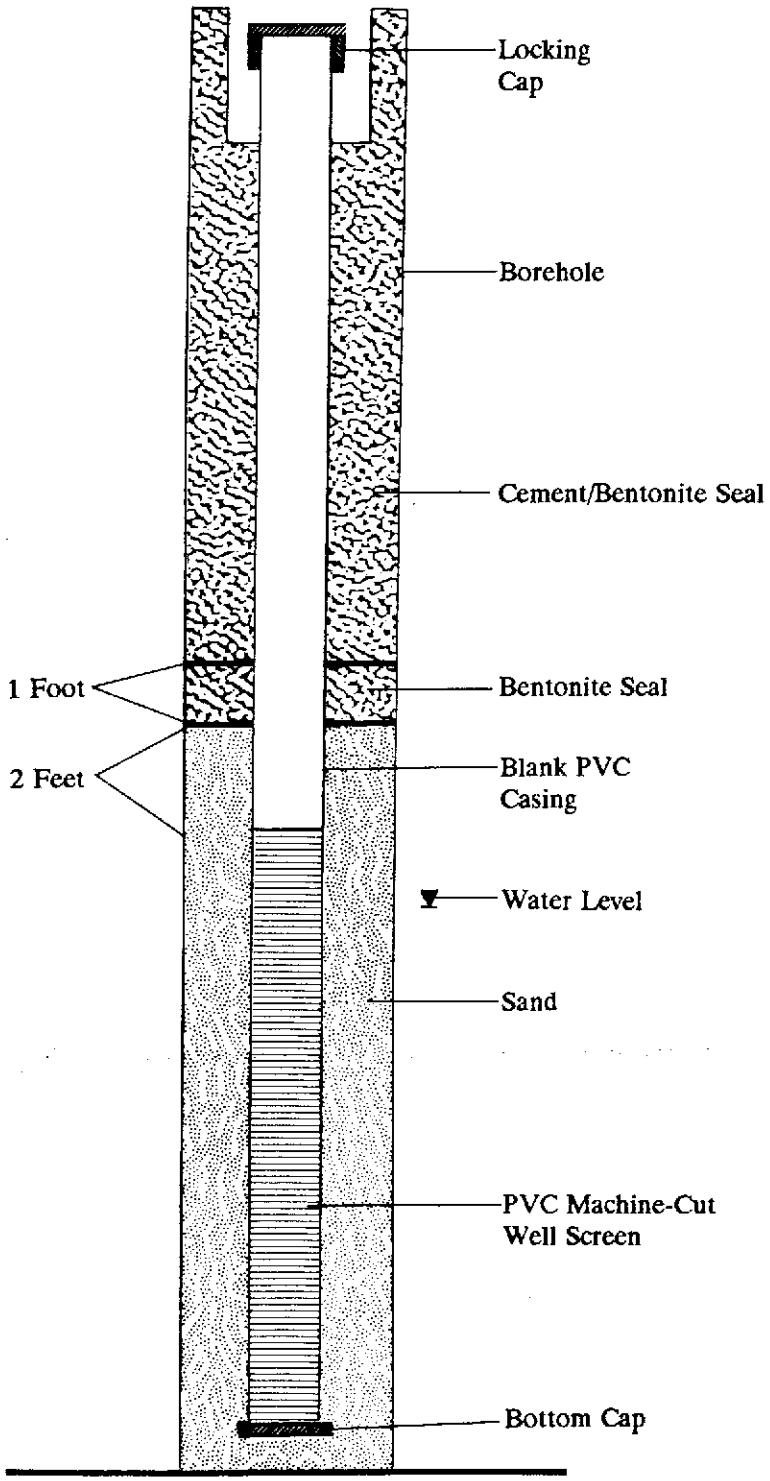
WORK PLAN FOR A PRELIMINARY GROUNDWATER INVESTIGATION

The unauthorized release of jet fuel at the site necessitates that a preliminary groundwater investigation be performed. It is recommended that one 2-inch diameter groundwater monitoring well be installed within ten feet downgradient of the former excavation as shown on Figure 3. The direction of flow is estimated to be westward toward the Bay.

- The well would be installed in a nominal 8-inch boring advanced with hollow-stem augers to a depth of approximately 13 feet below ground surface. One soil sample would be collected from the unsaturated zone just above the groundwater table for chemical analyses. Groundwater is expected to be encountered about 5 to 6 feet below ground surface, though it may be encountered at a shallower depth during the rainy season. The soil sample would be collected using a California modified sampler lined with 6-inch brass sample tubes, driven in advance of the hollow stem augers. The samples would be retrieved, and the ends of the sample tube would be covered with aluminum foil, capped with plastic caps, labeled, placed in ziplock plastic bags, and stored in a plastic cooler containing blue ice. The soil sample would be submitted under chain of custody to a state-certified analytical laboratory for analyses of TPH as jet fuel and BTXE.

- The well would be constructed with 2-inch diameter PVC casing and machine-slotted well screen. Well screen slot size of 0.010 inch and a fine sand filter pack (#2/#20 or #2/#16 grade) would be installed due to the fine-grained nature of the subsurface materials of the site. The screened interval would be placed at an approximate depth of between 3 to 13 feet to account for shallow groundwater fluctuations. The sand filter and a one-foot thick bentonite pellet seal would be tremied into the annular space between the borehole and the well through the hollow stem augers. The remainder of the annular space would be filled with a cement-bentonite grout. A

MONITORING WELL CONSTRUCTION DETAILS Figure 4



BASELINE

locking well cap and a traffic box set in concrete would complete the well installation. A typical well construction diagram is shown on Figure 4.

- The well would be developed by pumping until fines had been removed from the purged water. After a minimum of 24 hours, the well would be checked for floating product using a dual interface probe. A groundwater sample would be collected after approximately five well volumes of water were purged from the well and the electrical conductivity, pH, and temperature of the purged water had stabilized. The groundwater sample would be collected in a clean disposable PVC bailer and decanted into appropriate sample bottles. The sample would be stored in a plastic cooler containing blue ice and submitted under chain-of-custody to a state-certified analytical laboratory for TPH as jet fuel and BTXE analyses. For quality control purposes, one duplicate or one blank sample would also be submitted with the groundwater sample for chemical analyses.

- All augers, sampling equipment, and well casing would be decontaminated by steam cleaning prior to use. The steam cleaning would be performed in a trough so that decontaminate rinsate was contained and not discharged to the ground. All soil and water generated during field activities at the site would be contained in labeled and secured 55-gallon drums until analytical results are received and disposal options were determined.

- A well permit application for the proposed monitoring well would be submitted to the Alameda County Zone 7.

- All work would be conducted under the supervision of a geologist registered in the State of California. A copy of the drilling log would be submitted to the California Department of Water Resources (DWR) for their files.

- A written report would be prepared delineating field activities, methods used, and the results of the investigation. The report would include recommendations for additional investigation or monitoring activities based on the results of the preliminary investigation.

LIMITATIONS

The conclusions presented in this report are professional opinions based on the indicated data described in this report. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study. Changes in the conditions of the subject property can occur with time, because of natural processes or the works of man, on the subject sites or on adjacent properties. Changes in applicable standards can also occur

as the result of legislation or from the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

REFERENCES

Alameda County Flood Control and Water Conservation District, 1988, *Geohydrology and Groundwater-Quality Overview, East Bay Plain Area, Alameda County, California*, 205 (j) Report, June.

BASELINE, 1988, Report on Soil Sampling Activities, Jet fuel, Waste Oil, and Safety Solvent Tanks, United Airlines Management Hangar, Oakland International Airport, Oakland, California, October.

BASELINE, 1989, Report on Soil Sampling Activities - Phase II, Jet Fuel, Waste Oil/Safety Solvent Tank Areas, United Airlines Maintenance Hangar, Municipal Oakland International Airport, Oakland, California, January.

Brown, Jill, 1991, Port of Oakland, Engineer, personal communication, 6 June and 9 July.

Cygna Energy Service and ICF Kaiser Engineers (California) Corporation, 1990, *Environmental Assessment of Proposed Lease Property, Naval Supply Center, Oakland, California*, September.

APPENDIX A

PERMITS AND TANK REMOVAL FIRE INSPECTION REPORT

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

Project Specialist (print) Dennis Byrne

ACCEPTED 5/13/91

DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone: (415) 874-7237

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and local health laws. Changes to your plans indicated by this Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance of any required building permits for construction.

One copy of these accepted plans must be on the job site available to all contractors and craftsmen involved with removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Fire Department for approval. Inspection Department to determine if tank(s) meet the requirements of State and local laws. Call this Department at least 48 hours prior to the following required inspections:

_____ Removal of Tank and Piping
_____ Sampling
_____ Final Inspection

Issuance of a permit to operate is dependent on compliance with all applicable laws and regulations.

FOR ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

UNDERGROUND TANK CLOSURE PLAN

*** * * Complete according to attached instructions * * ***

1. Business Name Port Of Oakland

   Business Owner The Board Of Port Commissioners Of The City Of Oakland

2. Site Address Number 1 - Airport Drive, Building M-110, South Field

   City Oakland Zip 94621 Phone _____

3. Mailing Address 530 Water Street, environmental dept.

   City Oakland, Ca Zip 94607 Phone 415/272-1178

4. Land Owner Port Of Oakland

   Address 530 Water St. City, State Oakland, Ca Zip 94604-2064

5. Generator name under which tank will be manifested

   Port Of Oakland - 530 Water Street, Oakland, Ca 94604-2064

   EPA I.D. No. under which tank will be manifested CAC000594312

rev 12/90

6. Contractor RAMCON

Address 1401 Halyard Drive, Suite 130

City West Sacramento , Ca 95691 Phone 916/372-7535

License Type A/Haz ID# 94-2721041

7. Consultant Baseline Environmental Consulting

Address 5900 Hollis Street, Suite D

City Emeryville, Ca Phone 420-8686

8. Contact Person for Investigation

Name Andrew Clarke-Clough Title Assoc. Env.

Phone 415/272-1178

9. Number of tanks being closed under this plan 2

Length of piping being removed under this plan 10'

Total number of tanks at facility 2

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground tanks are hazardous waste and must be handled ** as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name Refinery Services EPA I.D. No CAD083166728

Hauler License No. 1500 License Exp. Date 6/30/91

Address P.O. Box 1167

City Patterson State Ca Zip 95363

b) Product/Residual Sludge/Rinsate Disposal Site

Name Refinery Services EPA I.D. No. CAD083166728

Address P.O. Box 1167

City Patterson State Ca Zip 95363

c) Tank and Piping Transporter

Name H&H Environmental Service EPA I.D. No. CAD004771168

Hauler License No. 0334 License Exp. Date 1/31/92

Address 220 China Basin

City San Francisco State Ca Zip 94107

d) Tank and Piping Disposal Site

Name H&H Environmental Service EPA I.D. No. CAD004771168

Address 220 China Basin

City San Francisco State ca Zip 94107

11. Experienced Sample Collector

Name Irene Kahn

Company Baseline Envrionmental Consulting

Address 5900 Hollis Street, Suite D

City Emeryville State Ca Zip 94607 Phone 420-8686

12. Laboratory

Name Curtis & Thompkins, Ltd.

Address 2323 Fifth Street

City Berkely State Ca Zip 94710

State Certification No. 159

13. Have tanks or pipes leaked in the past? Yes [xx]x No [ ]

If yes, describe. Soil sampling conducted as part of a phase 1 investigation, 10/31/88. Tanks have been tested tight.

14. Describe methods to be used for rendering tank inert

30Lbs of dry ice per each 1,000 gallon tank capacity

to purge vapors

Verify with on site LEL 02 meter

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be plugged.

The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.

15. Tank History and Sampling Information

Tank		Material to be sampled (tank contents, soil, ground-water, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
10,000 g.	Jet Fuel (MF23)	Soil	14 locations ranging from 12 to 45 feet from jet fuel tanks.
10,000 g.	Jet Fuel (MF24)	Soil	

One soil sample must be collected for every 20 feet of piping that is removed. A ground water sample must be collected should any ground water be present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated)	Sampling Plan
200 yards ^{3}	One sample every 20 cubic yards maximum or 1 sample every 50 cubic yards minimum. Analyze for TPH, Diesel and BTEX.

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
Jet fuel	3550 - 8020 or 8240 8260	TPH, DIESEL BTEX	1.0 PPM 0.005 PPM
Water	3510 - 602 - 624 or 8260	TPH, DIESEL BTEX	50 PPB .5 PPB

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy

Name of Insurer State Compensation Insurance Fund

19. Submit Plot Plan (See Instructions)

20. Enclose Deposit (See Instructions)

21. Report any leaks or contamination to this office within 5 days of discovery. The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (see Instructions)

22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true.

I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

Signature of Contractor

Name (please type) MICHAEL S. RAMOS DBA RAMCON

Signature

Date 5/8/91

Signature of Site Owner or Operator

Name (please type) ANDREW CLARK CLOUGH

Signature

Date 5/8/91

May 3, 1991

RAMCON
SITE HEALTH AND SAFETY PLAN

Contractor: RAMCON - 1401 HALYARD DRIVE,#130 WEST SAC, CA 95691
Site Name: METROPOLITAN OAKLAND INTERNATIONAL AIRPORT
Site Address: 300 FEET NORTH OF GEORGE P. MILLER AVIATION HANGER BUILDING M-110 AIRPORT DRIVE AT JOHN GLEN DRIVE
Job No: 288001

ON SITE ORGANIZATION AND COORDINATION - Police or Fire Call 911

Site Manager: John Pile **Pager:** 440-3826 **Phone:** 372-7535
Responsibilities: Oversee tank removal operations, air monitoring, determining when site level will be changed and arrange for all necessary inspections.

HAZARD EVALUATION

1. Be aware of area where work is performed. Stay clear of excavation equipment during operations to avoid physical injury.
2. Be aware of any airplanes in the vicinity of the work area. Workers are to wear ear plugs for hearing protection.
3. Set up a perimeter around work area with "No Smoking" signs posted to avoid fire hazards and unwanted personnel.
4. Have respirators, Tyveks suits and gloves readily available for personal protection when needed.
5. Have (2) 20Lb A:120 B-C dry chemical fire extinguisher available at all times.
6. Monitor air around excavation for any hazardous vapors.
7. All employees are to wear hard hats to avoid injuries to head area.
8. Personal will be excavating Jet A fuel tanks that contain TPH as Jet Fuel, Benzene, Toluene, Ethyl Benzene and Xylene which can be hazardous to your health.

DAILY BRIEFINGS

1. Inform each employee of what work needs to be accomplished during the work day.
2. Review any problems that may have occurred the prior day.
3. Inform employees on the status of air quality. Review respirator donning procedure if applicable.
4. Inform employees on visitors to site that day.
5. Review heat stress conditions and what signs to watch our for. If heat is going to be abnormal, take necessary breaks.
6. Review airport policy for work at facility.
7. Reiterate the fact, that safety comes first.
8. Have open discussion with employees to answer any questions or problems.

AIR AND PERSONAL MONITORING DEVISES

We will be using the Gastechtor 1314 and the LEL 02 Meter to monitor the concentrations of oxygen in the air and in the dirt This will be done every 15 minutes. The Gastechtor is calibrated weekly with Hexane.

PERSONNEL PROTECTIVE EQUIPMENT

Employees will work at Level D until air monitoring indicates a need for a change. Level D protection will consists of hard hats, steel toed boots, ear and eye protection and normal work clothes (Blue jeans and company shirts). When air monitoring indicates TPH levels above 50 PPM or Benzene levels above .5 PPM respirators will be donned along with Tyvek suits and gloves. Filter cartridge will be changed when break through is achieved. At Level C air monitoring will be changed from every 15 minutes to every 5 minutes. When employees reach immediate break through on filter cartridge then level B site procedure will be taken.

DECONTAMINATION PROCEDURES

Personnel will be decontaminated in Hazmat Decontamination Pool. Employees will also have an extra supply of Tyvek suits and spare change of clothes.

SECURING THE SITE

Securing the site will consist of barricading the excavation with lighted barricades and barricade tape. All stockpiled soil will be covered with visqueen. The visqueen will be secured with tires and rope to hold it in place.

RECEIVED

Excavation Permit Granted ________ No. ________

CITY OF OAKLAND

Permit to Excavate and Install, Repair, or Remove Inflammable Liquid Tanks.

Tank Permit No. 9437

Oakland, California, May 20, 1991

PERMISSION IS HEREBY GRANTED TO ~~install~~ remove ~~repair~~ Gasoline tank and excavate commencing ________ feet inside property line

on the north side of George P. Miller Aviation Hangar Street Avenue ________ feet 300 of north of Airport Dr. at John Glen Drive Street Avenue

House No. #1 Airport Dr. Bldg. M-110 South Field Street Avenue Present Storage ________

Owner Port of Oakland Address 530 Water Street

Applicant RAMCON Phone 272-1178

Address P.O.Box 1024 N. Sacto 95691 Phone 916-7535

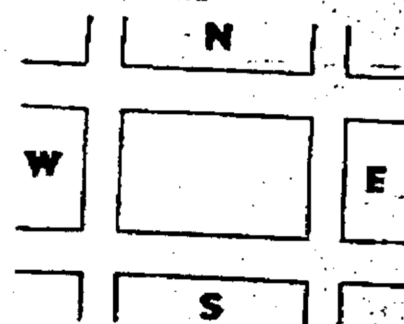
Dimensions of street (sidewalk) surface to be disturbed ________ x ________ Number of Tanks 2 Capacity 10,000 Gallons, each.

Remarks: ________

This Permit is granted in accordance with existing City Ordinances.
Owner hereby agrees to remove tanks on discontinuance of use or when notified by the City Authorities.
When installing, removing or repairing tanks, no open flame to be on or near premises.

Approved ________
Fire Marshal

Approved ________
Drainage Division Engineering Dept.



EXCAVATING PERMIT

Issued in accordance with Ord. No. 278 CMS, Sec. 6-2.04

________ square feet of digging or removal granted.

The receipt of $________ special deposit is hereby acknowledged.

GENERAL DEPOSIT.

BUREAU OF PERMITS AND LICENSES.

CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Inspected and passed on ________ 19____

By ________
Fire Marshal

Inspection Fee Paid . . . . $ 120.00 ck#014297 rec#651356

Received by G. M. Johnson
FIRE PREVENTION BUREAU

NOTICE

Before Covering Tanks, Above Certificate Must Be Signed.

When ready for inspection notify Fire Prevention Bureau, 273-3851

THIS PERMIT MUST BE LEFT ON THE WORK AS AUTHORITY THEREFOR.

930-00 (6-67)

07/02/91 11:49 415 430 1707 BASELINE P.16

EMERGENCY CONTACTS AND PHONE NUMBERS:
POLICE OR FIRE CALL 911

Site Manager: John Pile - 916/372-7535 Office, 440-3826 Pager
916/765-1746 Mobile

Project Manager: Thom Murray - 916/372-7535 Office, 440-3823 Pager
916/761-3291

Client Contact: Jill Warner Brown - 415/577-4162

Environmental Agency: Alameda County Environmental Health
415/271-4320

Hospital: Humana - 13855 East 14th Street, San Leandro
415/357-6500 (See attached map for directions)

Site Phone Number: 916/761-3289

Ramcon's occupational Doctor: Dr. David E. Root
1 Scripps Drive
Sacramento, Ca 95825
(916) 924-9263

Dr. Root should be notified in the event of any occupational injury or exposure.

Workman's Compensation Carrier: State Compensation Insurance Fund
Policy Number: 571-90-2206
Expires: 10/91

Poison: 415/476-2845 **EPA:** 800/424-8802 **Envirologic:** 207/773-3020

OSHA TRAINING

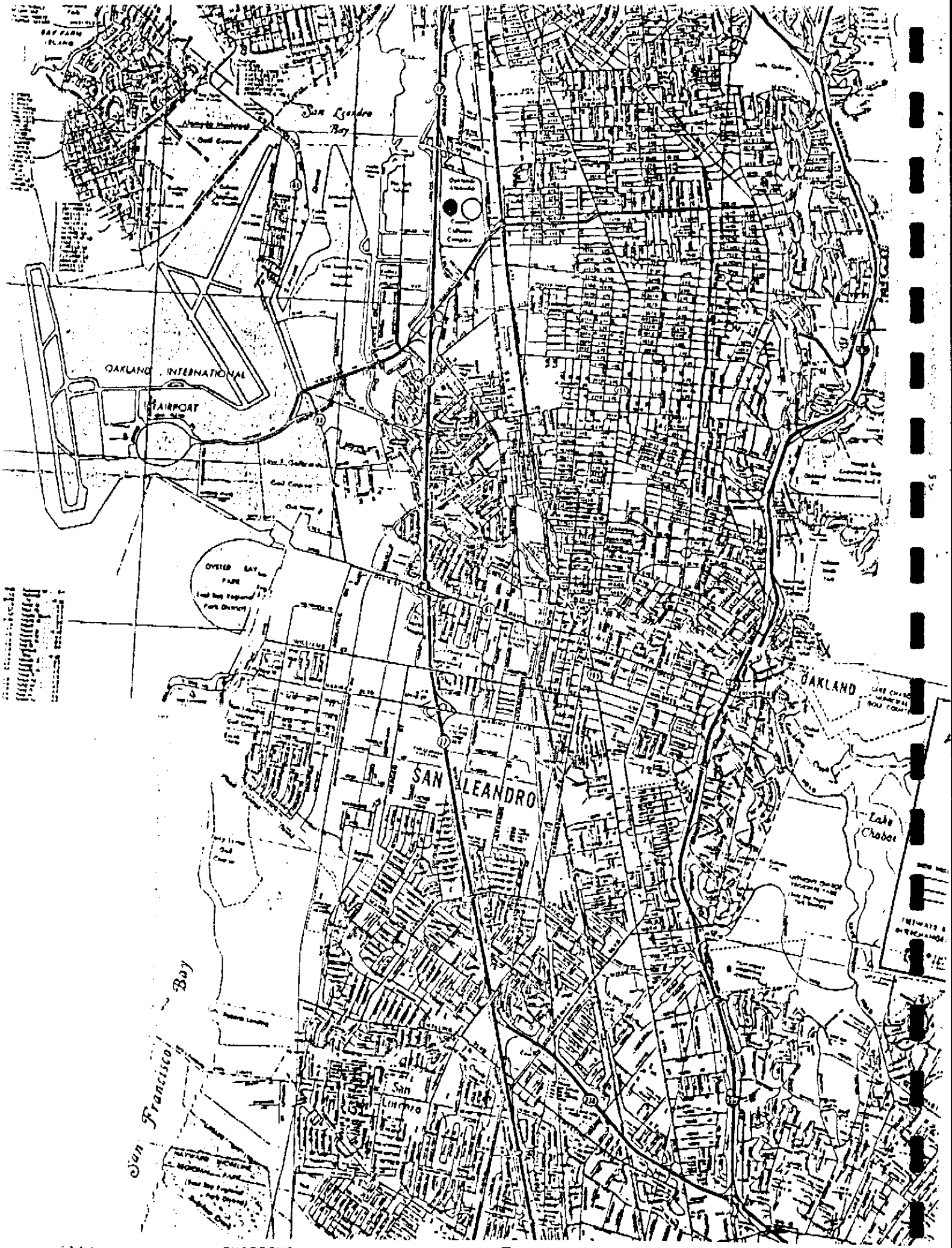
Attached are the certificates for the OSHA Hazardous Waste Training (29 CFR 1910.120) as required.

This form shall be filled out by the Project Manager along with the client, master and copies forwarded to the Health and Safety Director. The H & S Director will review, sign and return expeditiously if no exception is taken. Employees shall not visit a site without a copy of this Site Safety Plan in their possession.

Reviewed by:_____ Date:_____

Reviewed by:_____ Date:_____

Reviewed by:_____ Date:_____


San Leandro Bay
OAKLAND INTERNATIONAL AIRPORT
OYSTER BAY REGIONAL SHORELINE
SAN LEANDRO
OAKLAND
Lake Chabot
San Francisco Bay

STATE COMPENSATION INSURANCE FUND

P.O. BOX 807, SAN FRANCISCO, CA 94101-0807

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

SEPTEMBER 10, 1990

POLICY NUMBER: 571-90 UNIT 000019
CERTIFICATE EXPIRES: 10-1-91

COUNTY ALAMEDA
HAZARDOUS MATERIALS DIVISION
30 SWAN WAY, ROOM 200
OAKLAND
CA 94621

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon ten 30 days' advance written notice to the employer.
XX

We will also give you TEN 30 days' advance notice should this policy be cancelled prior to its normal expiration.
XX

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

John A. Wolff
PRESIDENT

ENDORSEMENT #2065 ENTITLED CERTIFICATE HOLDERS' NOTICE EFFECTIVE 10/01/90 IS ATTACHED TO AND FORMS A PART OF THIS POLICY.

EMPLOYER

MICHAEL S RAMOS
DBA: RAMCON
P.O. BOX 1024
WEST SACRAMENTO
CA 95691

Excavation Permit Granted _____ No. _____

CITY OF OAKLAND

Permit to Excavate and Install, Repair, or Remove Inflammable Liquid Tanks.

Tank Permit No. 9437

Oakland, California, May 20, 1991

PERMISSION IS HEREBY GRANTED TO ~~install~~ remove ~~repair~~ Gasoline tank and excavate commencing _____ feet inside property line

on the north side of George P. Miller Aviation Hangar Street Avenue feet 300 of north of Airport Dr. Street Avenue

House No. #1 Airport Dr. Bldg. M-110 South Field Street Avenue Present Storage at John Glen Drive

Owner Port of Oakland Address 530 Water Street Phone 272-1178

Applicant RAMCON Address P.O.Box 1024 W. Sacto 95691 Phone 916-7535

Dimensions of street (sidewalk) surface to be disturbed _____ X _____ Number of Tanks 2 Capacity 10,000 Gallons, each.

Remarks: _____

This Permit is granted in accordance with existing City Ordinances.
Owner hereby agrees to remove tanks on discontinuance of use or when notified by the City Authorities.
When installing, removing or repairing tanks, no open flame to be on or near premises.

ed _____
Fire Marshal

ved _____
Drainage Division Engineering Dept.

EXCAVATING PERMIT

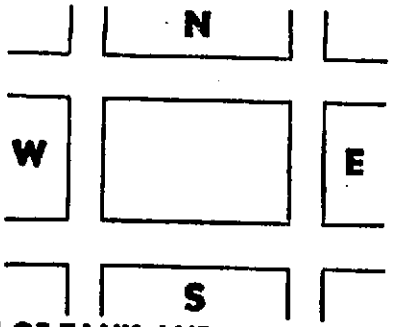
Issued in accordance with Ord. No. 278 CMS, Sec. 6-2.04

_____ square feet of digging or removal granted.

The receipt of $_____ special deposit is hereby acknowledged.

GENERAL DEPOSIT.

BUREAU OF PERMITS AND LICENSES.



CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Inspected and passed on _____ 19____

By _____
Fire Marshal

Inspection Fee Paid . . . . . $ 120.00 ck#014297 rec#651356

Received by G. M. Johnson
FIRE PREVENTION BUREAU

NOTICE

Before Covering Tanks, Above Certificate Must Be Signed.

When ready for inspection notify Fire Prevention Bureau, 273-3851

THIS PERMIT MUST BE LEFT ON THE WORK AS AUTHORITY THEREFOR.

ACKNOWLEDGMENT

RECEIVED MAY 24 1991

Bay Area Air Quality Management District acknowledges receipt of your Tank Removal/Contaminated Soil Excavation Notification Form received on 5-17-91.

REGULATION 8, RULE 40
Aeration of Contaminanted Soil and Removal of Underground Storage Tanks

NOTIFICATION FORM

☒ Removal or Replacement of Tanks

☒ Excavation of Contaminated Soil

ORMATION N. Lee

; M-110, SOUTH FIELD

ITY, STATE, ZIP OAKLAND, CALIFORNIA 94621

OWNER NAME PORT OF OAKLAND - 530 WATER STREET OAKLAND, CA 94604-2064

PECIFIC LOCATION OF PROJECT BEHIND UNITED AIRLINES HANGER - 110 AIRPORT WAY, WEST SIDE OF HANGER CI

TANK REMOVAL

CHEDULED STARTUP DATE 6/3/91

VAPORS REMOVED BY:

[ ] WATER WASH

[X] VAPOR FREEING (CO^2)

[ ] VENTILATION

CONTAMINATED SOIL EXCAVATION

SCHEDULED STARTUP DATE 6-4-91

STOCKPILES WILL BE COVERED? YES X NO

ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):

(MAY REQUIRE PERMIT)

CONTRACTOR INFORMATION

NAME RAMCON CONTACT MICHAEL RAMOS

ADDRESS 1401 HALYARD DRIVE, SUITE 130 PHONE (916 372-7535

CITY, STATE, ZIP WEST SACRAMENTO, CA 95691

CONSULTANT INFORMATION
(IF APPLICABLE)

NAME BASELINE ENVIRONMENTAL CONSULTING CONTACT ANDREW CLARKE-CLOUGH

ADDRESS 5900 HOLLIS STREET, SUITE D PHONE (415) 272-1178

CITY, STATE, ZIP EMERYVILLE, CA

FOR OFFICE USE ONLY

DATE RECEIVED 5-17-91 BY AB (INIT.)

CC: INSPECTOR NO. 558 DATE 5-21-91 BY AB (INIT.)

TELEPHONE UPDATE: CALLER CHANGE MADE

BAAQMD N #

/89

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

№-0548547

PERMIT

Permit Issued To
(Insert Employer's Name, Address and Telephone No.)

RAMCON
1401 HALYARD DRIVE #130
W. SACRAMENTO, CA 95691
(916) 372-7535

No. ____
Date MAY 31, 1991
Region 2
District 1
Tel. (916) 920-6123

Type of Permit EXCAVATION - ANNUAL 1991

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

State Contractor's License Number		Permit Valid through		
510034		DECEMBER 31, 1991		
Description of Project	Location Address	City and County	Anticipated Dates: Starting	Anticipated Dates: Completion
Excavation of trenches five and deeper.	Various	Various	05-31-91	12-31-91

NOTE:
Significant changes to existing earthwork protection regulations are expected in 1991. This PERMIT is conditional upon conformance to these new regulations as they become effective.

This Permit is issued upon the following conditions:

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.
2. That employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.
3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.
4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.
5. This permit shall be posted at or near each place of employment as provided in 8 CAC 341.4.

Received From ____ Received By ____
Amount ____ Date ____
Check ____ 5-91

Investigated by ____ Safety Eng. ____ Date ____

Approved by ____ Dist. Manager ____ Date ____

EMPLOYER ORIGINAL—GREEN DISTRICT COPY—PINK
ACCOUNTING COPY—CANARY REGIONAL COPY—WHITE
S-89 REV. 2-81

CITY OF OAKLAND
REPORT OF FIRE INSPECTION

ENGINE CO. 205

ADDRESS # 1 AIRPORT DR.

NAME United Airlines Wash Rack Area.

GENERAL INSPECTION ☐ PERMIT ☐ OTHER ☐ HAZARD NOTED ☐ HAZARD ABATED ☐

NOTICE LEFT ☐ LETTER ☐ | 1st NOTICE | 2nd NOTICE | FINAL

DATE	VIOLATION	O.F.C	CONTACTED
6-6-91	REMOVED THIS DATE TWO 10,000		
	GAL FUEL TANKS. L.E.L. & O2 BOTH		
	BELOW 5%. GROUND WATER IN		
	EXCAVATION. NO APPARENT HOLES		
	IN TANKS. TANKS HAULED BY H.&H..		PERMIT NO 200548
	SAMPLING OF GROUND AND WATER &		200508
	TO BE UNDER THE DIRECTION OF		
	ALAMEDA CO. HEALTH HAZ. MAT.		

A REINSPECTION WILL BE MADE WITHIN ______ DAYS

338-5 (Rev. 5-77)

FIRE PREVENTION BUREAU — PHONE 273-3851
INSPECTOR Steven B. Hallet

APPENDIX B

UNIFORM HAZARDOUS WASTE MANIFESTS

PORT of OAKLAND
Interoffice Memo

TO: Neil Werner

FROM: Hope E. Samaras

DATE: June 6, 1991

SUBJECT: Removal of Jet Fuel Tanks MF-23 and MF-24 Near George P. Miller Aviation Hangar, Building M-110, South Field, M.O.I.A. Contractor: Ramcon - Contract No.: 32464
"Uniform Hazardous Waste Manifest"
Generator's EPA ID No. CAC000594312

Transmitted herewith is the yellow (Generator's Copy) "Uniform Hazardous Waste Manifest,"Manifest Document No. 89806912 on the above subject project.

Please note that the blue copy usually sent by the Generator to the Dept. of Health Services (DOHS) is missing. Please make a copy of the yellow and send to DOHS to make certain we have properly notified them.

Hope E. Samaras
Contract Administrator

HES:eu#3/1AB

Attachment

cc: J. Wilson
J. Brown

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible]
4. Generator's Phone ( ) [illegible]

A. State Manifest Document Number: 89806912
B. State Generator's ID:
C. State Transporter's ID: 116234
D. Transporter's Phone: 209-892-8670
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: 209 892-8670

5. Transporter 1 Company Name: Refineries Service
6. US EPA ID Number: CAD083166712 8
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address:
Refineries Serivce
13331 N. HWY. 33
Patterson, CA. 95363
10. US EPA ID Number: CAD083166712 8

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Combustible Liquid NA 1270	002	TT	00015	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: a. Refined diesel fuel (waste)

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

24 HR. EMERGENCY CONTACT: # 1-800-874-4444
24 HR. EMERGENCY RESPONSE: CHEM TEL INC. # 1-800-255-3924
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Frank T. Pile | Signature: Frank Pile | Month Day Year: 06 04 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Mark Ensley | Signature: Mark Ensley | Month Day Year: 06 04 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: | Signature: | Month Day Year:

GENERATOR

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

...ia—Health and Welfare Agency
...ved OMB No. 2050—0039 (Expires 9-30-91)
...or type. *Form designed for use on elite (12-pitch typewriter).*

See instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A C 0 0 0 5 9 4 3 1 2 | Manifest Document No.: 0 0 0 0 8
2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
PORT OF OAKLAND (ENVIRONMENTAL DEPARTMENT)
530 Water Street, Oakland, CA 94607
Generator's Phone ((415) 272-1178/272-1100

A. State Manifest Document Number: 90538236
B. State Generator's ID:

4. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
C. State Transporter's ID: 200548
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

5. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
G. State Facility's ID: C A D 0 0 4 7 7 1 1 6 8
H. Facility's Phone: (415) 543-4635

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RESIDUE JET "A" TANK NON-RCRA HAZARDOUS WASTE SOLID	0 0 1	T P	1 0 0 0 0	P	State 512 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
PUMPED OUT 10,000 gallon tank last containing JET "A". Tank inerted with dry ice for transport. Tank Piping included with the load
PROFILE #A0910

K. Handling Codes for Wastes Listed Above
a. 01 b.
c. d.

L. Special Handling Instructions and Additional Information
JOB #7724
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR.

JOB SITE: OAKLAND INT'L AIRPORT
1 Airport Dr., M-110
Oakland, California

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: x Jill A. Brown | Signature: x Jill A. Brown | Month Day Year: 10 6 10 6 9 1

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: EDWARD G. MILAND | Signature: Edward G Miland | Month Day Year: 10 6 10 6 9 1

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: | Signature: | Month Day Year:

Do Not Write Below This Line

...22 A
...00—22
...89) ...vious editions are obsolete

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. Form designed for use on elite (12-pitch typewriter).

See Instructions on Back of Page 6 and Front of Page 7

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A C 0 0 0 5 9 4 3 1 2 | Manifest Document No.: 0 0 0 0 9

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 90538237

3. Generator's Name and Mailing Address
PORT OF OAKLAND (ENVIRONMENTAL DEPARTMENT)
530 Water Street, Oakland, CA 94607

4. Generator's Phone: (415) 272-1178/272-1100

B. State Generator's ID:

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8

C. State Transporter's ID: 200508
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8

G. State Facility's ID: C A D 0 0 4 7 7 1 1 6 8
H. Facility's Phone: (415) 543-4835

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RESIDUE JET "A" TANK NON-RCRA HAZARDOUS WASTE SOLID	0 0 1	T P	1 0 0 0 0	P	State 512
					EPA/Other
b.					State
					EPA/Other
c.					State
					EPA/Other
d.					State
					EPA/Other

J. Additional Descriptions for Materials Listed Above
PUMPED OUT 10,000 gallon tank last containing JET "A". Tank inerted with dry ice for transport.
PROFILE #A0910

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
JOB #7724
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR.

JOB SITE: OAKLAND INT'L AIRPORT
1 Airport Dr., M-110
Oakland, California

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: Jill A. Brown — Signature: Jill A. Brown — Month Day Year: 0 6 0 6 9 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROBERT V. PETRUCCI — Signature: Robert V. Petrucci — Month Day Year: 0 6 0 6 9 1

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Month Day Year:

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER (800) 424-8802

90538237

Do Not Write Below This Line

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite (12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD000591481 | Manifest Document No. 120551A
2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
PORT OF OAKLAND
530 WATER ST.
OAKLAND, CA
4. Generator's Phone 415 272-1178 / 272-1100

A. State Manifest Document Number 90005519
B. State Generator's ID
C. State Transporter's ID 168008
D. Transporter's Phone (415) 822-1181
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone 1-800-894-4444

5. Transporter 1 Company Name: HYDRO-CHEM SERVICES, INC
6. US EPA ID Number: CAD098008145791
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address: REFINERY SERVICES, 13331 N. HWY 33, PATTERSON, CA. 95363
10. US EPA ID Number: CAD008316728

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON RCRA HAZARDOUS WASTE, LIQUID GROUND WATER WITH FUEL OIL	001	TT	04900	G	State 223 / EPA/Other NONE
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
GROUND WATER 99%
FUEL OIL 1%

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES, GOGGLES, RESPIRATOR

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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GENERATOR

Printed/Typed Name: Jill A Brown | Signature: Jill A. Brown | Month 10 Day 16 Year 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROSS W. ALLEN | Signature: Ross W Allen | Month 10 Day 16 Year 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

DHS 8022 A (1/86)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

90005519

Form Approved OMB No. 2050-0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite (12-pitch typewriter).

See Instructions on Back of Page 6 and Front of Page 7

Texic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: C|A|C|1|0|0|1|5|9|1|4|3|1|1|2 — Manifest Document No: 0|0|1|1|6|1|6
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
PORT OF OAKLAND
530 WATER ST, OAKLAND CA
4. Generator's Phone 415 272-1178

A. State Manifest Document Number: 90428912
B. State Generator's ID:

5. Transporter 1 Company Name: Refineries Service
6. US EPA ID Number: C A D D 6 8 1 6 6 7 2 8
C. State Transporter's ID: 102020
D. Transporter's Phone: 209-892-8670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Refineries Serivce
13331 N. HWY. 33
Patterson, CA. 95363
10. US EPA ID Number: C A D D 6 8 1 6 6 7 2 8
G. State Facility's ID:
H. Facility's Phone: 209 892-8670

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON RCRA HAZARDOUS WASTE LIQUID	001	T	014900	G	State 223 / EPA/Other N/A
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WATER - 99%
FUEL - 1%
PETROLEUM PRODUCT

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
24 HR. EMERGENCY CONTACT: # 1-800-874-4444
24 HR. EMERGENCY RESPONSE: CHEM TEL INC. # 1-800-255-3924
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

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Printed/Typed Name	Signature	Month	Day	Year
Jill A. Brown	Jill A Brown	10	16	91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Daniel Gerson		10	17	91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
JILL A BROWN	Jill A Brown	10	16	91

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Month	Day	Year

Do Not Write Below This Line

GENERATOR

TRANSPORTER

FACILITY

90428912

IN CASE OF AN EMERGENCY CALL CHEMTREC NATIONAL RESPONSE CENTER 1-800-424-9300

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 806, Sacramento, CA 95812-0400

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

RECEIVED
JUN 21 91
BASELINE

DATE RECEIVED: 06/06/91
DATE REPORTED: 06/17/91

LAB NUMBER: 104053

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED AIRLINES MAINTENANCE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104053
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/06/91
DATE ANALYZED: 06/12/91
DATE REPORTED: 06/17/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	REPORTING LIMIT * (ug/kg)
104053-1	T-1	1,100	770	7,800	11,000	100
104053-2	T-2	ND	ND	1,200	4,400	100
104053-3	T-3	ND	ND	ND	ND	5.0
104053-4	T-4	ND	ND	850	2,500	100

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	10
RECOVERY, %	94

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104053
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/06/91
DATE EXTRACTED: 06/07/91
DATE ANALYZED: 06/14/91
DATE REPORTED: 06/17/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	JET FUEL RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104053-1	T-1	2,200	ND	100
104053-2	T-2	600	ND	10
104053-3	T-3	22	ND	1.0
104053-4	T-4	90	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	113

BASELINE

[redacted] St[redacted] Su[redacted]
Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD

10405

Turn Around Time Standard

Lab Curtis and Thompkins

Contact Person

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hanger, MOIA

Samplers: (Signature)
Geneva Randall

No.	Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: TPH as Jet Fuel	Analysis: BTXE	Remarks	Detection Limits
1	T-1	6-6-91	14:25	Soil	6'		1	North side, center	X	X		TPH = 1.0 ppm
2	T-2	"	14:28	"	6'		1	Tank 2, west end	X	X		BTXE = 0.005 ppm
3	T-3	"	14:33	"	6'		1	Tank 1, east end	X	X		
4	T-4	"	14:37	"	6'		1	South side, center	X	X		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6-6-91 16:25	Melinda M. Berry			
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	Remarks:	
			6/6/91 4:30	Bill Port of Oakland P.O. # 52847	

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/12/91
DATE REPORTED: 06/20/91

LAB NUMBER: 104109

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED AIRLINES MAINTENANCE HANGAR

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104109
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134.36
LOCATION: UNITED AIRLINES MAINTENANCE HANGAR

DATE RECEIVED: 06/12/91
DATE EXTRACTED: 06/13/91
DATE ANALYZED: 06/15/91
DATE REPORTED: 06/17/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	JET FUEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104109-1	EX1	ND	ND	ND	1.0
104109-2	EX2	ND	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	114

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104109
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/12/91
DATE ANALYZED: 06/17/91
DATE REPORTED: 06/20/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	REPORTING LIMIT * (ug/kg)
104109-1	EX1	ND	ND	ND	ND	5.0
104109-2	EX2	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	94

08 '63 08:53 C&T BERKELEY

BASELINE
101 H Street, Suite L
Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD 10410 9

Turn-Around Time 24 hours on Jet fuel
Lab Curtis + Thompkins
Contact Person

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hangar

Samplers: (Signature)
Geneva Randall

No.	Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: TPH jet fuel	Analysis: BTXE (8020)	Remarks	Detection Limits
EX1		6-12-91	13:58	Soil	5.0'	-	1	South side, east	X	X	Standard TAT for BTXE 24 hour TAT for TPH jet fuel	TPH = 1.0 ppm BTXE = 0.005 ppm
EX2		6-12-91	14:05	Soil	5.0'	-	1	South side, west	X	X		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6/12/91 3:15				
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	Remarks:	
		[signature]	6/12/91 3:15	Bill Port of Oakland P.O.# 52847	

08 '63 08:54 C&T BERKELEY P.5

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/13/91
DATE REPORTED: 06/20/91

LAB NUMBER: 104127

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED A/L MAINTENANCE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104127
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 59134-36
LOCATION: UNITED AIRLINES MAINTENANCE HANGAR

DATE RECEIVED: 06/13/91
DATE EXTRACTED: 06/14/91
DATE ANALYZED: 06/15/91
DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	JET FUEL RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104127-1	EX3	ND	ND	1.0
104127-2	EX4	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	114

08 '63 09:04 CCT EEPKELEY

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104127
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/13/91
DATE ANALYZED: 06/18/91
DATE REPORTED: 06/20/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	REPORTING LIMIT * (ug/kg)
104127-1	EX3	ND	ND	ND	ND	5.0
104127-2	EX4	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	13
RECOVERY, %	103

08 '83 09:05 CRT BERKELEY

101 H Stre[redacted]Sui[redacted]
[redacted]Pet[redacted]ma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD

10412 T

Turn-Around Time 24 HOUR FOR TPH
Lab Curtis + Thompkins
Contact Person

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hanger

Samplers: (Signature) Genera Randall

	No. Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: TPH as jet fuel	BTXE (8020)	Remarks	Detection Limits
1 *	EX3	6/13/91	11:25	Soil	5.0'	-	1	East side, South end	X	X	24 Hour TAT for TPH	TPH = 1.0 ppm
2	EX4	6/13/91	11:30	Soil	5.0	-	1	East side, north end	X	X	Standard TAT for BTXE	BTXE = 0.005 ppm

* Possible high conc

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Genera Randall	6/13/91 3:05				
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) [signature]	Date / Time 6/13/91 3:05	Remarks: Bill: Port of Oakland P.O. # 52847. Verbal results to Irene Kan 420-8686	

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/17/91
DATE REPORTED: 06/20/91

LAB NUMBER: 104145

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED A/L MAINTENANCE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104145
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED AIRLINES MAINTENANCE HANGAR

DATE RECEIVED: 06/17/91
DATE EXTRACTED: 06/18/91
DATE ANALYZED: 06/19/91
DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	JET FUEL RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104145-1	EX5	ND	ND	1.0
104145-2	EX6	ND	ND	1.0
104145-3	EX7	ND	ND	1.0
104145-4	EX8	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	7
RECOVERY, %	92

08 '63 07:16 CET BERKELEY

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104145
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/17/91
DATE ANALYZED: 06/19/91
DATE REPORTED: 06/20/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	REPORTING LIMIT * (ug/kg)
104145-1	EX5	ND	ND	ND	ND	5.0
104145-2	EX6	11	ND	ND	ND	5.0
104145-3	EX7	ND	ND	ND	ND	5.0
104145-4	EX8	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	103

08 '63 07:16 CRT BERKELEY

BASELINE

[redacted] Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD

Turn-Around Time TPH - 24 hour
Lab Curtis + Thompkins
Contact Person

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hangar

Samplers: (Signature)
Geneva Randall

	No. Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	TPH as Jet fuel	BTXE (8020)	Remarks	Detection Limits
1	EX5	6-17-91	8:30	Soil	5'	-	1	North side, east end	X	X	TPH = 24 hour TAT	TPH = 1.0 ppm
2	EX6	"	8:35	"	5'	-	1	North side, west end	X	X	BTXE = Standard TAT	BTXE = 0.005 ppm
3	EX7	"	8:45	"	5'	-	1	West side, south end	X	X		
4	EX8	"	8:55	"	5'	-	1	West side, north end	X	X		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6-17-91 10:55				
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	Remarks:	
		[signature]	6/17/91 10:55	Bill: Port of Oakland P.O. # 52847	

P.5

08 '63 07:17 CAT BERKELEY

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/06/91
DATE REPORTED: 06/10/91

RECEIVED
JUN 12 1991
BASELINE

LAB NUMBER: 104041

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED AIRLINES MAINTENANCE HANGAR

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104041-1
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
SAMPLE ID: STOCKPILE 1

DATE RECEIVED: 06/06/91
DATE ANALYZED: 06/07/91
DATE REPORTED: 06/07/91

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES
Extraction Method: EPA 5030 - Purge & Trap

COMPOUND	Result ug/kg	Reporting Limit (ug/kg)
chloromethane	ND	1,000
bromomethane	ND	1,000
vinyl chloride	ND	1,000
chloroethane	ND	1,000
methylene chloride	ND	500
acetone	ND	1,000
carbon disulfide	ND	500
trichlorofluoromethane	ND	500
1,1-dichloroethene	ND	500
1,1-dichloroethane	ND	500
cis-1,2-dichloroethene	ND	500
trans-1,2-dichloroethene	ND	500
chloroform	ND	500
freon 113	ND	500
1,2-dichloroethane	ND	500
2-butanone	ND	1,000
1,1,1-trichloroethane	ND	500
carbon tetrachloride	ND	500
vinyl acetate	ND	1,000
bromodichloromethane	ND	500
1,2-dichloropropane	ND	500
cis-1,3-dichloropropene	ND	500
trichloroethylene	ND	500
dibromochloromethane	ND	500
1,1,2-trichloroethane	ND	500
benzene	detected(380)	500
trans-1,3-dichloropropene	ND	500
2-chloroethylvinyl ether	ND	1,000
bromoform	ND	500
2-hexanone	ND	1,000
4-methyl-2-pentanone	ND	1,000
1,1,2,2-tetrachloroethane	ND	500
tetrachloroethylene	ND	500
toluene	ND	500
chlorobenzene	ND	500
ethyl benzene	1,900	500
styrene	ND	500
total xylenes	detected(480)	500

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	116 %
Toluene-d8	105 %
Bromofluorobenzene	71 %

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104041
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/06/91
DATE EXTRACTED: 06/06/91
DATE ANALYZED: 06/06/91
DATE REPORTED: 06/07/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	JET FUEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104041-1	STOCKPILE 1	ND	ND	3,300	100

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	101

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104041-1
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED AIRLINES MAINTENANCE HANGAR
SAMPLE ID: STOCKPILE 1

DATE RECEIVED: 06/06/91
DATE ANALYZED: 06/07/91
DATE REPORTED: 06/10/91

Title 26 Metals in Soils & Wastes
Digestion Method: EPA 3050

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Antimony	ND	3.0	EPA 6010
Arsenic	ND	2.5	EPA 7060
Barium	39.1	0.25	EPA 6010
Beryllium	0.11	0.10	EPA 6010
Cadmium	ND	0.25	EPA 6010
Chromium (total)	23.1	0.50	EPA 6010
Cobalt	4.9	0.90	EPA 6010
Copper	7.0	0.50	EPA 6010
Lead	ND	3.0	EPA 7420
Mercury	ND	0.10	EPA 7471
Molybdenum	ND	0.70	EPA 6010
Nickel	23.2	1.6	EPA 6010
Selenium	ND	2.5	EPA 7740
Silver	ND	0.50	EPA 6010
Thallium	ND	2.5	EPA 7841
Vanadium	16.3	0.50	EPA 6010
Zinc	21.3	0.50	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%		RPD,%	RECOVERY,%
Antimony	4	91	Mercury	<1	102
Arsenic	3	103	Molybdenum	2	96
Barium	<1	101	Nickel	1	98
Beryllium	<1	106	Selenium	1	116
Cadmium	<1	88	Silver	<1	89
Chromium	<1	100	Thallium	<1	106
Cobalt	2	100	Vanadium	<1	98
Copper	<1	100	Zinc	1	94
Lead	3	91			

BLAINE

[redacted] Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD

10401

Turn Around Time [redacted]

Lab Curtis and Thompkins

Contact Person

Project No.	Project Name and Location
9134-36	United Airlines Maintenance Hangar, NOIA

Samplers: (Signature)
Geneva Randall

No.	Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: TPH as Jet Fuel	Analysis: Title 26 Metals	Analysis: 8240	Analysis: [illegible]	Remarks	Detection Limits
	Stockpile 1	6-6-91	11:40	SOIL	0.5	-	2 1 jar		X	X	X	X		TPH = 1.0 ppm

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6-6-91 12:05	[signature]			
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	Remarks: Submit bill to Port of Oakland P.O.# 52847	

AT T

Aqua Terra Technologies
Aquatic Bioassay
Laboratory

295 Buskirk Avenue
Suite 120
Walnut Creek, CA
945
415 934-4884
FAX 934-0418

RECEIVED
JUN 28 1991
BASELINE

LETTER OF TRANSMITTAL

Date: June 24, 1991

To: Ms. Irene Kan
Baseline Environmental Consulting
5900 Hollis Street
Emeryville, CA 94608

From: William E. Foster, M.S.
Laboratory Manager

Terrance E. Carter
Laboratory Director

Subject: Aquatic Toxicity Testing Results for Hazardous Waste Testing.

SAMPLE MATRIX AND I.D.: Soil Sample #10132 (stockpile 1); Job #59134-36; PO #52847.

TREATMENT DILUTIONS (mg/L): 250, 500, 750, and Control run in soft water (40-48 mg/L hardness) and in duplicate with 10 fish/3 L tank and 20 fish/treatment.

TESTING PERIOD: June 6-10, 1991.

BIOASSAY TEST: Fathead minnow (Pimephales promelas) 96-hour static Hazardous Waste Toxicity.

METHODS: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, American Public Health Association, 1986; "Static Acute Bioassay Procedures for Hazardous Waste Samples" (Polisini and Miller, 1988), California Department of Fish and Game; and certified by the State of California Department of Health Services.

SUMMARY:

Fathead minnow 96-hour percent survival was 100% in Control.
Fathead minnow 96-hour percent survival was 100% in all treatments for Soil Sample #10132.

The 96-hour LC50 > 750 mg/L for Soil Sample #10132 (stockpile 1).

Summary data sheets for this test are enclosed.

Aqua Terra Technologies
2950 Buskirk Avenue
Walnut Creek, CA 94596
(415) 934-4884

STATIC ACUTE BIOASSAY
(Hazardous Waste Test)

ATT

CLIENT: Baseline Environmental Consulting (pg. 2 of 2) ATTENTION: Ms. Kan

SAMPLE ID#: 10132 SAMPLE DESCRIPTION: Soil TESTING DATES: 6/6/91 to 6/10/91

CLIENT ID#: Stockpile 1; Project # 59134-36; PO #52847

			INITIAL				24-HOUR				48-HOUR				72-HOUR				96-HOUR,FINAL			
TEST CONC mg/L	Alk * mg/L	Hard * mg/L	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC
250 A			10	7.8	8.8	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
250 B			10	7.8	8.8	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
500 A			10	7.8	8.9	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
500 B			10	7.8	8.8	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
750 A	68	84	10	7.8	8.9	20	10	8.0	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
750 B	68	84	10	7.8	8.9	20	10	8.0	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20

Test Species: fatheads Avg Length 32.0 mm SL Max Length 36.0 mm SL Min Length 28.0 mm SL

Test Source: Thomas Fish Company Avg Wt 0.314 g Max Wt 0.37 g Min Wt 0.25 g

Species Density 10 tank 20/treatment Control & Dilution Water dechlorinated tap Test Soln Vol 3 L Depth 17 cm Aeration Bubble

Acclimation Tank % Dead 0 Accl. Tank Water dechlorinated tap Accl. Period 30 Days Accl. Temp. 20 +/-2°C

96-hr. LC50: > 750 mg/L

95% Confidence Limits: N/A

96-hr. Final Percent Survival This Pg.: 100% in all treatments.

Remarks:

* Final Alkalinity, Hardness (mg/L): 750 mg/L = 75, 89.

Technician: WF, RD

Laboratory Manager: William E Foster

Laboratory Director:

STATACU2.HWT/BLE10132.2DA

Aqua Terra Technologies
2950 Buskirk Avenue
Walnut Creek, CA 94596
(415) 934-4884

STATIC ACUTE BIOASSAY
(Hazardous Waste Test)

ATT

CLIENT: Baseline Environmental Consulting (pg. 1 of 2) ATTENTION: Ms. Kan
SAMPLE ID#: 10132 SAMPLE DESCRIPTION: Soil TESTING DATES: 6/6/91 to 6/10/91
CLIENT ID#: Stockpile 1; Project #59134-36; PO #52847

	INITIAL						24-HOUR				48-HOUR				72-HOUR				96-HOUR,FINAL			
TEST CONC CTRL	Alk * mg/L	Hard * mg/L	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC	Live	pH	DO mg/L	Temp oC
C-1	30	45	10	8.0	8.9	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20
C-2	30	45	10	8.0	9.0	20	10	8.1	8.9	20	10	7.8	8.9	20	10	7.9	8.9	20	10	8.0	8.9	20

Test Species: fatheads Avg Length 32.0 mm SL Max Length 36.0 mm SL Min Length 28.0 mm SL
Test Source: Thomas Fish Company Avg Wt 0.314 g Max Wt 0.37 g Min Wt 0.25 g
Species Density 10 tank 20/treatment Control & Dilution Water dechlorinated tap Test Soln Vol 3 L Depth 17 cm Aeration Bubble
Acclimation Tank % Dead 0 Accl. Tank Water dechlorinated tap Accl. Period 30 Days Accl. Temp. 20 +/-2°C

96-hr. LC50: N/A
95% Confidence Limits: N/A
96-hr. Final Percent Survival in Controls: 100%

Remarks:
* Final Alkalinity, Hardness (mg/L): Controls = 35, 50.

Technician: WE, RD, PR

Laboratory Manager: [signature]
Laboratory Director: [signature]

BASELINE
1[redacted]H Street, Suite L[redacted]
Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD

[redacted]-Around Time [redacted] 4 day

Lab Aqua Terra Pleasant Hill ~~Curtis and Thompkins~~

Contact Person Bill Foster

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hanger, MOIA

Samplers: (Signature) Geneva Randall

No. Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: Fish bioassay Hazardous Waste Toxicity test w/ Fathead	Remarks	Detection Limits
Stockpile 1	6-6-91	11:40	Soil	0.5	–	1		X	Verbal results on Monday June 10	
									#10132	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6-6-91 12:05	[signature]	Bill Foster	6/6/91 [illegible]	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6-6-91 13:00	[signature]			
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	
[signature]	6-6-91 1300	Richard Daggett		Submit bill to Port of Oakland P.O. #52847 Bill to: Baseline Baseline Contact: Irene Ka[illegible]	

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 104281

Project Name: United A/L Maintenance
Project Number: 89134-36

Report Date: 27 June 91

ANALYSIS: pH

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	Method	Analyst	QC Batch
104281-001	STOCKPILE 1	Soil	06-JUN-91	06-JUN-91	26-JUN-91	7.2	SU *	EPA 9045	TR	1836

* Soil pH measured as water

14 '53 08:21 CCT BERKELEY

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Baseline Environmental
Project Name: United A/L Maintenance
Project Number: 89134-36

Laboratory Login Number: 104281
Report Date: 27 June 91

ANALYSIS: pH

QC Batch Number: 1836

Calibration Verification Results

Sample	Result	TV	Difference	Limit	Analyzed
ICV	10.00	10.00	.00	< 0.10	26-JUN-91
CCV	9.91	10.00	.09	< 0.10	26-JUN-91

Sample Duplicate Results

Sample	Duplicate	RPD	Analyzed
7.19	7.19	0%	26-JUN-91

14 '63 08:22 CBT BERKELEY

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104402
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED AIRLINES MAINTENANCE HANGER

DATE RECEIVED: 06/06/91
DATE ANALYZED: 07/08/91
DATE REPORTED: 07/08/91

ANALYSIS: IGNITABILITY

LAB ID	SAMPLE ID	RESULT
104402-1	STOCKPILE 1	NOT IGNITABLE *

* Not ignitable as defined in CCR Title 26, Section 22-66702(a)(2).

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 104402
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9-117.07
LOCATION: LANGLEY/DOOLITTLE

DATE RECEIVED: 07/02/91
DATE ANALYZED: 07/08/91
DATE REPORTED: 07/08/91

ANALYSIS: IGNITABILITY

LAB ID	SAMPLE ID	RESULT
104402-2	LDV-1	NOT IGNITABLE *

* Not ignitable as defined in CCR Title 26, Section 22-66702(a)(2).

APPENDIX D

LABORATORY REPORT, GROUNDWATER

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/11/91
DATE REPORTED: 06/21/91

LAB NUMBER: 104085

CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9134-36

LOCATION: UNITED A/L MAINTENANCE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

11 '53 07:48 C&T BERKELEY P.2

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104085
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/11/91
DATE EXTRACTED: 06/12/91
DATE ANALYZED: 06/18/91
DATE REPORTED: 06/21/91
DATE REVISED: 06/25/91

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	JET FUEL RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
104085-1	T-WATER	19,000	ND	500

ND = Not detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	80

13 '89 08:05 CRT BERKELEY

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 104085
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9134-36
LOCATION: UNITED A/L MAINTENANCE

DATE RECEIVED: 06/11/91
DATE ANALYZED: 06/18/91
DATE REPORTED: 06/21/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT * (ug/L)
104085-1	T-WATER	95	14	52	42	5.0

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	13
RECOVERY, %	103

BASELINE

101 H Street, Suite L
Petaluma, CA 94952
(707) 762-5233

CHAIN OF CUSTODY RECORD 104085

Turn-Around Time: Standard
Lab: Curtis + Thompkins
Contact Person:

Project No.	Project Name and Location
59134-36	United Airlines Maintenance Hangar

Samplers: (Signature)
Geneva Randall

No.	Station	Date	Time	Media	Depth	Composites	No. of Containers	Station Location	Analysis: TPH as Jet Fuel	Analysis: BTXE (602)	Remarks	Detection Limits
	T-Water	6/10/91	15:30	H_2O	–	–	5		X	X	VOAs preserved with HCl	TPH = 50 ppb BTXE = 0.5 ppb

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Geneva Randall	6/10/91 16:45	Melinda Burry			
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	Remarks:	
Linda Burry	6/11/91 9:10		6/11/91 9:10	Bill: Port of Oakland	

P.5
11 '63 07:49 C&T BERKELEY

APPENDIX E

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK)/CONTAMINATION SITE REPORT

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO — HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☒ NO

FOR LOCAL AGENCY USE ONLY. I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25 THE HEALTH AND SAFTY CODE.

SIGNED _____ DATE _____

REPORT DATE 10/31/88 — CASE # _____

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: Michele Heffes — PHONE: (415) 839-2652 — SIGNATURE: Michele Heffes

REPRESENTING: ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER

COMPANY OR AGENCY NAME: Port of Oakland

ADDRESS: 66 STREET Jack London Square CITY Oakland STATE CA ZIP 94

RESPONSIBLE PARTY

NAME: Port of Oakland ☐ UNKNOWN — CONTACT PERSON: Neil Werner — PHONE: (415) 839-

ADDRESS: 66 STREET Jack London Square CITY Oakland STATE CA ZIP

SITE LOCATION

FACILITY NAME (IF APPLICABLE): Vicinity of Bld M-110 — OPERATOR: World Airways — PHONE: ( )

ADDRESS: 1100 STREET Airport Drive CITY Oakland COUNTY Alameda ZIP

CROSS STREET: John Glenn Drive — TYPE OF AREA: ☐ COMMERCIAL ☐ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☒ OTHER Airport — TYPE OF BUSINESS: ☐ RETAIL FUEL STA ☐ FARM ☒ OTHER Hangar

IMPLEMENTING AGENCIES

LOCAL AGENCY — AGENCY NAME: Alameda Co. Health Care Services — CONTACT PERSON: _____ — PHONE: ( )

REGIONAL BOARD: SF Region 2 — PHONE: ( )

SUBSTANCE(S) INVOLVED

(1) NAME: Jet Fuel — QUANTITY LOST (GALLONS): _____ ☒ UNKN

(2) Waste Oil / Solvents _____ ☒ UNKN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 10/24/88 — HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITI ☐ TANK TEST ☐ TANK REMOVAL ☒ OTHER Soil Sampling

DATE DISCHARGE BEGAN: ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED? ☐ YES ☐ NO IF YES, DATE

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☐ REMOVE CONTENTS ☐ REPLACE TANK ☒ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCED ☒ OTHER Not Completed

SOURCE/CAUSE

SOURCE OF DISCHARGE: ☐ TANK LEAK ☒ UNKNOWN ☐ PIPING LEAK ☐ OTHER

TANK(S) ONLY/CAPACITY: 3 (10,000) GAL — AGE 13 YRS ☐ UNKNOWN

MATERIAL: ☐ FIBERGLASS ☐ STEEL ☒ OTHER _____

CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILU ☐ CORROSION ☐ UNKNOWN ☐ SPILL ☐ OTHER _____

CASE TYPE

CHECK ONE ONLY: ☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTE

CURRENT STATUS

CHECK ONE ONLY: ☒ SITE INVESTIGATION IN PROGRESS (DEFINING EXTENT OF PROBLEM) ☐ CLEANUP IN PROGRESS ☐ SIGNED OFF (CLEANUP COMPLETED OR UNNECESSAR ☐ NO ACTION TAKEN ☐ POST CLEANUP MONITORING IN PROGRESS ☐ NO FUNDS AVAILABLE TO PROCEED ☐ EVALUATING CLEANUP ALTERNATIVI

REMEDIAL ACTION

CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)

☐ CAP SITE (CD) ☐ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (☐ CONTAINMENT BARRIER (CB) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS) ☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☒ OTHER (OT) See Below

COMMENTS

Removal of [illegible]

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

REPORT DATE: 06 28 91

CASE #:

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.

SIGNED _____ DATE _____

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: G. Randall

PHONE: (707) 762-5233

SIGNATURE: G. Randall

REPRESENTING ☐ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☒ OTHER Consultant

COMPANY OR AGENCY NAME: BASELINE Environmental Consulting

ADDRESS: 101 H Street, Suite L (STREET), Petaluma (CITY), CA (STATE) 94952 (ZIP)

RESPONSIBLE PARTY

NAME: Port of Oakland ☐ UNKNOWN

CONTACT PERSON: Andrew Clark-Clough

PHONE: (415) 272-1178

ADDRESS: 530 Water Street (STREET), Oakland (CITY), CA (STATE) 94607 (ZIP)

SITE LOCATION

FACILITY NAME (IF APPLICABLE): George A. Miller Aviation Hanger (United)

OPERATOR:

PHONE: ( )

ADDRESS: 1100 Airport Drive (STREET), Oakland Airport, Oakland, Alameda (COUNTY) (ZIP)

CROSS STREET: John Glenn Drive

TYPE OF AREA ☐ COMMERCIAL ☒ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☐ OTHER

TYPE OF BUSINESS ☐ RETAIL FUEL STATION ☐ FARM ☒ OTHER Airplane Maint

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME: Alameda Co. Health Agency

CONTACT PERSON: Dennis Byrne

PHONE: (415) 271-4320

REGIONAL BOARD: San Francisco

PHONE: ( )

SUBSTANCES INVOLVED

(1) NAME: Jet Fuel

QUANTITY LOST (GALLONS): _____ ☒ UNKNOWN

(2) _____ ☐ UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 06 10 91

HOW DISCOVERED ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☒ TANK REMOVAL ☐ OTHER _____

DATE DISCHARGE BEGAN: ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE 06 06 91

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☒ REMOVE CONTENTS ☐ REPLACE TANK ☒ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURE ☐ OTHER _____

SOURCE/CAUSE

SOURCE OF DISCHARGE: ☒ TANK LEAK ☐ UNKNOWN ☐ PIPING LEAK ☐ OTHER

TANKS ONLY/CAPACITY: 10,000 GAL. AGE >12 YRS ☐ UNKNOWN

MATERIAL: ☐ FIBERGLASS ☒ STEEL ☐ OTHER _____

CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ CORROSION ☒ UNKNOWN ☐ SPILL ☐ OTHER _____

CASE TYPE

CHECK ONE ONLY
☐ UNDETERMINED ☐ SOIL ONLY ☒ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

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☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☐ OTHER (OT) _____

COMMENTS

HSC 05 (4/87)