GROUNDWATER INVESTIGATION
FOLLOWING UNDERGROUND TANK REMOVAL
BUILDINGS 85, 133 AND 137
ALAMEDA GATEWAY
2900 MAIN STREET
ALAMEDA, CALIFORNIA
SCI 554.007

NOV 1992

Prepared For:

Mr. Ronald W. Doll
Attorney at Law
c/o The John Beery Organization
2236 Mariner Square
Alameda, California 94501

By:

Sean O Carson

Sean O. Carson
Civil Engineer 45074 (expires 3/31/94)

REGISTERED PROFESSIONAL ENGINEER
SEAN O. CARSON
C 45074
CIVIL
STATE OF CALIFORNIA

R. William Rudolph

R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/92)

REGISTERED PROFESSIONAL ENGINEER
ROSS WILLIAM RUDOLPH
No. GE 000741
GEOTECHNICAL
STATE OF CALIFORNIA

Subsurface Consultants, Inc.
171 - 12th Street, Suite 201
Oakland, California 94607
(510) 268-0461

November 4, 1992

I INTRODUCTION

This report presents the results of a groundwater investigation conducted by Subsurface Consultants, Inc. (SCI) at the Alameda Gateway Business Park at 2900 Main Street in Alameda, California. The investigation was required by the Alameda County Health Care Services Agency (ACHCSA) to evaluate whether groundwater quality has been impacted by hydrocarbon releases from previous underground storage tanks. The location of the site is shown on the Site Plan, Plate 1.

Four underground storage tanks were removed from the site on April 11, 1990. Details regarding the various tanks are summarized in the following table. The locations of the tanks are shown on the Site Plan.

Tank	Capacity (Gallons)	Contents
85A	600	Diesel
85B	7000	Gasoline
133	600	Diesel
137	1100	Fuel Oil

Data regarding tank removal were presented in a report dated June 1990, prepared by Mittelhauser Corporation. A copy of the report is included in Appendix C. Soil and groundwater samples obtained and analytically tested following tank removal indicated that releases had occurred from each tank.

On May 26, 1992 the ACHCSA issued a letter requesting that an investigation be conducted to evaluate the impacts of the tank releases. SCI prepared a work plan (dated July 1, 1992) to conduct the investigation. The work plan was subsequently approved by the ACHCSA, as recorded in their letter dated August 17, 1992. As outlined in the work plan, the scope of SCI's services included:

1. Obtaining a permit to install wells from the Alameda County Flood Control and Water Conservation District, Zone 7,
2. Performing a utility check for drilling locations,
3. Drilling three test borings varying from 12 to 15 feet deep,
4. Constructing a groundwater monitoring well in each of the test borings,
5. Developing, purging, and sampling the wells in accordance with Regional Water Quality Control Board guidelines,
6. Performing analytical tests on soil and groundwater samples from each test boring/monitoring well,
7. Performing a level survey,
8. Performing a tidal study, and
9. Preparing this report.

II FIELD INVESTIGATION

Subsurface conditions were investigated by drilling 3 test borings 12 to 15 feet deep and completing them as monitoring wells. The monitoring well locations are shown on Plates 1 and 2.

A discussion of procedures followed during drilling, soil sampling, monitoring well installation, and development is presented in Appendix A. Logs of the test borings are presented on Plates 3 through 5.

A level survey was performed to determine the top of casing (TOC) elevation for the wells. The elevation reference is at the southwest corner of the concrete box covering the water valve pit situated adjacent to southwest corner of Building 61. The benchmark has a known elevation of +9.80 feet, mean lower low water datum (MLLW).

A tidal study was conducted to determine the influence of tidal changes on the groundwater levels in the wells. A detailed discussion of field procedures used during the tidal study is also provided in Appendix A.

III SITE CONDITIONS

A. Regional Setting

The site is located on the northwest end of Alameda, an island located south of the Oakland Inner Harbor Channel. In the early

1800's, about one third of the northern portion of Alameda was marshland, traversed by meandering tidal channels. The Alameda Gateway site is located entirely within the area of former marshland. Reclamation of the marshland by filling began in the late 1800's. The current configuration of the shoreline in the area was completed in the early 1900s.

B. Surface Conditions

The site is approximately triangular in shape. The northern portion of site lies at the southern shore of the Oakland Inner Harbor Channel. The shoreline is composed of concrete walls and concrete rip-rap. Several concrete and timber piers exist in the area. Landward of the shoreline, there are several buildings. These buildings were previously part of the Todd Shipyard. The remainder of the site is occupied by paved and unpaved driveways and parking areas.

C. Subsurface Conditions

Our test borings indicate that the site is blanketed by about 7 to 14 feet of fill. In general, the fill consists of clean, clayey and silty sands and clayey silt. The upper fill materials appear to have been placed by conventional end dumping. The lower portions of the fill appear to consist of dredge spoils and are largely made up of silt and sand.

The fill is underlain by Bay Mud, which consists of soft clayey silt containing occasional layers of sandy silt, silty sand and peat. The Bay Mud is highly organic and compressible.

Groundwater levels were measured in the wells using a well sounder and/or a steel tape with water and product sensitive pastes. Water level data indicate that groundwater exists at depths of 2 to 5 feet below existing grade. The water level data is presented in Table 1.

Tidal influences were evaluated by observing changes in well water levels during a 5.4 foot tide change over a 12 hour period. The tidal influence study data is presented in Table 2. The study indicated that MW-2 responded significantly (greater than 2 feet) to tidal level changes while little or no change in groundwater levels were recorded in wells MW-1 and MW-3.

IV ANALYTICAL TESTING

Selected soil and groundwater samples were analyzed by Curtis & Tompkins, Ltd., a laboratory certified by the DHS for hazardous waste and water testing.

Analyses were performed on selected soil and groundwater samples and included total extractable hydrocarbons (TEH), total volatile hydrocarbons (TVH), benzene, toluene, ethylbenzene and xylenes (BTEX), oil and grease (O&G), and lead. The analytical results are presented in Tables 3 and 4. Sample preparation and analytical test methods for the analyses are summarized in Appendix B. Analytical test reports and Chain-of-Custody documents are also presented in Appendix B.

V DISCUSSION AND CONCLUSIONS

The investigation indicates that the soil and groundwater near each tank site have been impacted by petroleum hydrocarbons. The hydrocarbons detected in soil consisted of oil and grease and diesel. No detectable concentrations of benzene, toluene, ethylbenzene or xylenes were found.

Hydrocarbon concentrations in soil are highest near Tanks 137 and 85. Diesel at a concentration of 4900 mg/kg (ppm) was encountered near Tank 137. At Building 85 diesel was detected at a concentration of 12,000 mg/kg. Lead concentrations in soil were relatively low varying up to 46 mg/kg. The analytical results are graphically summarized on Plate 2.

The contaminants in groundwater consist primarily of diesel. Diesel was detected at concentrations of 4800, 820 and 4000 ug/l (ppb) in the wells near Tanks 137, 135, and 85, respectively. Total volatile hydrocarbons, as gasoline, were detected near Tank 85 at a concentration of 73 ug/l. No detectable concentrations of benzene, toluene, ethylbenzene and xylenes were encountered in groundwater, except in MW-1 near Tank 137, where 0.6 ug/l of ethylbenzene was detected. Lead concentrations in water ranged from 9 to 360 ug/l.

VI LIMITATIONS

This investigation was intended to provide a preliminary means of evaluating soil and/or groundwater contamination near previous tanks. Contamination may exist in other areas not investigated by SCI.

The conclusions drawn from this investigation are an expression of our professional opinion, and do not constitute a warranty or guaranty, either expressed or implied. Additional investigative work, if undertaken, may modify the conclusions presented herein, as additional information is generated.

SCI has performed this assessment in accordance with generally accepted standards of care which exist in Northern California at the time of this study. Please recognize that the definition and evaluation of environmental conditions is difficult and inexact. Judgements leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and/or historic conditions applicable to the site. In addition, the conclusions made herein reflect site conditions at the time of the investigation. These conditions may change with time and as such, the conclusions may also change.

The conclusions and opinions presented herein may also be affected by rapid changes in the field of environmental engineering and the laws governing hazardous waste. The reader is advised to consult with SCI prior to relying upon the information provided.

Illustrations:

Plate 1	Site Plan
Plate 2	Contaminant Concentrations
Plates 3 thru 5	Logs of Test Borings
Plate 6	Unified Soil Classification System

Tables:

Table 1 - Groundwater Elevation Data

Table 2 - Tidal Influence Study Data

Table 3 - Contaminant Concentrations in Soil

Table 4 - Contaminant Concentrations in Groundwater

Appendices:

A - Investigation Protocol

B - Analytical Testing

C - Mittlehauser Tank Removal Report

Distribution:

6 copies: Mr. Ronald W. Doll
Attorney at Law
The John Beery Organization
2236 Mariner Square
Alameda, California 94501

1 copy: Ms. Juliet Shin
Alameda County health Care Services Agency
80 Swan Way, Room 350
Oakland, California 94662-0901

1 copy: Mr. Rich Hiett
Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

JTW:SOC:RWR:JPB:egh

ALAMEDA ESTUARY

PIER

SHORELINE

APPROXIMATE RANGE OF GROUNDWATER FLOW DIRECTIONS

MW-2

BUILDING 133

600 GAL. DIESEL

PIER

BUILDING 140

BUILDING 61

SURVEY ELEVATION REFERENCE

MW-1

1100 GAL. FUEL OIL

BUILDING 137

MW-3

BUILDING 85

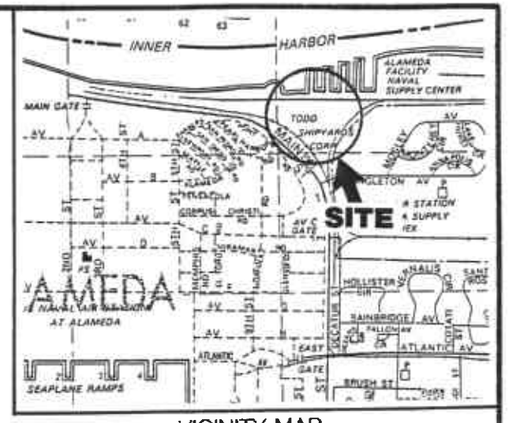
600 GAL. DIESEL
7000 GAL. GAS

POWER HOUSE

BUILDING 123 WAREHOUSE

POWER STATION

MAIN STREET



VICINITY MAP

MONITORING WELL

PREVIOUS UNDERGROUND STORAGE TANK AREA

TANK SITE DETAILS (SEE PLATE 2)

N

APPROXIMATE SCALE (feet)

0 200 400

SITE PLAN

Subsurface Consultants

2900 MAIN STREET – ALAMEDA, CA

JOB NUMBER	DATE	APPROVED
554.007	7/10/92	

PLATE 1

BUILDING 61

MW-1

SOIL@7.0' (mg/kg)	GROUNDWATER (ug/l)
O&G 140	ND
TEH 4900	4800
BTEX ND	0.6 EB
LEAD 13	9

N

100 fuel oil

BUILDING 137

SOIL@6.0' (mg/kg)	GROUNDWATER (ug/l)
O&G 120	ND
TEH 65	820
BTEX ND	ND
LEAD 46	10

MW-2

BUILDING 72

BUILDING 133

600 gas/diesel/fuel oil

N

BUILDING 123
WAREHOUSE

MW-3

SOIL@4.5' (mg/kg)	GROUNDWATER (ug/l)
O&G 1600	ND
TEH 12,000	4000
TVH ND	73
BTEX ND	ND
LEAD 9	360

CONCRETE PAD

(PREVIOUS BUILDING 85)

former 600 diesel 7000 gasoline

N

APPROXIMATE SCALE (feet)

0 40 80

⊕	MONITORING WELL
▨	PREVIOUS UNDERGROUND STORAGE TANK AREA
O&G	OIL & GREASE
TEH	TOTAL EXTRACTABLE HYDROCARBONS (DIESEL)
TVH	TOTAL VOLATILE HYDROCARBONS (GASOLINE)
BTEX	BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES
LEAD	TOTAL LEAD

Subsurface Consultants

CONTAMINANT CONCENTRATIONS

2900 MAIN STREET – ALAMEDA, CA

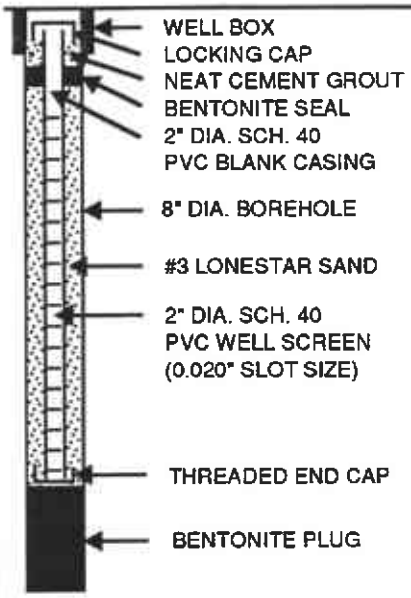
JOB NUMBER	DATE	APPROVED
554.007	9/28/92	

PLATE 2

LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 8/13/92
ELEVATION 9. 5 feet MSL

TOC = 9.16 feet



MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
			0			ASPHALTIC CONCRETE - 3" thick
					18	BROWN CLAYEY SAND (SC) medium dense, moist, with abundant gravel (fill)
					5	GROUNDWATER LEVEL DURING DRILLING
			5		push	BLACK SANDY GRAVEL (GP) loose, moist (fill)
						GRAY GREEN CLAYEY SILT (MH) soft, wet (fill)
						GRAY SILTY SAND (SM-SP) loose, wet (fill)
			10		push	
						BLUE GRAY CLAYEY SILT (MH) soft, wet (fill)
						GRAY SILTY SAND (SM-SP) loose, wet (fill)
			15		push	BLUE GRAY CLAYEY SILT (MH) soft, wet

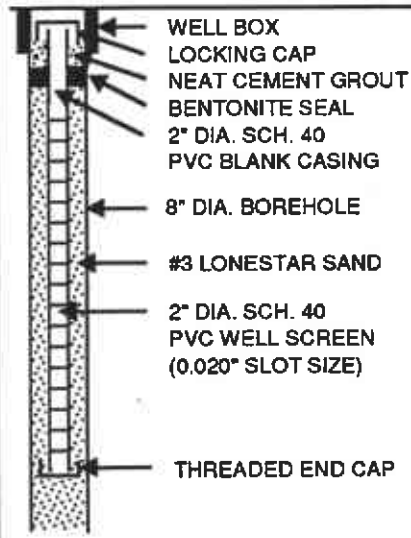
SAMPLER TYPES:
MODIFIED CALIFORNIA DRIVE
O.D.: 3.0 inches
I.D.: 2.5 inches
*CALIFORNIA DRIVE
O.D.: 2.5 inches
I.D.: 2.0 inches

HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 8/13/92
ELEVATION 10.1 feet MSL

TOC = 9.73 feet



MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
			0			BROWN SANDY GRAVEL (GM) dense, moist, contains cobbles to 4" (fill)
					22	ORANGE BROWN CLAYEY SAND (SC) medium dense, moist (fill)
					7	BLACK SILTY CLAYEY SAND (SM-SP) medium dense, moist, contains some gravel (fill)
			5			GROUNDWATER LEVEL DURING DRILLING
						BLUE GRAY CLAYEY SILT (MH) soft, wet (fill)
					14	
			10			GRAY SAND (SP) medium dense, wet, contains silty and clayey lenses (fill)
					push	
			15			

Subsurface Consultants

2900 MAIN STREET - ALAMEDA, CA

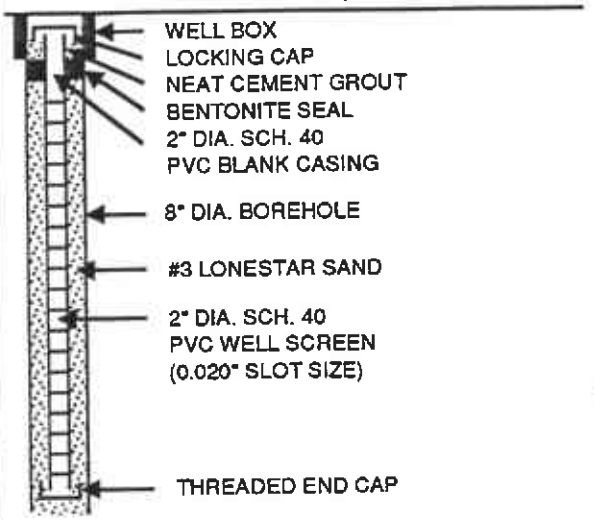
JOB NUMBER	DATE	APPROVED
554.007	8/26/92	

PLATE 3

LOG OF TEST BORING 3

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 8/13/92
ELEVATION 8.0 feet

TOC = 7.67 feet



MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
			0			CONCRETE SLAB - 6" thick
						BROWN SANDY GRAVEL (GM)
						medium dense, moist
					18	GROUNDWATER LEVEL DURING DRILLING
			5		3	ORANGE BROWN CLAYEY SAND (SC)
						medium dense, moist
						GRAY SILTY SAND (SM-SP)
						medium dense, moist to wet
						becomes loose
						heaving sands
					push	BLUE GRAY SILT (MH)
			10			soft, wet
						GRAY SAND (SP)
						loose, wet
						BLUE GRAY CLAYEY SILT (MH)
					push	soft, wet
			15			

Subsurface Consultants

2900 MAIN STREET - ALAMEDA, CA

JOB NUMBER 554.007 | DATE 8/26/92 | APPROVED

PLATE 4

GENERAL SOIL CATEGORIES			SYMBOLS	TYPICAL SOIL TYPES
COARSE GRAINED SOILS More than half is larger than No. 200 seive	GRAVEL More than half coarse fraction is larger than No. 4 seive size	Clean Gravel with little or no fines	GW	Well Graded Gravel, Gravel-Sand Mixtures
			GP	Poorly Graded Gravel, Gravel-Sand Mixtures
		Gravel with more than 12% fines	GM	Silty Gravel, Poorly Graded Gravel-Sand-Silt Mixtures
			GC	Clayey Gravel, Poorly Graded Gravel-Sand-Clay Mixtures
	SAND More than half coarse fraction is smaller than No. 4 seive size	Clean Sand with little or no fines	SW	Well Graded Sand, Gravelly Sand
			SP	Poorly Graded Sand, Gravelly Sand
		Sand with more than 12% fines	SM	Silty Sand, Poorly Graded Sand-Silt Mixtures
			SC	Clayey Sand, Poorly Graded Sand-Clay Mixtures
FINE GRAINED SOILS More than half is smaller than No. 200 seive	SILT AND CLAY Liquid Limit Less than 50%		ML	Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayey Fine Sand, or Clayey Silt with Slight Plasticity
			CL	Inorganic Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Silty Clay, Lean Clay
			OL	Organic Clay and Organic Silty Clay of Low Plasticity
	SILT AND CLAY Liquid Limit Greater than 50%		MH	Inorganic Silt, Micaceous or Diatomaceous Fine Sandy or Silty Soils, Elastic Silt
			CH	Inorganic Clay of High Plasticity, Fat Clay
			OH	Organic Clay of Medium to High Plasticity, Organic Silt
HIGHLY ORGANIC SOILS			PT	Peat and Other Highly Organic Soils

UNIFIED SOIL CLASSIFICATION SYSTEM

Subsurface Consultants

2900 MAIN STREET - ALAMEDA, CA

JOB NUMBER	DATE	APPROVED
554.007	8/26/92	

PLATE 5

Table 1.

Groundwater Elevation Data

Tank Area	Well	Date	Time	TOC Elev (ft)	Groundwater Depth (ft)	Groundwater Elevation (ft)
133	MW-1	8/19/92	1525	9.16	3.45	5.71
		9/01/92	0915		3.48	5.68
		9/01/92	1615		3.48	5.68
		9/16/92	1115		3.65	5.51
137	MW-2	8/19/92	1515	9.73	4.36	5.37
		9/01/92	0905		5.27	4.46
		9/01/92	1605		3.29	6.44
		9/16/92	1105		5.42	4.31
85A and B	MW-3	8/19/92	1520	7.67	2.32	5.35
		9/01/92	0910		2.16	5.51
		9/01/92	1610		2.15	5.52
		9/16/92	1110		2.32	5.35

TOC = Top of Casing
Elevation with respect to MLLW

Table 2.

Tidal Influence Study
9/1/92

Station		low tide			Elevations (MLLW)				high tide				
Event	1	2	3	4	5	6	7	8	9	10	11	12	13
Start Time	0759	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	1955
Tidal[1] Gauge	1.93	1.81	2.03	2.70	3.85	5.00	6.06	6.96	7.21	6.81	5.37	3.96	2.71
MW-2	4.57	4.46	4.35	4.28	4.33	4.60	5.28	6.0	6.44	6.42	5.75	5.12	4.91
MW-3	5.51	5.51	5.50	5.51	5.50	5.48	5.50	5.48	5.52	5.54	5.54	5.56	5.56
MW-1	6.01	5.68	5.66	5.69	5.69	5.69	5.70	5.68	5.68	5.67	5.68	5.70	5.67
Tidal[2] Gauge	1.93	1.81	2.22	2.99	4.06	5.36	6.35	7.19	7.16	6.56	5.19	3.61	4.16
Stop Time	0823	0920	1020	1115	1213	1315	1415	1514	1619	1720	1817	1920	2016

[1] = initial gauge reading
[2] = final gauge reading
MLLW = Mean Lower Low Water

Table 3.
Contaminant Concentrations in Soil

Tank Area	Sample ID	Oil and Grease mg/kg	TEH mg/kg	TVH mg/kg	B ug/kg	T ug/kg	E ug/kg	X ug/kg	Lead mg/kg
137	1 @ 7.0'	140	4,900	-	<5	<5	<5	<5	13
133	2 @ 6.0'	120	65	-	<5	<5	<5	<5	46
85A and B	3 @ 4.5'	1600	12,000	<1	<5	<5	<5	<5	9

Table 4.
Contaminant Concentrations in Groundwater

Tank Area	Sample ID	Oil and Grease mg/l	TEH ug/l	TVH ug/l	Benzene ug/l	Toluene ug/l	Ethyl-Benzene ug/l	Xylenes ug/l	Lead ug/l
137	MW-1	<5	4,800	-	<0.5	<0.5	0.6	<0.5	9
133	MW-2	<5	820	-	<0.5	<0.5	<0.5	<0.5	10
85A and B	MW-3	<5	4,000	73	<1	<1	<1	<1	360

TEH = total extractable hydrocarbons, EPA 8015/3550
TVH = total volatile hydrocarbons, EPA 8020, 3550
mg/kg = milligrams per kilogram or parts per million (ppm)
ug/kg = micrograms per kilogram or parts per billion (ppb)
mg/l = milligrams per liter or parts per million (ppm)
ug/l = micrograms per liter or parts per billion (ppb)
ND = None detected above reporting limits indicated in parentheses.

Appendix A

Investigation Protocol

APPENDIX A

INVESTIGATION PROTOCOL

A. Test Borings

The test borings were drilled using a truck-mounted drill rig equipped with 8-inch diameter hollow stem augers. Our field geologist observed drilling operations, prepared detailed logs of the test borings and obtained undisturbed samples of the materials encountered. Test boring logs are presented on Plates 3 through 5. Soils are classified in accordance with the Unified Soil Classification System described on Plate 6.

A Modified California Sampler (outside diameter of 3.0 inches, inside diameter of 2.5 inches) and California Drive Sampler (outside diameter of 2.5 inches, inside diameter of 2.0 inches) were used to obtain soil samples. The number of blows required to drive the sampler the final 12 inches of each 18-inch penetration was recorded and is presented on the test boring logs. Drilling and sampling equipment were thoroughly steam-cleaned prior to each use to reduce the likelihood of cross-contamination between samples and/or borings.

Soil samples were retained in 2.0-inch and 2.5-inch-diameter brass liners. Teflon sheeting was placed over the ends of the soil liners; the liners were subsequently capped and sealed with duct tape. The shoe sample from each drive was retained in a plastic bag and screened for volatile organics using an Organic Vapor Meter (OVM). The sealed liners were placed in ice-filled coolers and

remained iced until delivery to the analytical laboratory. Chain-of-custody records accompanied the samples. Soil cuttings generated during drilling were stockpiled on-site.

B. Groundwater Monitoring Wells

At the completion of drilling, a monitoring well was installed in each test boring. Well schematics are shown on the respective test boring log. In general, each well consists of a 2-inch diameter, Schedule 40 PVC well casing having flush-threaded joints. The well casing was steam-cleaned prior to being placed in the borehole.

The lower 10 feet of each well consists of machine-slotted well screen having 0.02-inch slots. The remaining portion of the wells consist of blank pipe. The wells were provided with a threaded bottom cap and locking top cap. The well screen is encased in a filter composed of Lonestar No. 3 washed sand. The filter sand was placed by carefully pouring it through the annulus between the hollow stem of the auger and the well casing. Periodically, the augers were raised to allow the sand to fill the annulus between the casing and the borehole. The filter extends from just below the bottom of the well to at least one half foot above the top of the screened section. A one-half foot thick bentonite pellet seal was placed above the sand filter. The annulus above the seal was backfilled with cement grout. The grout mixture consists of Portland cement mixed with tap clean water. It was placed in a manner similar to the sand filter. The monitoring wells were completed below grade and are protected by traffic-rated valve boxes.

The wells were developed after the grout seal had hardened. The depth to water was measured below the top of the well casing using an electric sounder and/or steel tape with water sensitive paste. The wells were then developed by removing water with a new disposable bailer. Approximately 40 gallons of water were removed from each well. The wells were sampled at least 24 hours after development. Prior to sampling, the wells were purged of about five gallons of water. When the wells had recharged to within 80 percent of their initial levels they were sampled with a new disposable bailer. Well development and purge water were placed in 55 gallon drums and left on-site for later disposal by others. Well development and purge logs are attached.

The Groundwater samples were retained in chilled, pre-cleaned containers supplied by the laboratory. The samples were placed in ice-filled coolers and remained iced until delivery to the analytical laboratory. Chain-of-custody records accompanied the samples to the laboratory.

c. Tidal Study

The tidal study was performed by measuring water levels in the wells and a tidal gauge over a twelve hour period.

The tidal gauge was constructed by placing 2 inch diameter Sch 40 PVC well screen in the Oakland Inner channel adjacent to the building 133, near MW-2. The elevation of the top of the gauge casing was measured during our level survey.

The tide and groundwater levels were measured using an electronic well sounder. The measuring events were conducted from 8 a.m. to 8 p.m. Each event started approximately on the hour with an initial reading of the tidal gauge. Then the monitoring levels in the wells were measured in a predetermined order. A final tidal gauge reading of each event was also taken. The duration of each measuring event was approximately 20 minutes.

Appendix B

Analytical Testing

APPENDIX B

ANALYTICAL TESTING

Analytical testing services were provided by Curtis and Tompkins, a State of California Department of Health Services (DHS) certified laboratory for hazardous waste and water testing. The analytical tests were performed on individual samples. A summary of sample preparation and test methods are presented below.

Test Analysis	Sample Preparation Method	Analysis Method
Total Extractable Hydrocarbons	EPA 3550	EPA 8015 modified
Total Volatile Hydrocarbons	EPA 5030	EPA 8015 Modified
Benzene, Toluene, Xylene, and Ethylbenzene	EPA 5030	EPA 8020
Oil and Grease	EPA 3550	SMWW 5520
Lead		EPA 7420/7421

Test results are summarized in Tables 2 and 3. Analytical test reports and chain-of-custody records are attached.

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

DATE RECEIVED: 08/24/92
DATE REPORTED: 08/31/92

LABORATORY NUMBER: 108392

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 554.007

LOCATION: ALAMEDA GATEWAY

RESULTS: SEE ATTACHED

Reviewed by

Reviewed by

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108393
CLIENT: SUBSURFACE CONSULTANTS
PROJECT: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/24/92
DATE ANALYZED: 08/28/92
DATE REPORTED: 08/31/92

ANALYSIS: LEAD
ANALYSIS METHOD: EPA 7420

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
108393-1	MW-1@3.0	13	mg/Kg	3
108393-2	MW-2@3.5	46	mg/Kg	3
108393-3	MW-3@2.5	9	mg/Kg	3

QA/QC SUMMARY:

RPD, %	<1
RECOVERY, %	93

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 108393

Project Name: Alameda Gateway
Project Number: 554.007

Report Date: 31 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108393-001	MW1 @ 3.0'	Soil	13-AUG-92	20-AUG-92	28-AUG-92	140	mg/Kg	50	HDD	6484
108393-002	MW2 @ 3.5'	Soil	13-AUG-92	20-AUG-92	28-AUG-92	120	mg/Kg	50	HDD	6484
108393-003	MW3 @ 2.5'	Soil	13-AUG-92	20-AUG-92	28-AUG-92	1600	mg/Kg	50	HDD	6484

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: Alameda Gateway
Project Number: 554.007

Laboratory Login Number: 108393
Report Date: 31 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 6484**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	86%	SMWW 17:5520EF	28-AUG-92
BSD	89%	SMWW 17:5520EF	28-AUG-92

		Control Limits
Average Spike Recovery	87%	80% - 120%
Relative Percent Difference	3.5%	< 20%

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 108393

Project Name: Alameda Gateway
Project Number: 554.007

Report Date: 31 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108393-004	MW-1	Water	17-AUG-92	20-AUG-92	28-AUG-92	ND	mg/L	5	HDD	6483
108393-005	MW-2	Water	17-AUG-92	20-AUG-92	28-AUG-92	ND	mg/L	5	HDD	6483
108393-006	MW-3	Water	17-AUG-92	20-AUG-92	28-AUG-92	ND	mg/L	5	HDD	6483

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: Alameda Gateway
Project Number: 554.007

Laboratory Login Number: 108393
Report Date: 31 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 6483**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	105%	SMWW 17:5520BF	28-AUG-92
BSD	104%	SMWW 17:5520BF	28-AUG-92

		Control Limits
Average Spike Recovery	105%	80% - 120%
Relative Percent Difference	1.6%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108393
CLIENT: SUBSURFACE CONSULTANTS
PROJECT: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/17/92
DATE RECEIVED: 08/24/92
DATE ANALYZED: 08/26/92
DATE REPORTED: 08/31/92

ANALYSIS: LEAD
ANALYSIS METHOD: EPA 7421

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
108393-4	MW-1	9	ug/L	3
108393-5	MW-2	10	ug/L	3
108393-6	MW-3	360	ug/L	30

QA/QC SUMMARY:

RPD, %	<1
RECOVERY, %	112

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

DATE RECEIVED: 08/20/92
DATE REPORTED: 09/03/92

LABORATORY NUMBER: 108363

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 554.007

LOCATION: ALAMEDA GATEWAY

RESULTS: SEE ATTACHED

Reviewed by

Reviewed by

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/20/92
DATE EXTRACTED: 08/24/92
DATE ANALYZED: 08/26/92
DATE REPORTED: 09/01/92

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)	REPORTING LIMIT* (mg/Kg)
108363-1	MW-1 @3.0'	**	4,900	100
108363-2	MW-2 @3.5'	**	65	1
108363-3	MW-3 @2.5'	**	12,000	100

ND = Not Detected at or above reporting limit.

* Reporting limit applies to all analytes.

** Quantitated as diesel range.

QA/QC SUMMARY: LABORATORY CONTROL SAMPLE

RECOVERY, %	65

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/17/92
DATE RECEIVED: 08/20/92
DATE EXTRACTED: 08/24/92
DATE ANALYZED: 08/25/92
DATE REPORTED: 09/01/92

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

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
108363-4	MW-1	**	4,800	50
108363-5	MW-2	**	820	50
108363-6	MW-3	**	4,000	50

ND = Not detected at or above reporting limit.

* Reporting limit applies to all analytes.
** Quantitated as diesel range.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	87

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/20/92
DATE ANALYZED: 08/25/92
DATE REPORTED: 09/03/92

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)
108363-4	MW-1	0.6	ND	ND	ND	0.5
108363-5	MW-2	ND	ND	ND	ND	0.5

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/20/92
DATE ANALYZED: 08/26/92
DATE REPORTED: 09/03/92

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
108363-3	MW3 @ 2.5'	ND(1)	ND(5)	ND(5)	ND(5)	ND(5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	101

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/20/92
DATE ANALYZED: 08/26/92
DATE REPORTED: 09/03/92

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)
108363-1	MW1 @ 3.0'	ND	ND	ND	ND	5
108363-2	MW2 @ 3.5'	ND	ND	ND	ND	5

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	105

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108363
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.007
LOCATION: ALAMEDA GATEWAY

DATE SAMPLED: 08/13/92
DATE RECEIVED: 08/20/92
DATE ANALYZED: 08/25/92
DATE REPORTED: 09/03/92
DATE REVISED: 09/08/92

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
108363-6	MW-3	73	ND(1)	ND(1)	ND(1)	ND(1)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	122

CHAIN OF CUSTODY FORM

PAGE _____ OF _____

PROJECT NAME: Alameda Gateway

JOB NUMBER: 554.007 LAB: Curtis & Tompkins

PROJECT CONTACT: Sean Carson TURNAROUND: Normal

SAMPLED BY: Jose Bermudez REQUESTED BY: John Wolfe

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TCH	BTEX	TVH
	MW-1	X						4	2										08	17	92	1010		X	X	X
	MW-2	X						4	2										08	17	92	1120		X	X	X
	MW-3	X						4	2										08	17	92	1400		X	X	X

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
	12:37		
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
			8/24/92 12:37

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 • FAX: 510-268-0137

CHAIN OF CUSTODY FORM

PAGE _____ OF _____

PROJECT NAME: Alameda Gateway

JOB NUMBER: 554.007 LAB: Curtis & Tompkins

PROJECT CONTACT: Sean Carson TURNAROUND: Normal

SAMPLED BY: John Wolfe REQUESTED BY: John Wolfe

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	MATRIX: SOIL	MATRIX: WASTE	MATRIX: AIR	CONTAINERS: VOA	CONTAINERS: LITER	CONTAINERS: PINT	CONTAINERS: TUBE	METHOD PRESERVED: HCL	METHOD PRESERVED: H_2SO_4	METHOD PRESERVED: HNO_3	METHOD PRESERVED: ICE	METHOD PRESERVED: NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TPH	BTEX	TPH
	MW-1 @ 30'		X						X				X		8	13	92			X	X	X
	MW-2 @ 35'		X						X				X		8	13	92			X	X	
	MW-3 @ 25'		X						X				X		8	13	92			X	X	X

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
[signature]	12:37		
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
		[signature]	8/26/92 12:37

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 · FAX: 510-268-0137

CHAIN OF CUSTODY FORM

PAGE _____ OF _____

PROJECT NAME: Alameda Gateway

JOB NUMBER: 554.007 LAB: Curtis + Tompkins

PROJECT CONTACT: Sean Carson TURNAROUND: Normal

SAMPLED BY: John Wolfe REQUESTED BY: John Wolfe

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME				NOTES	ANALYSIS REQUESTED: LEAD	O.I. Grease
	MW-1 @ 3.0		X								X								8	13	92						X	X
	MW-2 @ 3.5		X								X								8	13	92						X	X
	MW-3 @ 2.5		X								X								8	13	92						X	X
	MW-1	X						4	2										8	17	92	1	0	0	0		X	X
	MW-2	X						4	2										8	17	92	1	2	0	0		X	X
	MW-3	X						4	2										8	17	92	1	4	0	0		X	X

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
John Wolfe	8/24/92 830		
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 · FAX: 510-268-0137

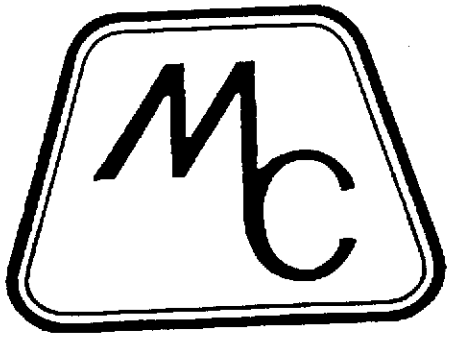
UNDERGROUND STORAGE TANK REMOVAL REPORT

Prepared for:

ALAMEDA GATEWAY, LTD.
ALAMEDA, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION
SAN RAMON, CALIFORNIA



JUNE 1990

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: 0
1332R1

1.0 INTRODUCTION

This report summarizes the removal of four underground storage tanks from 3 separate locations at the Alameda Gateway, Ltd. facility in Alameda, California. Included in this report are the analytical results of soil and water samples collected from the excavations following the removal of the tanks. Work was performed in accordance with the November 9, 1989 Tri-Regional Board Staff Recommendations For Initial Evaluation And Investigation of Underground Tanks.

2.0 SCOPE OF WORK

Services provided by Mittelhauser Corporation during this activity included the following:

- Excavation and removal of a total of four underground fuel storage tanks from 3 separate locations;
- Over-excavation of approximately 50 cubic yards of petroleum hydrocarbon impacted soil;
- Collection of soil and water samples from the tank excavations;
- Laboratory chemical analysis of soil and water samples for Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel and benzene, toluene, xylenes and ethylbenzene (BTX&E).

3.0 TANK REMOVALS

Mittelhauser Corporation was retained by Alameda Gateway, Ltd. in April, 1990, to remove four underground fuel storage tanks from its property located at 2900 Main Street, Alameda, California. The location of the site is shown on Figure 1.

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: 0
1332R1

Removal of the four underground storage tanks was accomplished on April 11, 1990. Lieutenant Steve McKinley of the City of Alameda Fire Department was present during all of the tank removals. Mittelhauser subcontracted Zaccor Corporation of Menlo Park, California to provide the manpower and equipment necessary to excavate, remove, transport and dispose of the tanks. Prior to tank removal, Zaccor Corporation submitted the Underground Tank Closure/Modification Plan to Alameda County, a copy of which can be found in Appendix A. Residual product and hydroblast water (approximately 400 gallons), was transported to Refineries Services in Patterson, California by Allied Oil and Pumping under state manifest number 88379685. The tanks were transported and disposed of by Erickson, Inc., under state manifest number 89921484. Copies of both manifests are provided in Appendix A.

Zaccor Corporation provided a Gastech Tri-meter Model 1314 LEL meter to monitor potentially explosive vapor concentrations in the tanks before and after the addition of dry ice. After the addition of approximately ten pounds of dry ice per 100 gallons of displacement, a zero LEL reading was observed for each of the tanks. Permission for removal of the tanks was then given by Lieutenant Steve McKinley of the City of Alameda Fire Department.

Once the tanks were removed from the ground, the tanks were visually inspected for any signs of leakage or damage. The 600-gallon diesel tank (Tank 85A) had riveted seams and appeared to be very old. Close inspection, however, revealed no holes or other signs of corrosion, and it does not appear that the tank leaked except perhaps through the riveted seams. The 7,000-gallon gasoline tank (Tank 85B), also removed from near the drainage ditch, had been installed in 1975 according to the site manager, and was in very good condition, with no indications of leakage found. The 600-gallon fuel tank removed from the west side of Building 133 (Tank 133) contained several holes, all of which were along a line approximately two thirds of the way up the side of the tank. The 1100-gallon fuel oil tank removed from the north side of Building 137 (Tank 137) showed obvious signs of corrosion along the lower side and one end, where several holes were observed.

4.0 TANK PIT SAMPLING AND ANALYTICAL RESULTS

Following the excavation and removal of each tank, samples of soil were collected either from the backhoe bucket or the pit itself, by driving clean brass tubes into the soil using a plastic wrapped hammer. The ends of the tubes were covered with aluminum foil, followed by plastic endcaps, and the endcaps were secured to the brass tubes with duct tape. The brass tubes were then labeled and immediately placed in a cooler on ice for transport to the state-certified laboratory. Formal chain-of-custody forms accompanied all samples to the laboratory.

Soil and water samples were submitted to the Mobile Chem Labs, Inc. on-site mobile laboratory for immediate analysis, with the remainder of the samples submitted to Mobile Chem Labs, Inc. in Lafayette, California for two week turnaround. The analytical results of the soil and water samples, collected from the fuel tank pits, are summarized in Tables 1 and 2, respectively. Copies of the laboratory analytical results and chain-of-custody documentation are presented in Appendix B.

All of the soil and water samples were analyzed for TPH as gasoline using EPA Method 5030 in conjunction with modified EPA Method 8015, and for BTX&E using EPA Method 8020. In addition, the soil samples collected from the fuel oil tank pits (Tanks 133 and 137) were analyzed for TPH as diesel using EPA Method 3550 in conjunction with Modified EPA Method 8015.

All excavated soil was stockpiled near the respective excavation, and sealed in visqueen pending further investigation of the soils surrounding the excavations.

An Unauthorized Release Report Form was submitted to the County of Alameda on May 30, 1990, a copy of which is provided in Appendix C.

4.1 Tanks 85A and 85B

The location of the excavation for Tanks 85A and 85B is shown in Figure 1. During the excavation, groundwater was encountered in the tank pit at a depth of approximately three feet. Because the diesel and gasoline tank (85A and 85B, respectively) were removed from the same location, the excavation was approached as one excavation for sampling purposes. Two

sidewall soil samples designated as AG-85-01 and AG-85-02 and one groundwater sample designated as AG-85-03 were collected from the larger excavation (Tank 85B). The soil samples were collected from the sidewalls of the tank pit approximately 6 inches above the water level. The water sample was collected after the tanks were removed, and before the pit was disturbed by the subsequent over-excavation. A subsurface sampling device was utilized to gather the sample from a depth of about 18 inches below the water surface.

Soil along the southeast portion of the excavation, where the diesel tank had been located, was over-excavated laterally ten feet to the north and east of the tank location, and approximately two feet to the south, in an attempt to determine the extent of soil contamination. The southern excavation was limited by the close proximity of a railroad spur. Because a limit to the contamination was not found, it was decided to determine the extent of contamination at a later time.

Results for the soil samples designated as AG-85-01 and AG-85-02, collected from the fuel tank pit sidewall showed 4.8 and 1.1 ppm of TPH as gasoline, respectively, with non-detectable levels of BTX&E in both samples. Water sample AG-85-03 collected from the fuel tank pit for the gasoline tank showed 3,300 ppb of TPH as gasoline, and 37 ppb of benzene.

4.2 Tank 133

The location of the Tank 133 excavation is shown in Figure 3. During excavation, groundwater was encountered at a depth of approximately four feet. Because the water table coincided with the bottom of the excavation, one side wall sample was collected. Both Katherine Chesick of the Alameda County Department of Environmental Health and Lieutenant Steve McKinley of the Alameda County Fire Department were present at the time of sampling, and confirmed the sampling location as appropriate. Because both ends of the tank had been weighted down with concrete slabs, the sidewall sample designated as AG-133-01 was collected from the west side wall of the tank pit. The product line was less than 20 feet in length, therefore no product line soil samples were collected.

The analytical results of the soil sample AG-133-01, collected from the tank pit sidewall, showed 1,100 ppm of TPH as

diesel. The pit was therefore over-excavated approximately two feet to the east and four feet to the west in an attempt to define the extent of contamination. During the over-excavation activities, a HNU was utilized to estimate the level of contamination by collecting samples of the soil in glass jars and allowing the material to heat in the sun prior to testing. Using this approach, HNU readings failed to decrease as the excavation was extended, and it was decided to return at a later date to investigate the full extent of the contaminated soil.

4.3 Tank 137

The location of the Tank 137 excavation is shown in Figure 4. During the excavation, groundwater was encountered in the tank pit at a depth of approximately three feet. Two sidewall soil samples, designated as AG-137-01 and AG-137-02, were therefore collected approximately 6 inches above the water level from the west and east ends of the excavation, respectively. The product line to the boiler inside the building was less than 20 feet in length, therefore no product line sample was collected. During the excavation, a clay sewer line was damaged which resulted in several gallons of sewer water spilling into the pit. Because the water in the pit was tainted with the sewer water, a water sample was not taken at this location.

The analytical results of soil samples AG-137-01 and AG-137-02 collected from the fuel tank pit side wall showed 6.7 and 38,000 ppm of TPH as diesel, respectively, with benzene levels of 2.2 and 0.1 ppm, respectively. However, after the on-site lab confirmed the AG-137-02 sample result by rerunning an aliquot of the sample, a second sample, AG-137-03, was collected by hand auger from approximately the same depth as AG-137-02 (2.5 feet), but two feet east of the pit sidewall. The analytical results of soil sample AG-137-03 showed non-detectable levels of TPH as diesel, indicating that the contamination was limited in extent. Over-excavation was not performed due to the close proximity of buried utilities. The analytical results of sample AG-137-03 showed non-detectable levels of TPH as diesel and 2.8 ppm of TPH as gasoline, indicating that the soil contamination did not extend very far beyond the tank pit.

5.0 DISTRIBUTION

Copies of this report have been sent to the City of Alameda Fire Department, Alameda County Department of Environmental Health, and to the Regional Water Quality Control Board, San Francisco Bay Region.

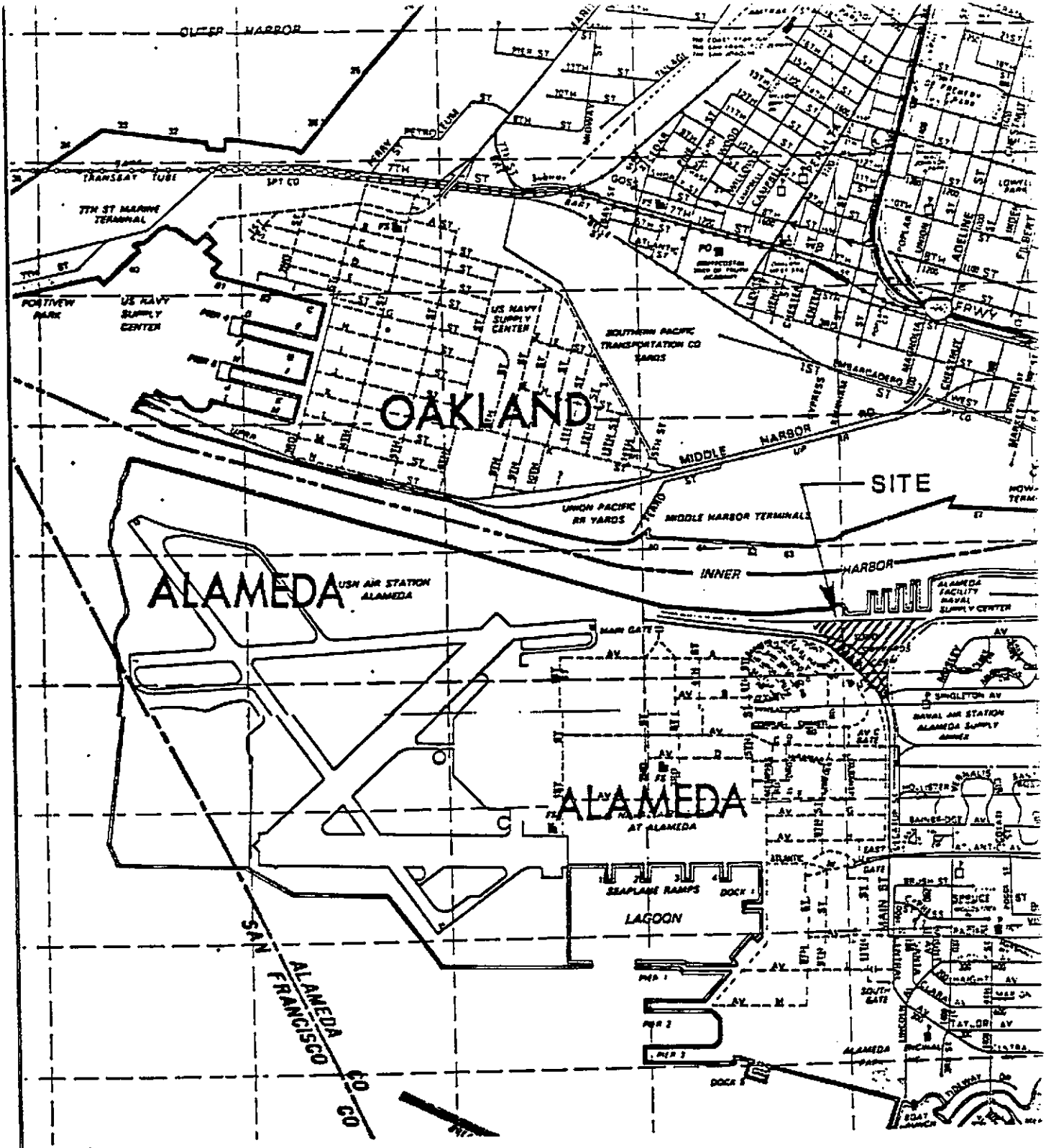
6.0 LIMITATIONS

This work has been performed and this report prepared in accordance with generally accepted environmental science and engineering practices. Conclusions and recommendations are based solely on the activities and information identified in this report. This warranty is in lieu of all other warranties, expressed or implied.

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: D0
1332AP

FIGURES



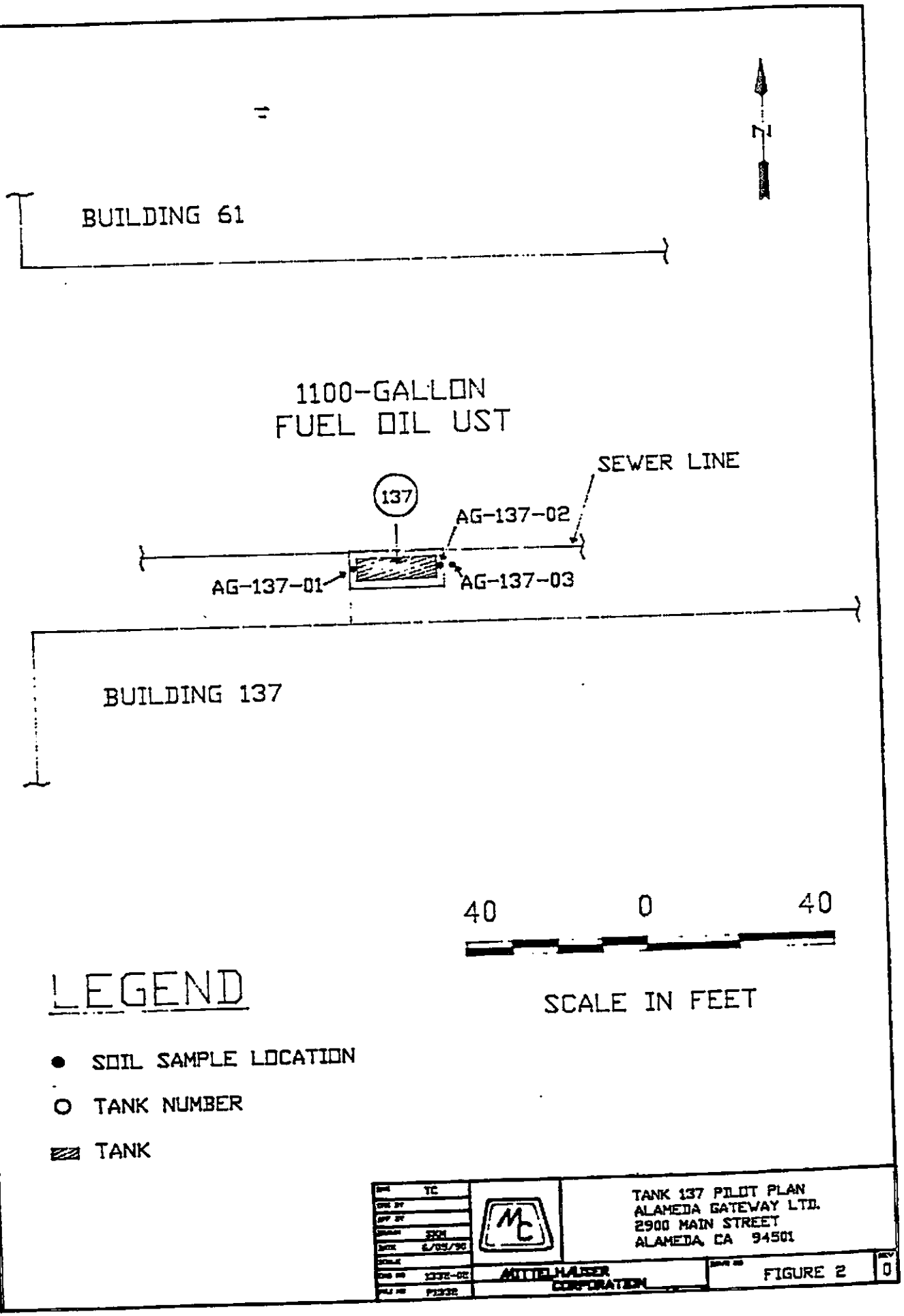
DRN	BAF
CHK BY	
APP BY	
DESIGN	KYM
DATE	10/11/89
SCALE	AS SHOWN
JOB NO	12200004
FILE NO	P1220-01

MITTELHAUSER Corporation

SITE LOCATION MAP

ALAMEDA-GATEWAY PROJECT

FIGURE 1

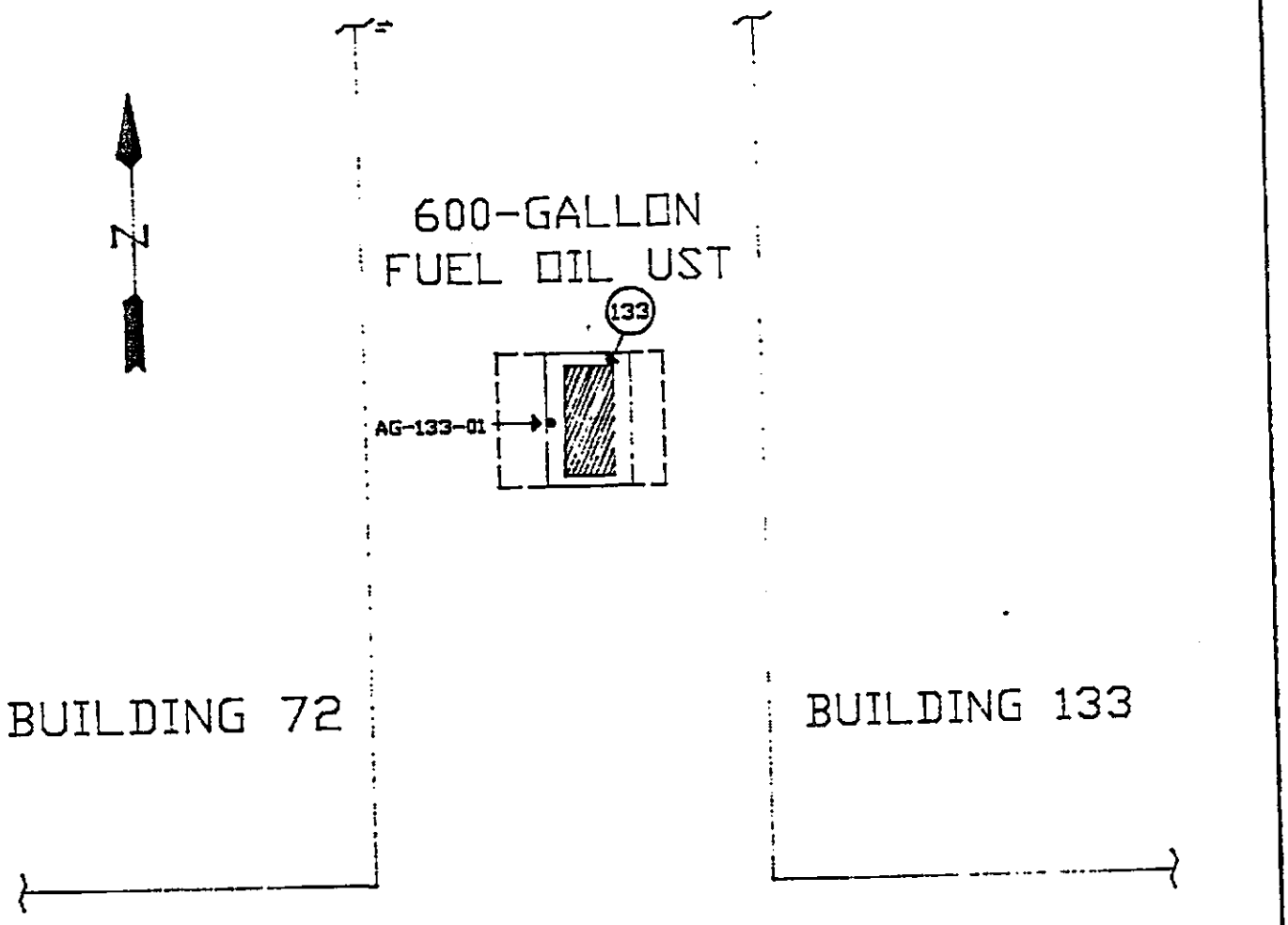


TANK 137 PILOT PLAN
ALAMEDA GATEWAY LTD.
2900 MAIN STREET
ALAMEDA, CA 94501

MICHELHAUSER CORPORATION

FIGURE 2

REV 0



20 0 20

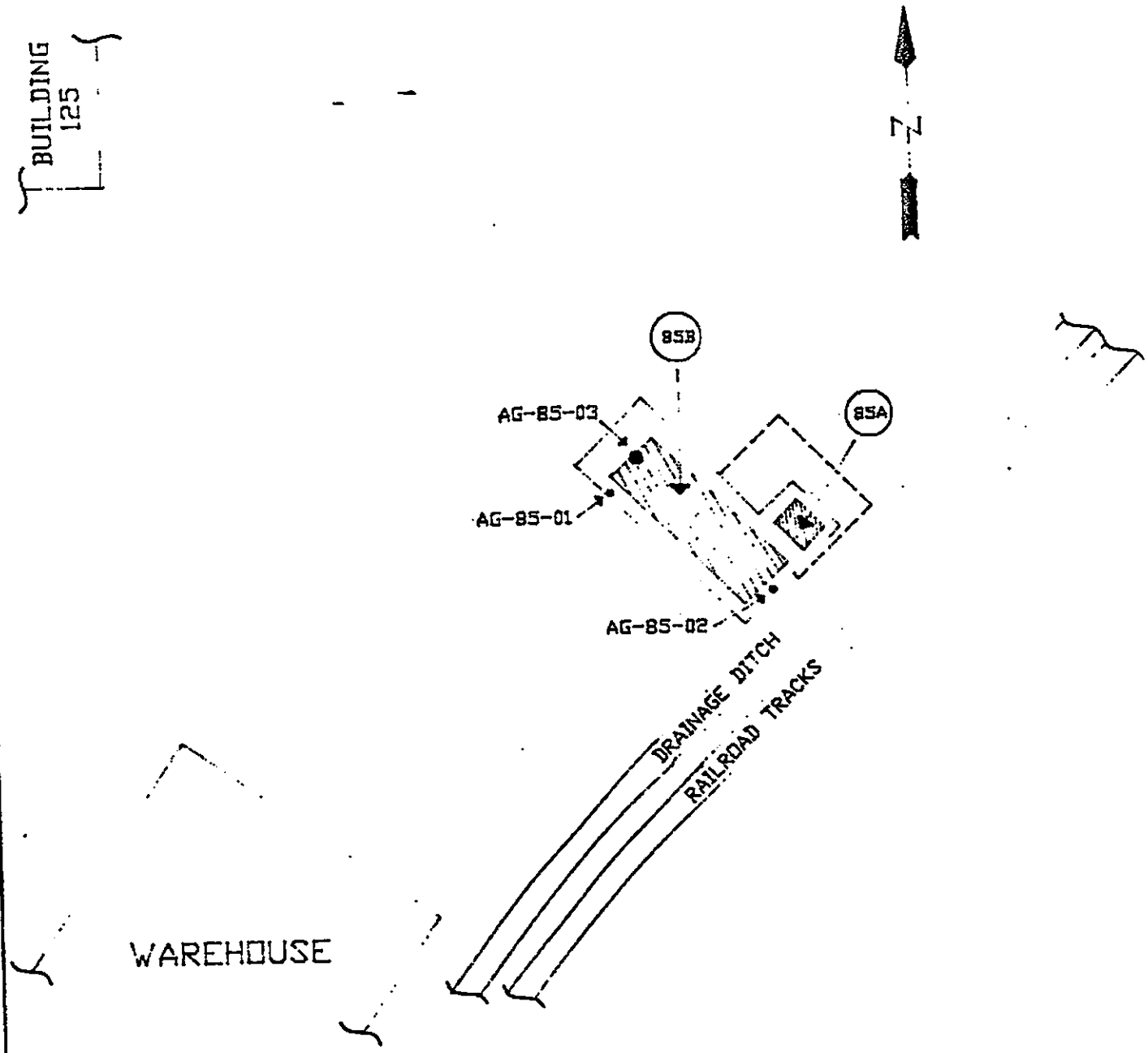
SCALE IN FEET

LEGEND

- TANK
- TANK NUMBER
- SOIL SAMPLE LOCATION
- AREA OF OVEREXCAVATION

TANK 133 PLOT PLAN
ALAMEDA GATEWAY LTD.
2900 MAIN STREET
ALAMEDA, CA 94501

FIGURE 3



LEGEND

- SOIL SAMPLE LOCATIONS
- WATER SAMPLE LOCATIONS
- TANK NUMBER
- TANK
- AREA OF OVEREXCAVATION

TM	TANKS B5, B5A PLOT PLAN ALAMEDA GATEWAY LTD. 2900 MAIN STREET ALAMEDA, CA 94501	
SKH 6/05/90		
1332-04	MICHAEL HARDER CORPORATION	FIGURE 4 — 0
P1332		

1.45" = 40'

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: D0
1332AP

TABLES

TABLE 1

SOIL SAMPLE RESULTS

SAMPLE LOCATION	TPH AS DIESEL	TPH AS GASOLINE	BENZENE	TOLUENE	XYLENES	ETHYL BENZENE
AG-85-01	--	4.8	<0.1	<0.1	<0.1	<0.1
AG-85-02	--	1.1	<0.1	<0.1	<0.1	<0.1
AG-133-01	1,100	52	0.3	<0.1	0.7	0.4
AG-137-01	6.7	<1.0	<0.1	<0.1	<0.1	<0.1
AG-137-02	38,000	850	2.2	4.3	29	4.3
AG-137-03	<5.0	2.8	0.1	<0.1	<0.1	<0.1
Detection Limit	5.0	1.0	0.1	0.1	0.1	0.1

-- Indicates analysis not performed.
Results in parts per million (ppm) unless otherwise indicated.

TABLE 2

WATER SAMPLE RESULTS

SAMPLE LOCATION	TPH AS DIESEL	TPH AS GASOLINE	BENZENE	TOLUENE	XYLENES	ETHYL BENZENE
AG-85-03	--	3,300	37	<0.5	300	<0.5
Detection Limit	--	50	0.5	0.5	0.5	0.5

-- Indicates analysis not performed.
Results in parts per billion (ppb), unless otherwise indicated.

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: D0
1332AP

APPENDIX A

MANIFEST AND PERMIT INFORMATION

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

UNIFORM HAZARDOUS WASTE MANIFEST

CAC000726404

A. State Manifest Document Number: 89921484

3. Generator's Name and Mailing Address
ALAMEDA GATEWAY LTD.
2236 MARINER SQUARE DR. ALAMEDA CA 94501

B. State Generator's ID

4. Generator's Phone (415) 521-2727

C. State Transporter's ID 100979

5. Transporter 1 Company Name
DILLARD TRUCKING

6. US EPA ID Number: CAD982816909

D. Transporter's Phone (415) 834-0567

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
Erickson, Inc.
255 Parr Blvd.
Richmond, Ca. 94801

10. US EPA ID Number: CAD009146392

G. State Facility's ID: CAD009146392

H. Facility's Phone (415) 235-1393

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. Waste Empty Storage Tanks California Regulated Waste Only	004	TP	08800	P	State 512 / EPA/Other None
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Empty storage tank #3261 last contained Fuel
Empty storage tank #3262 last contained Diesel
Empty storage tank #3263 last contained Gasoline
Empty storage tank #3264 last contained
Tanks iced with 15 lbs. dry ice per 1,000 lb. capacity

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

15. Special Handling Instructions and Additional Information
Keep away from sources of ignition. Wear hardhat, safety shoes and gloves when working with U.S.T.'s.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping nam and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international a 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 determ to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes 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 wast generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month | Da

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: BRIAN MATHEWS
Signature: Brian Mathews
Month: 04 D

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

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

Do Not Write Below This Line

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

YELLOW: GENERATOR F

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 Se
Toxic Substances Control D
Sacramento, Ca

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAC002654701
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: ZACCOR COMPANY LIMITED
2400 MAIN ST ALAMEDA CA, 94501
4. Generator's Phone: 415, 521-2727

A. State Manifest Document Number: 88379585
B. State Generator's ID: CAE
C. State Transporter's ID: 0822
D. Transporter's Phone: (408) 432-933
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAD083165728
H. Facility's Phone: (209) 874-4444

5. Transporter 1 Company Name: ALLIED OIL & PUMPING
6. US EPA ID Number: CAT080014277
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: REFINERIES SERVICES
13331 NORTH HWY. 33
PATTERSON, CA. 95363
10. US EPA ID Number: CAD083165728

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. WASTE OIL N.O.S COMBUSTIBLE LIQUID NA 1270	001	TT	400	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
1.1 USED OIL
1.2 WATER

K. Handling Codes for Wastes Listed Above
a. T1 b.
c. d.

15. Special Handling Instructions and Additional Information
GLOVES
MAILING ADDRESS
2236 MARINER SQUARE DR #F
ALAMEDA CA 94501
415-521-2727

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 determin to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes t 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 manag ment method that is available to me and that I can afford.

Printed/Typed Name: GARY ZACCOR | Signature | Month 04 Day 11

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: RICH JOHNS | Signature | Month 04 Day 11

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

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

GENERATOR

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

88379585

DHS 8022 A (1/88)

Do Not Write Below This Line

CITY OF ALAMEDA

APPROVED FOR IS[SUE]
DATE 4/9/90 BY Y K
CENTRAL PERMIT OFFICE

CITY OF ALAMEDA
PLANNING DEPARTMENT
ZONING REGULATIONS
☒ approved
☐ disapproved
☐ approved with conditions
by [signature] date 4-6-90

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

PLUMBING & MECHANICAL PLA[N]
APPROVED
DATE: ____
BY: ____
Donald J. Rodrigues,
Sr. Plbg. & Mech. Insp.

RECEIVED
MAR 30 1990

ACCEPTED
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 ensure 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 and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Fire and Building Inspection Department to determine if such changes meet the requirements of State and local laws.

Notify 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 accepted plans and all applicable laws and regulations.

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

3/30/90 Katherine Chesick

Fire Department must witness removal of all Underground Tanks, and all State and County Requirements must be met.
By [signature] Date 4-3-90

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name Alameda Gateway Ltd.
Business Owner Stan Kinsk
2. Site Address 2900 Main Street
City Alameda, CA Zip 94501 Phone 415-521-2727
3. Mailing Address 2236 Mariner Sqaure Drive
City Alameda Zip 94501 Phone 415-521-2727
4. Land Owner Alameda Gateway Ltd.
Address 2900 Main Street City, State Alameda, CA Zip 945[01]
5. EPA I.D. No. ~~CAX000229831~~ CAC000265401 → no longer valid per Helen of DHS (916) 324- on 3/29/90
6. Contractor Zaccor Corporation
Address 791 Hamilton Ave.
City Menlo Park, CA Phone 415-363-21
License Type Class A ID# 478799

568818
$831.00
3.26.90

7. Consultant -same as above-
Address ____
City ____ Phone ____

PLUMBING & MECHANICAL PLAN
APPROVED
DATE: 4-4-90
BY: [signature]
Donald J. Rodrigues,

8. Contact Person for Investigation

Name Gary Zaccor Title Project Mgr./Pres.

Phone 415-363-2181

9. Total No. of Tanks at facility 4 Permit submitted for 2 tanks only

10. Have permit applications for all tanks been submitted to this office? Yes [X] No [ ]

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name Allied Oil EPA I.D. No. CAT080014277

Address P. O. Box 399

City Alviso State CA Zip 95002

b) Rinsate Transporter

Name Allied Oil EPA I.D. No. CAT080014277

Address P. O. Box 399

City Alviso State CA Zip 95002

c) Tank Transporter

Name Erickson, Inc. EPA I.D. No. CAD009466392

Address 225 Parr Blvd.

City Richmond State CA Zip 94801

d) Tank Disposal Site

Name Erickson, Inc. EPA I.D. No. CAD009466392

Address 225 Parr Blvd.

City Richmond State CA Zip 94801

e) Contaminated Soil Transporter

Name - unknown- EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

12. Sample Collector

Name Tim Carlson

Company Mittelhauser Corporation

Address 2401 Crow Canyon Road, Ste. 100

City San Ramon State CA Zip 94583 Phone 743-0335

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
Capacity	Historic Contents (past 5 years)		
1 - 600 gal	Diesel	- Soil	directly underneath tank
2 - 600 gal	Fuel Oil	- Soil	directly underneath tank
1 - 7000 gal	Gasoline	- Soil	Under each end of t One sample for every of piping

14. Have tanks or pipes leaked in the past? Yes [ ] No [ ] unknown

If yes, describe. - unknown -

15. NFPA methods used for rendering tank inert? Yes [x] No [ ]

If yes, describe. [redacted], hydroblast and dry ice at 6.5 lbs per 100 gallons

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name Mobile Chem Labs, Inc.

Address 1678 Reliez Valley Road / 1733 Dartmouth Ave, San Carlos

City Lafayette State CA zip 94549

State Certification No. 195 / Vehicle license No. MX2172

All piping must be drained and flushed to the tank before ta
are pumped out. All piping must then be removed or disc

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
- Diesel TPH D	3550 ~~unknown~~	GC FID / DHS Method ~~EPA Method 8015~~
BTX+E	8020 or 8240 prep method	8020 or 8240
- ~~Motor Oil~~		~~EPA Method 8015~~
- Gasoline TPH G	5030	GC FID / DHS Method
BTX+E	8020 or 8240 prep method	8020 or 8240
- Fuel Oil		
TPH D	3550	GC/FID / DHS Method
BTX+E	8020 or 8240 prep method	8020 or 8240
		Detection limits must meet RWQCB standards (see attached yellow sheet)

18. Submit Site Safety Plan

19. Workman's Compensation: Yes [X] No [ ]

Copy of Certificate enclosed? Yes [x] No [ ]

Name of Insurer State Fund

20. Plot Plan submitted? Yes [X] No [ ]

21. Deposit enclosed? Yes [x] No [ ]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received tanks, product, hydroblast water (manifest)

d) Attachment A summarizing laboratory results

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 Saftey and Health Administration) requirements concerning personnel and safety.

* I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. 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.

Signature of Contractor

Name (please type) Gary Zaccor

Signature Gary Zaccor

Date 3/26/90

Signature of Site Owner or Operator

Name (please type) STAN KIRSK

Signature Stan Kirsk

Date March 26, 90

Permit No: P90-5517
Status: APPROVED

04/09/90 08:4

Applied : 03/30/90
App/Issue : 04/09/90
Finalized :
To Expire : 08/07/90

Valuation 14.000

JOB ADDRESS : 2900 MAIN ST

PERMIT TYPE : PLUMBING PERMIT
Parcel number : 074 -0891-002-00
Owner : TODD SHIPYARDS CORPORATION
MICHAEL JOHNSON
P O BOX 7263
SAN FRANCISCO CA 94120

Group-Occ/Use :
Class code : 088

Applicant : ZACCOR COMPANIES
791 HAMILTON AVE
MENLO PARK. CA 94025
365-2181

Construction : OTH
Project Title : REMOVAL 4 STORAGE TANKS
Project Desc. : REMOVAL 4 STORAGE TANKS

Fee description	Units	Fee/Unit	Ext fee	Dat
Storage Tanks.....>	4.00	20.00	80.00	
			80.00	
Fixture Fee			6.00	
Filing Fee				
S.M.I.P (R Calc.).....(Enter 'Y')>			.50	
S.M.I.P Fee			5.00	
Assembly Bill 941			140.00	Y
Improvement Tax.....(Enter 'Y')>			640.00	
Police & Fire Fee.....(Enter Fee)>	640.00		15.00	
Micro-fiche Fee.....>	15.00			
*** Fees Required ***	***	Fees Collected & Credits		*

Receipt No.	Date	Payment
32124	04/09/90	886.50

Fees:	886.50	Total Credits:	.00
Adjustments:	.00	Total Payments:	886.50
Total Fees:	886.50	Balance Due:	.00

Public Works Department, Room 204
Central Permits Office

City Hall
Santa Clara Avenue at Oak Street - 94501
415.748 4530

TOTAL P.01

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: D0
1332AP

APPENDIX B

LABORATORY ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY RECORDS

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittelhauser Corporation
2401 Crow Canyon Rd. Suite 100
San Ramon, CA 94583
Attn : Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-11-90

Sample Number	Sample Description
V040032	Todd Shipyard 2900 Main St. Alameda, CA. Pro# P1332 AG-85-01 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	4.8
Benzene	0.1	<0.1
Toluene	0.1	<0.1
Xylenes	0.1	<0.1
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittelhauser Corporation
2401 Crow Canyon Rd. Suite 100
San Ramon, CA 94583
Attn : Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-11-90

Sample Number	Sample Description
V040033	Todd Shipyard 2900 Main St. Alameda, CA. Pro# P1332 AG-85-02 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1.1
Benzene	0.1	<0.1
Toluene	0.1	<0.1
Xylenes	0.1	<0.1
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A V Dinkman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittlehauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-13-90

Sample Number	Sample Description
V040029	Project # P1332 - Alameda AG-133-01 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	52
Benzene	0.1	0.3
Toluene	0.1	<0.1
Xylenes	0.1	0.7
Ethylbenzene	0.1	0.4

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS.

Joyce A V Dishman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittlehauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-13-90

Sample Number	Sample Description
V040030	Project # P1332 - Alameda AG-137-01 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.1	<0.1
Toluene	0.1	<0.1
Xylenes	0.1	<0.1
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittlehauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-13-90

Sample Number	Sample Description
V040031	Project # P1332 - Alameda AG-137-02 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	850
Benzene	0.1	2.2
Toluene	0.1	4.3
Xylenes	0.1	29
Ethylbenzene	0.1	4.3

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittlehauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-13-90

Sample Number	Sample Description
V040034	Project # P1332 - Alameda AG-137-03 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	2.8
Benzene	0.1	0.1
Toluene	0.1	<0.1
Xylenes	0.1	<0.1
Ethylbenzene	0.1	<0.1

QA/QC: *Blank Concentrate is none detected.
*Spike Recovery is 88.4%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce R. Dashman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittelhauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-11/13-90

Sample Number	Sample Description	Detection Limit	SOIL Total Petroleum Hydrocabons as Diesel
		ppm	ppm
	Proj. # P1332-Alemeda		
V040029	AG-133-01	5.0	1,100
V040030	AG-137-01	5.0	6.7
V040031	AG-137-02	5.0	38,000
V040034	AG-137-03	5.0	<5.0

Note: Analysis was performed using EPA methods 3550 and TPH LUFT

MOBILE CHEM LABS

Joyce A. Dishman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Mittlehauser Corporation
2401 Crow Canyon Road
San Ramon, CA 94583
Attn: Timothy L. Carlson
Project Manager

Date Sampled:04-11-90
Date Received:04-11-90
Date Reported:04-13-90

Sample Number	Sample Description
V040035	Project # P1332 - Alameda AG-85-03 WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	3,300
Benzene	0.5	37
Toluene	0.5	<0.5
Xylenes	0.5	300
Ethylbenzene	0.5	<0.5

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce M Dishman

Ronald G. Evans
Lab Director

MITTELHAUSER corporation — 2401 Crow Canyon Rd., Suite 100, San Ramon, CA 94583 (415) 743-0335

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: P1332

PROJECT NAME: ALAMEDA GATEWAY EAST REMOVAL

SAMPLED BY: (PRINTED AND SIGNATURE) TIMOTHY L. CARLSON Timothy L Carlson

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH G	BTXE	TEL	TPH D	PRESERVATIVE	REMARKS
AG-133-01	4/4/90	1055	SOIL	BLDG 133 FOOTPRINT.	4		X	X			BTXE 2WK T/A
AG-137-01	4/4/90	1200	SOIL	BLDG 137 FOOTPRINT, NW END	1		X	X			BTXE 2WK T/A
AG-137-02	4/4/90	1205	SOIL	" " " SE END	1		X	X			BTXE 2WK T/A
AG-85-01	"	115	SOIL	GAS SIDE OF BLDG 85 EXCAV.	1	X	X				
AG-85-02	"	215	SOIL	GAS SIDE (SOUTH END), BLDG 85	1	X	X				
AG-137-03	4/4/90	300	SOIL	137 TK, SOUTH END.	1		X	X			2 WK T/A
AG-85-03	4/4/90	1040	WATER	GASOLINE/DIESEL EXCAV.	1	X	X	X			2 WK T/A.

RELINQUISHED BY: (SIGNATURE) Timothy L Carlson	DATE 4/4/90	TIME 1430	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT) 7
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 7
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	4/4/90

LABORATORY: MOBILE CHEM.

LABORATORY CONTACT: BY DISHNEAU-EVANS

LABORATORY PHONE NUMBER: (415) 945-1266

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
GOLD, LABORATORY

REMARKS: ~~2 WK TPH D, 2 WK T/A ON BTXE~~ RUSH

Alameda Gateway, Ltd.
Project 1332
Underground Storage Tank Removal

June 1990
Rev: D0
1332AP

APPENDIX C

UNAUTHORIZED RELEASE FORM

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 I HAV
REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 C
THE HEALTH AND SAFTY CODE.
SIGNED _____ DATE _____

REPORT DATE: 05/25/90 | CASE #:

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT: Timothy L. Carlson | PHONE: (415) [illegible] | SIGNATURE:
REPRESENTING ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____
COMPANY OR AGENCY NAME: Mittelhauser Corporation
ADDRESS: 2401 Crow Canyon Road Suite 100 | CITY: San Ramon | STATE: CA | ZIP: 94583

RESPONSIBLE PARTY
NAME: Alameda Gateway, LTD ☐ UNKNOWN | CONTACT PERSON: Stan Kinsk | PHONE: (415) 521-2727
ADDRESS: 2900 Main Street | CITY: Alameda | STATE: CA | ZIP: 94501

SITE LOCATION
FACILITY NAME (IF APPLICABLE): Alameda Gateway, LTD | OPERATOR: Stan Kinsk | PHONE: (415) 521-2727
ADDRESS: 2900 Main Street | CITY: Alameda | COUNTY: CA | ZIP: 94501
CROSS STREET:

IMPLEMENTING AGENCIES
LOCAL AGENCY / AGENCY NAME: Alameda County Health Agency | CONTACT PERSON: Katherine Chesick | PHONE: (415) 271-4320
REGIONAL BOARD: San Francisco Bay Regional WQCB | Lester Feldman | PHONE: (415) 464-1255

SUBSTANCES INVOLVED
	NAME	QUANTITY LOST (GALLONS)
(1)	Diesel	☒ UNKNOWN
(2)	Fuel Oil	☒ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED: 04/11/90 | HOW DISCOVERED: ☐ TANK TEST ☒ TANK REMOVAL ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITION ☐ OTHER _____
DATE DISCHARGE BEGAN: ☒ UNKNOWN
HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE 04/11/90
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☒ REMOVE CONTENTS ☐ REPLACE TANK ☐ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDU ☒ OTHER Removed Tanks

SOURCE/CAUSE
SOURCE OF DISCHARGE: ☒ TANK LEAK ☐ UNKNOWN ☐ PIPING LEAK ☐ OTHER
CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ SPILL ☒ CORROSION ☐ UNKNOWN ☐ 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: ☐ NO ACTION TAKEN ☐ LEAK BEING CONFIRMED ☐ REMEDIATION PLAN ☐ PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED ☐ PRELIMINARY SITE ASSESSMENT UNDERWAY ☐ CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY) ☐ POLLUTION CHARACTERIZATION ☐ POST CLEANUP MONITORING IN PROGRESS ☐ CLEANUP UNDERWAY

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS): ☐ CAP SITE (CD) ☐ CONTAINMENT BARRIER (CB) ☐ VACUUM EXTRACT (VE) ☐ EXCAVATE & DISPOSE (ED) ☐ EXCAVATE & TREAT (ET) ☐ NO ACTION REQUIRED (NA) ☐ OTHER (OT) _____ ☐ REMOVE FREE PRODUCT (FP) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ TREATMENT AT HOOKUP (HU) ☐ ENHANCED BIO DEGRADATION ☐ REPLACE SUPPLY (RS) ☐ VENT SOIL (VS)

COMMENTS
The highest concentration found was 36,000 PPM TPH-D from a side wall sample collect at the end of a fuel oil tank. As visual observation did not support this reading a second sample was collected 2 feet out from the first. This sample showed less than 5.0 PPM TPH-D

HSC 05