ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

May 10, 1995
STID 3752

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Jason Baker
City of Albany
1000 San Pablo Avenue
Albany, California

RE: City of Albany Corporation Yard
507 San Gabriel Street, Albany, California 94706

Dear Mr. Baker:

This letter confirms the completion of site investigation and remedial action for the 250 gallon underground gasoline storage tank removed on August 22, 1991 at the above described location.

Based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

Please contact Susan L. Hugo at (510) 567-6780 if you have any questions regarding this matter.

Sincerely,

Rafat A. Shahid, Director

cc: William Raynolds, Acting Chief, Environmental Protection - files
Kevin Graves, RWQCB
Mike Harper, SWRCB
David Connell, Harlan Tait Associates, 1269 Howard Street
San Francisco, California 94103-2787

RECEIVED
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BY

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION — **Date: March 21, 1995**

Agency name: **Alameda County-HazMat** — Address: **1131 Harbor Bay Parkway**
City/State/Zip: **Alameda, CA 94502** — Phone: **(510) 567-6700**
Responsible staff person: **Susan Hugo** — Title: **Sr. Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **City of Albany Corporation Yard**
Site facility address: **507 San Gabriel Street, Albany, CA 94706**
RB LUSTIS Case No: **N/A** — Local Case No./LOP Case No.: **3752**
URF filing date: **6/18/92** — SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
City of Albany c/o Mr. Jason Baker	1000 San Pablo Avenue Albany, CA 94706	(510) 528-5760

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	250 gallon	Gasoline	Removed	8/22/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown, probably from overfilling the tank**
Site characterization complete? **YES**
Date approved by oversight agency: **8/7/92**
Monitoring Wells installed? **NO** — Number: **NA**
Proper screened interval? **NA**
Highest GW depth below ground surface: **NA** — Lowest depth: **NA**
Flow direction: **Generally towards the west based on regional groundwater data and an adjacent site - 1259 Brighton Ave., Albany**
Most sensitive current use: **Unknown**
Are drinking water wells affected? **NO** — Aquifer name: **Unknown**
Is surface water affected? **NO** — Nearest affected SW name: **NA**
Off-site beneficial use impacts (addresses/locations): **NA**
Report(s) on file? **YES** — Where is report(s) filed? **Alameda County 1131 Harbor Bay Parkway, Alameda, CA 94502-6577**

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	250 gallon	Erickson, 255 Parr Blvd., Richmond, CA	8/22/91
Piping	-		
Free Product	NA		
Soil	Unknown amount, overburden soil from tank removal	Albany Landfill	8/92

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	ND<1	-	* 91	* ND<50
TPH (Diesel)	-	-	-	* ND<50
Benzene	0.009	-	* ND<0.5	* ND<0.5
Toluene	ND<0.003	-	* 0.3	* ND<0.5
Xylene	ND<0.003	-	* 0.4	* ND<0.5
Ethylbenzene	0.007	-	* 4.0	* ND<0.5
Total Lead	ND<10	-	* 400	-

*** Groundwater sample collected on 8/25/92 from a probe hole (aprox. 11.8 feet depth) downgradient (west) of the former tank.**
*** Groundwater samples collected on 10/24/94 from three borings (HP-1, HP-2, HP-3) drilled at depths ranging from 12 to 13 feet and approximately 30 feet from the tank across San Gabriel Avenue in the presumed downgradient direction.**

Comments (Depth of Remediation, etc.):

One 250 gallon underground storage tank (used to store unleaded gasoline) was removed on August 22, 1991. The tank appeared to be in good condition with no visible holes. One soil sample collected at the bottom of the tank excavation (aprox. 10 ft. bgs) showed no detectable concentration of TPH gasoline, lead, toluene and xylene but indicated the presence of low levels of benzene (9 ppb) and ethylbenzene (7 ppb). A composite sample from the stockpiled soil found TPH gasoline (560 ppm), benzene (400 ppb), toluene (2400 ppb), ethylbenzene (4300) and xylene (30,000 ppb).

On August 25, 1992, one cone penetration hole was performed to a depth of about 26 feet to determine the subsurface stratigraphy and groundwater depth. Three soil borings were also advanced (up to 14 feet depth) around the perimeter of the excavation within ten feet of the former tank area. The borings were drilled to the west, north and south of the former tank excavation. The soil samples from these borings showed no detectable concentrations of benzene and toluene, but low levels of TPH gasoline (6 ppm), ethylbenzene (0.061 ppm), xylene (0.45) and total lead (16 ppm). Groundwater collected from the boring downgradient of the former tank in the westerly direction indicated the presence of low levels of TPH gasoline (91 ppb), benzene (0.7 ppb), toluene (0.3), ethylbenzene (4 ppb), xylene (0.4 ppb) and lead (0.4 ppm).

On October 24, 1994, three borings (HP-1, HP-2, HP-3) were drilled at depths ranging from 12 to 13 feet and approximately 30 feet downgradient of the former tank. The groundwater samples and soil samples collected from the three borings (at 7.5 feet, 11.5 feet and 13.5 feet) showed no detectable concentration of TPH gasoline, TPH diesel, benzene, toluene, ethylbenzene and xylene.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**
Does corrective action protect public health for current land use? **YES**
Site management requirements: **NA**
Should corrective action be reviewed if land use changes? **NO**
Monitoring wells Decommissioned: **NA**
Number Decommissioned: **NA** Number Retained: **NA**
List enforcement actions taken: **NA**
List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Susan L. Hugo** Title: **Sr. Hazardous Materials Specialist**
Signature: Susan L. Hugo Date: 3/29/95

Reviewed by
Name: **Eva Chu** Title: **Hazardous Materials Specialist**
Signature: Eva Chu Date: 3/29/95

Name: **Thomas Peacock** Title: **Sup. Hazardous Materials**
Signature: Thomas Peacock Date: 3-29-95

VI. RWQCB NOTIFICATION

Date Submitted to RB:
RWQCB Staff Name: Kevin Graves
Signature: Kevin Graves

RB Response: Approved
Title: Water Resources Control Engineer
Date: 4/27/95

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is located approximately 6000 feet east of the San Francisco Bay underlain by older alluvial fan deposits consisting of interbedded clays and silts with sand and gravel zones. Depth to groundwater is about 8 to 12 feet and gradient generally is to the west (San Francisco Bay). A concrete-encased channel for El Cerrito Creek is approximately 100 feet north of the former tank area. The channel is about 3 feet deep and 5 feet wide and is covered by thin layer of soil over most of its length.

Soil sample collected beneath the tank showed no detectable concentration of TPH gasoline, toluene, xylene, and lead. However, benzene (9 ppb) and ethylbenzene (7 ppb) at very low levels were found. Initial grab groundwater sample from the downgradient boring detected the presence of dissolved petroleum hydrocarbons at low levels. Additional samples were collected from three borings (HP-1, HP-2, HP-3) drilled in 10/94 and confirmed no detectable concentration of TPH gasoline and BTEX in both the soil and groundwater.

Aggressive source removal has occurred at the site. The potential beneficial uses of the groundwater do not appear to be threatened to a significant extent from the release that occurred at the site associated with the former tank.

TABLE 1

ANALYTICAL RESULTS
TANK REMOVAL SOIL SAMPLES

Analytical results on soil samples taken during tank removal on August 22, 1991.

SAMPLE NO./ANALYSES	*1 Below Tank, 10'*	*2 Composite*	*DETECTION LIMIT*
TPH-G (EPA 5030/CADHS-LUFT)	*ND*	*560*	*1 mg/kg*
TOTAL LEAD (EPA 7420/CADHS-LUFT)	*ND*	*ND*	*10 mg/kg*
PURGEABLE AROMATICS (EPA 5030/8020)			
Benzene	*9*	*400*	*3 ug/kg*
Toluene	*ND*	*2400*	*3 ug/kg*
Ethylbenzene	*7*	*4300*	*3 ug/kg*
Xylene	*ND*	*30,000*	*3 ug/kg*

Notes:

TPH (G)	Total petroleum hydrocarbons as gasoline
ug/l	Micrograms per liter (parts per billion)
mg/l	Milligrams per liter (parts per million)
mg/kg	Milligrams per kilogram (parts per million)
ND	Not detected in excess of the analytical detection limit stated.

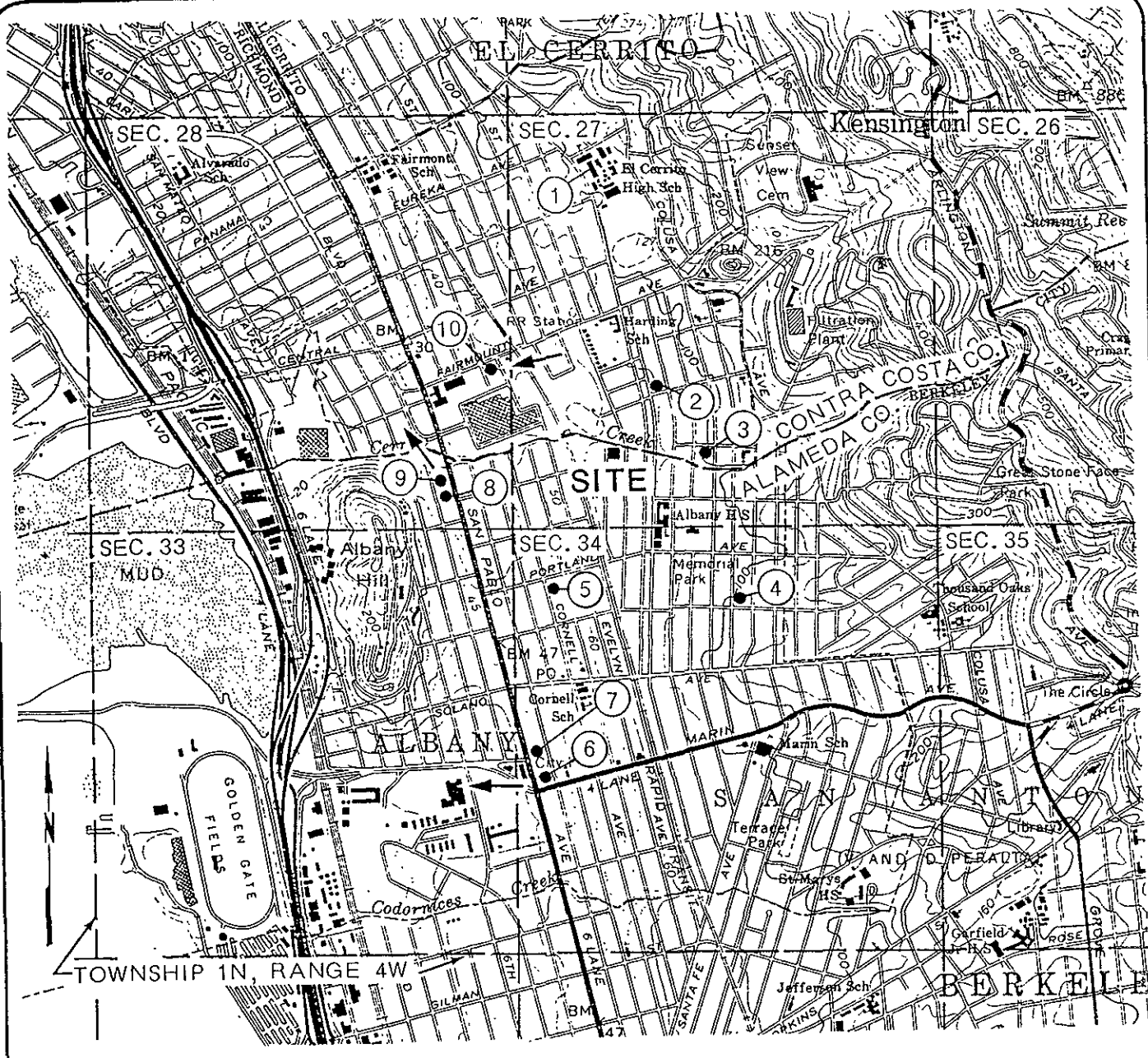
TABLE 2

ANALYTICAL TEST RESULTS
SOIL AND WATER SAMPLES
PRELIMINARY INVESTIGATION STUDY

Sample	Depth (feet)	Sample Type	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylene	Total Lead	Measurement Units
CPT-1	-	Water	91	0.7	0.3	4.0	0.4	0.4 mg/l	ug/l
CPT-1	4.0	Soil	<1	<.003	<.003	<.003	<.003	16	mg/kg
CPT-1	8.0	"	6	<.003	<.003	0.061	0.45	6	mg/kg
CPT-2	6.0	"	<1	<.003	<.003	<.003	<.003	7	mg/kg
CPT-2	12.0	"	<1	<.003	<.003	<.003	<.003	6	mg/kg
CPT-3	7.0	"	3	<.003	<.003	0.014	0.013	8	mg/kg
CPT-3	14.0	"	<1	<.003	<.003	<.003	<.003	10	mg/kg
Stockpile Composite	-	"	<1	<.003	<.003	<.003	<.003	41	mg/kg

Notes:

TPH (G) Total petroleum hydrocarbons as gasoline
ug/l Micrograms per liter (parts per billion)
mg/l Milligrams per liter (parts per million)
mg/kg Milligrams per kilogram (parts per million)



LEGEND

(10) ● Well location (see text for details)

← Shallow groundwater downgradient direction (when available)

Reference: USGS 7.5' Richmond Quadrangle, 1980

HTA Harlan Tait Associates Consulting Engineers and Geologists	VICINITY AND WELL LOCATION MAP Albany Corporation Yard 507 San Gabriel Avenue Albany, California	FIGURE 2
	Proj. No: 653.061 Date: 6/26/92 App'd by: DHC	

TABLE 1

WELL COMPLETION DETAILS
AREAL IRRIGATION AND OTHER WELLS

WELL/OWNER	USE	DATE COMPLETED	DEPTH Feet	PERFORATIONS
1 El Cerrito High School	Irrigation	1951	65	Unknown
2 PGE	Cathodic	1973	76	NA
3 PGE	Cathodic	1976	120	NA
4 PGE	Cathodic	1973	75	NA
5 PGE	Cathodic	1976	120	NA
6 Shell Oil Company, 7 wells	Monitoring	1990	12 to 16	0.02"
7 Firestone,4 wells	Monitoring	1990	12 to 15	0.01"
8 Troxell Auto Body, 3 wells	Monitoring	1990	20	0.02"
9 Plaza Car Wash, 3 wells	Monitoring	1989	15 (Approx)	Unknown
10 Mobil Gas Station, 3 wells	Monitoring	1985	20 (Approx)	Unknown

TONTO ENVIRONMENTAL DRILLING

Engineer HTA
On Site Loc:CPT-1
Job No. :653.061
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :08/25/92 09:21
Cone Used :339
Water table (meters) : 2

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	1.62	0.09	5.77	0.02	organic material	UNDFND	UNDFD	2	.1
0.50	1.64	10.76	0.29	2.70	0.07	silty clay to clay	UNDFND	UNDFD	7	.7
0.75	2.46	38.42	0.58	1.51	0.11	silty sand to sandy silt	70-80	46-48	12	UNDEFINED
1.00	3.28	36.82	0.72	1.95	0.16	sandy silt to clayey silt	UNDFND	UNDFD	14	2.4
1.25	4.10	55.04	1.51	2.74	0.20	sandy silt to clayey silt	UNDFND	UNDFD	21	3.6
1.50	4.92	73.80	1.81	2.45	0.25	sandy silt to clayey silt	UNDFND	UNDFD	28	4.9
1.75	5.74	42.64	1.27	2.98	0.29	sandy silt to clayey silt	UNDFND	UNDFD	16	2.8
2.00	6.56	41.80	0.97	2.31	0.34	sandy silt to clayey silt	UNDFND	UNDFD	16	2.7
2.25	7.38	57.90	2.27	3.91	0.37	clayey silt to silty clay	UNDFND	UNDFD	28	3.8
2.50	8.20	69.82	3.41	4.88	0.39	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
2.75	9.02	64.28	3.72	5.78	0.41	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
3.00	9.84	64.20	2.90	4.52	0.43	silty clay to clay	UNDFND	UNDFD	41	4.2
3.25	10.66	42.50	2.21	5.20	0.45	clay	UNDFND	UNDFD	41	2.7
3.50	11.48	43.74	2.03	4.65	0.47	silty clay to clay	UNDFND	UNDFD	28	2.8
3.75	12.30	40.12	1.86	4.64	0.49	silty clay to clay	UNDFND	UNDFD	26	2.6
4.00	13.12	91.12	3.61	3.96	0.51	clayey silt to silty clay	UNDFND	UNDFD	44	6.0
4.25	13.94	72.90	2.96	4.06	0.53	clayey silt to silty clay	UNDFND	UNDFD	35	4.8
4.50	14.76	112.56	3.23	2.87	0.55	sandy silt to clayey silt	UNDFND	UNDFD	43	7.4
4.75	15.58	25.84	0.91	3.52	0.57	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
5.00	16.40	24.52	0.84	3.42	0.59	clayey silt to silty clay	UNDFND	UNDFD	12	1.5
5.25	17.22	31.80	1.38	4.34	0.60	silty clay to clay	UNDFND	UNDFD	20	2.0
5.50	18.04	72.50	3.03	4.18	0.62	clayey silt to silty clay	UNDFND	UNDFD	35	4.7
5.75	18.86	92.44	3.90	4.21	0.64	clayey silt to silty clay	UNDFND	UNDFD	44	6.0
6.00	19.69	87.90	3.86	4.40	0.66	undefined	UNDFND	UNDFD	UDF	UNDEFINED
6.25	20.51	55.62	2.16	3.88	0.68	clayey silt to silty clay	UNDFND	UNDFD	27	3.6
6.50	21.33	45.04	1.72	3.83	0.70	clayey silt to silty clay	UNDFND	UNDFD	22	2.9
6.75	22.15	96.68	3.61	3.73	0.72	clayey silt to silty clay	UNDFND	UNDFD	46	6.3
7.00	22.97	98.72	5.18	5.25	0.74	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
7.25	23.79	106.26	5.70	5.36	0.76	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
7.50	24.61	198.12	9.04	4.56	0.78	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
7.75	25.43	149.16	7.79	5.22	0.80	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

SEP 3 1992

TABLE 1
LABORATORY ANALYTICAL RESULTS
SOIL
October 1994

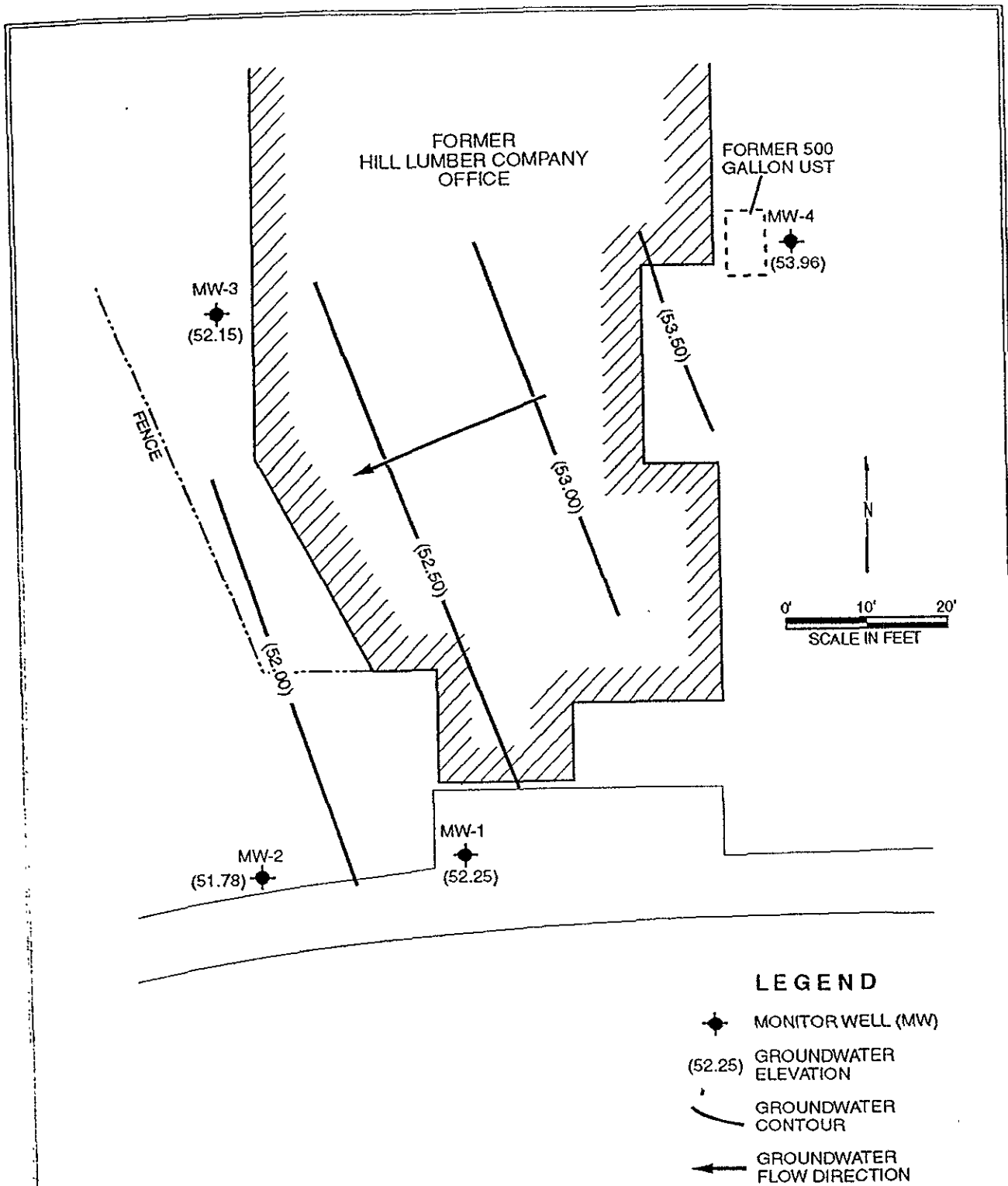
Sample Number	*Depth (feet)*	*THPd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*
HP1-11.5	11.5	<10	<1	<0.005	<0.005	<0.005	<0.005
HP2-13.5	13.5	<10	<1	<0.005	<0.005	<0.005	<0.005
HP3-7.5	7.5	<10	<1	<0.005	<0.005	<0.005	<0.005
MW4-8	8	<10	<1	<0.005	<0.005	<0.005	<0.005
MW4-11.5	11.5	<10	<1	<0.005	<0.005	<0.005	<0.005

Notes:
Concentrations in milligrams per kilogram
< indicates analyte not detected above the method detection limit shown

TABLE 2
LABORATORY ANALYTICAL RESULTS
GROUNDWATER
October 1994

Sample Number	*THPd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*
HP-1	<50	<50	<0.5	<0.5	<0.5	<0.5
HP-2	<50	<50	<0.5	<0.5	<0.5	<0.5
HP-3	<50	<50	<0.5	<0.5	<0.5	<0.5
MW-4	<50	<50	<0.5	<0.5	<0.5	<0.5

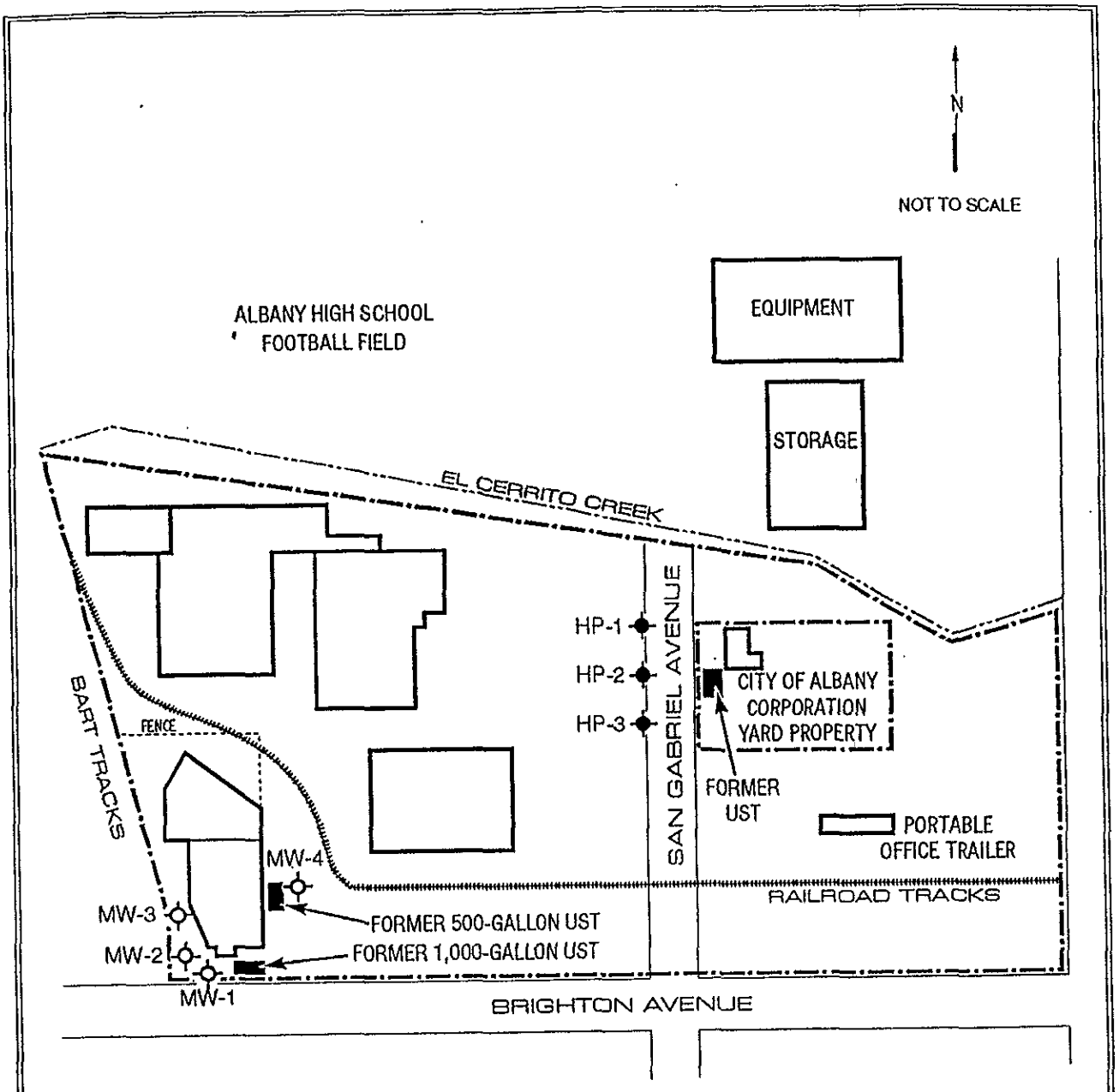
Notes:
Concentrations in micrograms per liter
< indicates analyte not detected above the method detection limit shown



ADAPTED FROM CEC MAP

DRAFTED BY: PEM	CHECKED BY: B.R.	PROJECT NUMBER: 70059-001-01	FIGURE NUMBER: 3
DWG DATE: 11/2/94	REV. DATE:	CLIENT: HILL LUMBER COMPANY	TITLE: GROUNDWATER CONTOUR MAP HILL LUMBER COMPANY 1259 BRIGHTON AVENUE ALBANY, CA
FILE NAME: ScrHilLmbrContur#3			

SEACOR
1390 Willow Pass Road
Suite 360
Concord, CA
94520



DRAFTED BY:	CHECKED BY:	PROJECT NUMBER:	FIGURE NUMBER: 2	SEACOR
PEM	B.R.	70059-001-01	TITLE: SOIL BORING LOCATION MAP HILL LUMBER COMPANY 1259 BRIGHTON AVENUE ALBANY, CA	1390 Willow Pass Road Suite 360 Concord, CA 94520
DWG DATE: 11/2/94	REV.DATE:	CLIENT: HILL LUMBER COMPANY		
FILE NAME: ScrHilLmbrSoilBrng#2				

Project: FORMER HILL LUMBER CO.–1259 Brighton Ave. Albany, CA			Log of Boring/Monitoring Well: HP-3
Boring Location: W of San Gabriel, SW of Former UST	Project No.: 70059–001–01		
Subcontractor and Equipment: BAYLAND CME 75, 7" HSA	Logged By: ROBITAILLE		
Sampling Method: CONTINUOUS SPLIT SPOON	Monitoring Device: PID/OVM		Comments:
Start Date/Time: 10/24/94//1525	Finish Date/Time: 10/24/94//1550		
First Water (bgs): 7.6 FEET	Stabilized Water Level (bgs): NA		

Surface Elevation: NA Casing Top Elevation: NA

Sample Interval Recovery (Inches)	Blows/Foot	PID (ppm)	Depth (Feet)	Samples	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
HAND AUGERED		0	0–5				GRAVEL BASE FILL (GRAVEL, SAND, SILT, CLAY, DRY) BLACK (10YR 2.5/1.5) SILTY CLAY (CL) moderate soft, dry, trace poorly sorted sand (0,5,25,70)	Backfilled with Neat Cement
18"/10"	8	0						
18"/14"	22		5–7				YELLOWISH BROWN (10YR 5/4) GRAVELLY SANDY CLAY (CL) moderate hard, dry, poorly sorted fine to coarse sand and gravel (15,30,15,40)	
18"/14"	17		7–8				Found water 1550 hrs.	
			8–9				YELLOWISH BROWN, GRAVELLY CLAYEY SAND (SC) medium loose, wet (20,40,10,30)	
			9–30				End of Boring at 8'. Drove Hydropunch Sampler to 12'.	

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SECOR

Reviewed By: _____ Date: Nov. 4, 94

Revised By: _____ Date: _____

Project: FORMER HILL LUMBER CO.–1259 Brighton Ave. Albany, CA			Log of Boring/Monitoring Well: HP-1
Boring Location: West Side of San Gabriel– NW of UST	Project No.: 70059–001–01		
Subcontractor and Equipment: BAYLAND CME 75, 7" HSA	Logged By: ROBITAILLE		Comments:
Sampling Method: CONTINUOUS SPLIT SPOON	Monitoring Device: PID/OVM		
Start Date/Time: 10/24/94//1030	Finish Date/Time: 10/24/94//1230		
First Water (bgs): NA	Stabilized Water Level (bgs): NA		

Surface Elevation: NA Casing Top Elevation: NA

Sample Interval Recovery (Inches)	Blows/Foot	PID (ppm)	Depth (Feet)	Samples	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
HAND AUGERED		0	0–3				BROKEN ASPHALT–GRAVEL ROAD BASE BASEROCK, SILT, CLAY BLACK (10YR 2.5/1.5) SILTY CLAY (CL) moderate soft, dry, trace poorly sorted sand (0,5,25,70) THIN GRAVELLY CLAY WITH SAND (CL)
18"/18"	25	0	4–5				BROWN (10YR 5/3) FINE SANDY CLAY (CL) moderate hard, dry, very fine well sorted sand, with silt, trace small gravel, very dark brown and yellowish brown mottled (3,32,10,55)
18"/12"	17	0	6–7				
18"/14"	20	0	7–8				
18"/18"	25	0	8–9				Grades with abundant medium gravels, angular to well rounded, >2" dia. max., with fine to coarse sand (15,20,70,55)
18"/15"	18	0	10–11				Grades moist on gravel surfaces
18"/4"	32	0	11–12				End of Boring at 13'. Drove Hydropunch Sampler to 17'.
			13–30				

Boring Abandonment/ Well Construction Details

199411.030901 I:\LOGS\HILL-LUM\HP-1

SECOR

Reviewed By: _____ Date: Nov 4, 94

Revised By: _____ Date: _____

Project: FORMER HILL LUMBER CO.–1259 Brighton Ave. Albany, CA			Log of Boring/Monitoring Well: HP-2
Boring Location: 35' West of UST on San Gabriel	Project No.: 70059-001-01		
Subcontractor and Equipment: BAYLAND CME 75, 7" HSA	Logged By: ROBITAILLE		Comments:
Sampling Method: CONTINUOUS SPLIT SPOON	Monitoring Device: PID/OVM		
Start Date/Time: 10/24/94//1245	Finish Date/Time: 10/24/94//1400		
First Water (bgs): 13.5 FEET	Stabilized Water Level (bgs): NA		

Surface Elevation: NA Casing Top Elevation: NA

Sample Interval Recovery (inches)	Blows/Foot	PID (ppm)	Depth (Feet)	Samples	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
HAND AUGERED		0	0–3				GRAVEL BASE FILL (GRAVEL, SAND, SILT, CLAY, DRY, NO ODOR) BLACK (10YR 2.5/1.5) CLAY WITH SILT (CL) moderate soft, trace poorly sorted sand (0,5,20,75)
18"/14"	17	0	4–5				GRAVELLY CLAY, BLACK (CL) moderate hard, dry (20,5,15,60)
18"/18"	22	0	5–6				BROWN (10YR 5/3) FINE SANDY CLAY WITH SILT (CL) moderate hard, dry, very dark brown and yellowish brown mottled, trace small gravel (3,32,10,55)
18"/14"	12	0	7–8				Grades with abundant gravel
18"/16"	19	0	8–9				YELLOWISH BROWN (10YR 5/4) GRAVELLY SANDY CLAY (CL) moderate hard, dry, black and yellowish brown mottled, interbedded (20,30,10,40)
18"/12"	25	0	10–11				
18"/14"	31	0	12–13				
18"/14"	33	0	13–14			▽	Discovered water at 1345 hrs. in gravelly sand lens. End of Boring at 14'. Drove Hydropunch Sampler to 17'.

Boring Abandonment/ Well Construction Details

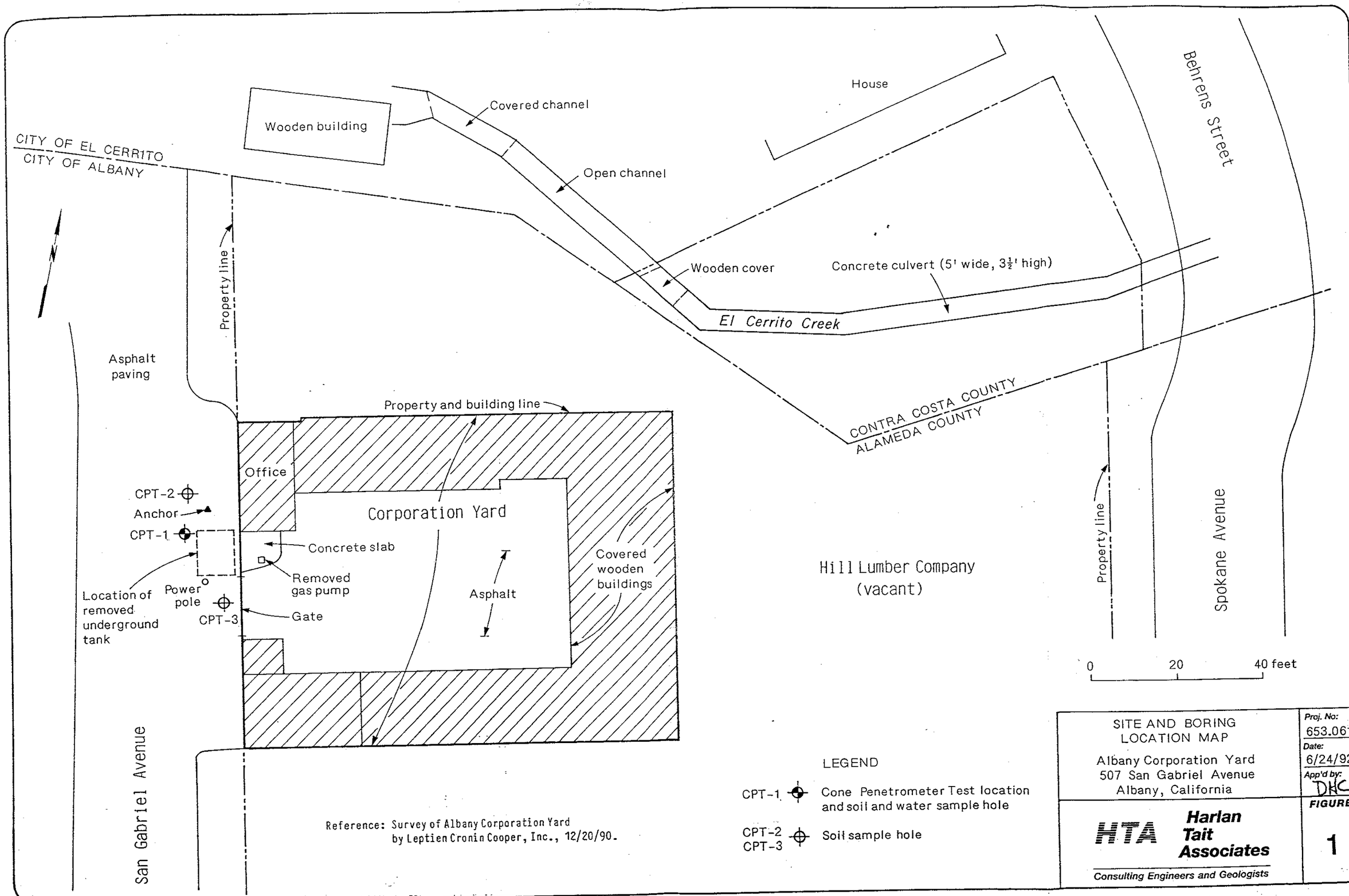
Backfilled with Neat Cement

199411.030901 I:\LOGS\HILL-LUM\HP-2

Reviewed By: _____ Date: Nov 4, 94

Revised By: _____ Date: _____

SECOR


CITY OF EL CERRITO
CITY OF ALBANY
Wooden building
Covered channel
Open channel
House
Behrens Street
Property line
Wooden cover
Concrete culvert (5' wide, 3½' high)
El Cerrito Creek
CONTRA COSTA COUNTY
ALAMEDA COUNTY
Asphalt paving
Property and building line
Office
Corporation Yard
CPT-2
Anchor
CPT-1
Concrete slab
Removed gas pump
Location of removed underground tank
Power pole
CPT-3
Gate
Asphalt
Covered wooden buildings
San Gabriel Avenue
Hill Lumber Company
(vacant)
Property line
Spokane Avenue
0
20
40 feet
Reference: Survey of Albany Corporation Yard by Leptien Cronin Cooper, Inc., 12/20/90.
LEGEND
CPT-1 Cone Penetrometer Test location and soil and water sample hole
CPT-2 CPT-3 Soil sample hole
SITE AND BORING LOCATION MAP
Albany Corporation Yard
507 San Gabriel Avenue
Albany, California
Proj. No: 653.061
Date: 6/24/92
App'd by: DHC
FIGURE 1
HTA Harlan Tait Associates
Consulting Engineers and Geologists

SEMCO

HEALTH & SAFETY

PLAN

HEALTH MONITORING AND SAFETY PROGRAM

To assure the health and safety of employees involved in hazardous waste operations, Semco Inc. has developed and implemented a Health and Safety Program.

This plan is based on Standard Operating Safety Guides (USEPA) and The Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH/OSHA/USGC/EPA).

Semco inc. employees must receive health and safety training prior to commencing work at sites where hazardous materials may be present and will be provided with periodic follow-up training as appropriate. Health and Safety training will include;

* Health Monitoring Program

* Review of General Chemical & Mechanical Dangers

* Emergency Response

* Decontamination

* Documentation and Record Keeping

* Updating of Health and Safety Plan

* Reference Guides for Hazardous Materials

When appropriate, a site-specific safety plan will be implemented and will include the following:

* Site history

* Inventory of known chemicals (updated as possible)

* Project organization

* Work Plan review

* Project documentation

* Review of site safety rules (site safety rules will be updated as new information is available or after an accident of implementation of contingency plan)

* Review of decontamination procedures

* Proper use and care of personal protective equipment

* Proper calibration and use of monitoring equipment

* Emergency response procedures

1.0 HEALTH MONITORING PROGRAM

All drilling personnel and field staff must be enrolled in the Semco Inc. Health Monitoring Program, developed in conjunction with Industrial Medical Clinics of Anaheim, CA. This program consists of an initial medical examination to establish the employee's general health profile and provides important baseline laboratory data for comparative study. The scope of the initial comprehensive physical examination and laboratory testing routine is detailed in Table 1-0. Follow-up examinations are completed for all personnel enrolled in the health monitoring program on a semi annual basis, or more frequently if project assignments warrant testing following specific field activities. The level of potential exposure that Semco personnel are subjected to in carrying out hazardous waste work assignments are recorded by the individual and reviewed weekly by the site supervisor. The California Poison Control Center maintains a comprehensive reference library containing the current information concerning the carcinogenic, mutagenic, teratogenic and toxic characteristics of hazardous wastes.

1.1 REVIEW OF EXPOSURE SYMPTOMS

Symptoms of exposure to hazardous materials for each site will be reviewed in order to indicate to personnel the recognized signs of possible exposure to those materials. This information will be supplemented with a discussion of the need for objecting in the personal health assessment to account for normal reaction to stressful situations. The Site Safety Officer (the lead driller) will be watchful for outward evidence of changes in worker health. These outward symptoms may include skin irritations, skin discoloration, eye irritability, reduced libido, intolerance to heat or cold, or loss of appetite. Employees will routinely be asked to assess their general state of health during individual projects. At the end of each week, employees will briefly describe minor injuries and chemical experience (exposure potential at each job site). This description will be turned in with time records, reviewed by the corporate safety officer and filed in the employees medical file.

TABLE 1-0

HEALTH MONITORING PROGRAM
INITIAL EXAMINATION

Physical Examination
- * medical history survey
- * medical examination
- * vision; near and distance vision, color vision
- * hearing; audiometry
- * radiologic: PA:LAT
- * electrocardiogram: 12-lead
- * spirometry

Lab Studies

* hematology
  - red blood count
  - white blood count
  - hemoglobin
  - hematocrit
  - platelet
  - indices
  - sedimentation rate

* blood chemistry
  - SMA 17
  - electrolytes
  - creatinine
  - SGPT
  - carbon dioxide
  - cholesterol
  - serum iron

- urinanalysis
- Papanicolaou
- cholinesterase level
- thyroid function test T3/T4

2.0 REVIEW OF GENERAL CHEMICAL AND MECHANICAL DANGER

A set of standard onsite safety practices will be enforced during site activities to reduce the risks associated with handling contaminated materials and dangers inherent with working near heavy machinery. These safety practices are divided into three categories: personal precautions, rig safety and general procedures and operations.

2.1 PERSONAL PRECAUTIONS

2.1.1 Any practice which increases the probability of hand-to-mouth transfer and ingestion of contaminated material will be prohibited in any area designated contaminated. Prohibited activities include eating, drinking, chewing gum or tobacco and smoking.

2.1.2 Hands and face will be thoroughly washed upon leaving the work area and before eating, drinking or any other activities.

2.1.3 Any excess facial hair which interferes with proper fit of the mask to face seal will be prohibited on personnel required to wear respirator protection. (while respirators are not typically required, work will be prepared to upgrade to Level "C" protection requiring the use of respriators.)

2.1.4 Unnecessary contact with contaminated or suspected contaminated surfaces will be avoided. Workers will be instructed to avoid walking through puddles, mud, or other discolored surfaces: kneeling on the ground; and leaning, sitting, or placing equipment on drums, containers, vehicles or the ground.

2.1.5 Medicine and alcohol can increase adverse effect from exposure to toxic chemicals. Therefore, prescribed medication will not be taken by personnel during field activities. Also, alcoholic beverage intake will not be tolerated immediately before or during field work.

2.1.6 The effects of heat stress in all personnel will be monitored by the Health and Safety Officer. Appropriate measures will be taken to remove any potential victim of heat stress from the work area, provide cooling to the body and provide plenty of liquids to replace body fluids.

2.2 RIG SAFETY

Semco, Inc. has incorporated the National Drilling Federation's (NDF/DCDMA/NDCA) "Drilling Safety Guide" as our mechanical hazards and rig safety guide. This booklet is required reading for all field personnel.

2.3 GENERAL PROCEDURES AND OPERATIONS

2.3.1 Entrance and exit to the site will be planned and emergency escape routes will be determined. Before drilling begins a working phone will be located and the most expeditious route to a hospital established. Site Specific Hazards will be discussed and the clients safety requirements will be adopted. Personnel will practice any unfamiliar procedures prior to performing them in the field. The number of personnel and pieces of equipment in the work area will be minimized to the extent that it compromises the effectiveness of site operations. Procedures for leaving a contaminated work area will be established prior to going onsite. Work areas and decontamination procedures will be established based on site conditions.

2.3.2 LEVELS OF PROTECTION

The level of personnel protective equipment required shall be determined by the type and levels of waste or spill material present at the site where project personnel may be exposed. In situations where the types of waste or spill material on-site are unknown or the hazards are not clearly established or the situation changes during onsite activities, the Site Safety Officer must make a reasonable determination of the level of protection that will assure the safety of drilling personnel until the potential hazards have been determined precisely through monitoring, sampling, informational assessment, or other reliable methods. Once the hazards have been determined, protective levels commensurate with the hazards shall be employed. Protection levels will be continuously evaluated to reflect any new information acquired.

The levels of protection utilized by SEMCO INC. are presented below:

Level A - Level A protection must be selected when the Site Safety Officer makes a reasonable determination that the highest available level of both respiratory and skin and eye contact protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise form wearing Level A protection should also enter into the subtask leaders dicision. (Comfort is not a decision factor, but heat stress will influence work rate, scheduling, and other work practices.)

Level B - The Site Safety Officer must select Level B protection when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (i.e. the back of the neck) is unlikely.

Level C - The Site Safety Officer may select Level C when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by full face air purifying respirators; and hazardous materials exposure to the few unprotected areas of the body. Level C requires carrying an emergency escape respirator.

Level D - Level D is the basic work uniform. Investigators and response personnel must not be permitted to work in civilian clothes. An emergency escape respirator may be required

Respiratory protection criteria and suitable protection gear are summarized in Table 2-1. Fit testing of safety equipment will be an important part of establishing adequate respiratory and dermal protection. Fit testing will be accomplished prior to site explorations and each individual will be assigned a fitted respirator for the duration of the project. These will be tagged for identification.

It should be recognized that most situations require a different combination of respiratory and dermal protective gear, e.g.. where no splash protection is required but a high respiratory hazard is present. The site Safety Officer may elect a modification of the above.

TABLE 2-1
PROTECTIVE GEAR
(AIR QUALITY LEVELS IN PPM)

	Level D	Level C	Level B	Level A
Air Quality Above Background	0	0-5	5-500	500-1000
Respirator Type*	Escape	Full Face + Escape	SCBA	SCBA
Clothing				
o Boots	*	*	*	*
o Safety glasses or equivalent	*	*	*	
o Hard hat	*	*	*	
o Gloves, inner and outer	*	*	*	*
o Booties		*	*	*
o Coveralls	*	*	*	
o Chemical protective coveralls		*	*	
o Totally encapsulated suit				*

* Use of a respirator is allowed only where identification or organic vapor constituents has occurred and appropriate respirator cartridges have been obtained.

3.0 EMERGENCY RESPONSE

3.1 ON-SITE FIRST AID

All of Semco, Inc.'s Drill Rigs will be equipped with the following items at all times:

- an industrial first aid kit
- 2 ELSA 10 minute supplied Air Escape Mask
- 3 Half Mask respirators
- 3 Full Face respirators
- 10 pair Cartridges TC-21C-287 (organic vapors)
- 10 pair Cartridges TC-23C-450 (organic vapors, acid gases)
- 3 hard hats
- 5 safety glasses
- 30 pair disposable gloves
- 10 pair butyl rubber gloves
- 10 chem resist coveralls (coated Tyvek)
- 3 pair rubber boots with steel toes
- 2 fire extinguishers (co 2)
- 1 eye wash station (portable)

3.1.1 At least one person qualified to perform first aid will be present onsite at all times during work activity. This person will have earned a certificate in first aid training from the American Red Cross or will have received equivalent training.

3.1.2 Transportation to Emergency Treatment

A vehicle will be available at all times for use in transporting personnel to the hospital. Hospital routes shall be discussed prior to onsite activity.

3.1.3 Contingency Planning

Prior to commencement of onsite activities, field personnel will review safety considerations with the Site Safety Officer. The Site safety Officer is responsible for adherence to the designated safety precautions and for adherence to the designated safety precautions and assumes the role of SEMCO,INC'S on site coordinator with the client in an emergency response situation.

3.2 POTENTIAL HAZARDS

The potential hazards associated with hazardous waste site investigation included 1) accidents; 2) contact, inhalation or ingestion of hazardous materials; 3) explosion; and 4) fire.

3.2.1 Accidents

Accidents must be handled on a case by case basis. Minor cuts, bruises, muscle pulls, etc., will still allow the injured person to undergo reasonable normal decontamination procedures prior to receiving direct first aid. More serious injuries may not permit complete decontamination procedures to be undertaken, particularly if the nature of the injury is such that the victim should not be moved. The nature and degree of surface contamination at a site is generally low enough that emergency vehicles could reach the victim on site without undue hazard.

3.2.2 Contact and/or Ingestion of Hazardous Materials

Properly prescribed and maintained protective clothing and adherence to established safety procedures are designed to minimize these hazards. however, it is still a possibility that contact or ingestion of materials may occur. One possibility for contamination is the puncture of a buried drum of liquid during drilling operations which might cause the random distribution of the drum contents. Standard first aid procedures should be followed. The drilling rig will have a tank of water which may be useful in some circumstances, particularly to flush off any exposed skin areas. Eye wash bottles will also be maintained at the site in case of emergencies. In cases of ingestion or other than minor contact with known substances, the Poison Control Center and local hospital should be contacted and the victim brought there immediately for further treatment and observation.

3.2.3 Explosion

The drilling crew should be keenly aware of combustible gas meter readings and withdraw at an indication of imminently hazardous conditions. The detection of such conditions shall be reported to local agencies for potential execution of the evacuation plan should the situation be assessed as warranting such response.

3.2.4 Fire

The combustible gas meter will also warn of imminent fire hazards at borings. The greatest fire hazard at the site should be recognized as handling the methanol used for decontamination. No smoking or open flames are allowed in this area. Carbon Dioxide fire extinguishers will be kept at the drilling rig, and the decontamination area/field office. The Fire Department, previously informed of site activities, will be called as needed.

3.3 EVACUATION RESPONSE LEVELS

Evacuation responses will occur at three levels: (1) withdraw from immediate work area (100+ feet upwind); (2) site evacuation; (3) evacuation of surrounding area. Anticipated conditions which might require these responses are described below:

Withdrawal up-Wind (100 or more feet)

- Sensing ambient air conditions as containing greater contaminant concentrations than guidelines allow for the type of respiratory protection being worn. The work party may return upon donning greater respiratory protection and/or assessing the situation as transient or past.

- Breach in protective clothing or minor accident. The party may return when tear or other malfunction is repaired and first aid or decontamination has been administered.

3.5.1 Site Evacuation:
Upon determination of conditions warranting site evacuation, the work party will proceed upwind of the borehole and notify the security force, Site Safety Officer and the field office of site conditions. If the decontamination area is upwind and greater than 500 feet from the borehole, the crew will pass quickly through decontamination to remove contaminated outer suits. If the hazard is toxic gas, respirators will be retained. The crew will proceed to the field office to assess the situation. There the respirators may be removed (if the PI meter indicates an acceptable condition). As more facts are determined from the field crew, these will be relayed to the appropriate agencies.

3.5.2 Evacuation of Surrounding Area

When the Site Manager determines that conditions warrant evacuation of downwind residences and commercial operations, the local agencies will be notified and assistance requested. Designated onsite personnel will initiate evacuation of the immediate off site area without delay.

3.6 TRAINING

The attached matric (Figure 3-1) indicated training received by on site personnel. All personnel should become familiar with this matrix to minimize response times.

4.0 DECONTAMINATION

4.1 PERSONNEL DECONTAMINATION PROCEDURE

A decontamination procedure will be carried out by all personnel leaving hazardous waste sites. Under no circumstances (except emergency evacuation) will personnel be allowed to leave the site prior to decontamination. Procedures for removal of protective clothing are as follows:

- o Drop tools, monitors, samples and trash at designated drop stations. These will be plastic containers or drop sheets.
- o Step into designated shuffle pit area and scuff feet to remove gross amounts of dirt from outer boots. If necessary, wash boots down with clear water in designated wash pit area.
- o Remove tape from boots and remove boots. Discard in drum container.
- o Remove outer gloves and place in container.
- o Remove hard hat and respirator and hang in the designated area.
- o Remove coveralls and discard in container.
- o Remove inner gloves and discard in container.
- o If the site required utilization of a decontamination trailer, all personnel would also shower before leaving the site at the end of the work day.

Note: Disposable items (coverall, inner gloves, and overboots) will be changed on a daily basis unless there is reason for changing sooner. Dual respirator canisters will be changed weekly unless more frequent changes are deemed appropriate by site surveillance data or personnel assessment.

A water hose and/or designated wash area will be available for wash down and cleaning purposes.

A schematic of a typical decontamination area is shown in Figure 4-1.

4.2 EQUIPMENT DECONTAMINATION

Equipment to be decontaminated during the project may include: (1) drilling rig and tools' (2) sample containers; (3) monitoring equipment; and (4) respirators.

All decontamination will be done by personnel in protective gear appropriate for the level of decontamination, determined by the Site Safety Officer. The decontamination work tasks will be split or rotated among support and work crews. Decontamination procedures within the trailer (if used) should take place only after other personnel have cleared the "hot area", moved to the clean area and the door between the two areas closed.

Miscellaneous tools and samplers will be dropped into a plastic pail, tub or other container. They will be brushed off and rinsed (outside, if possible) and transferred into a second pail to be carried to further decontamination stations. They will be washed with a trisodium phosphate or detergent solution, rinsed with acetone or methanol, rinsed with a trisodium phosphate or detergent solution and finally rinsed with clean water.

4.2.1 Drilling Rig and Tools

It is possible that the drill rigs will be contaminated during test pit/borehole activities. They will be cleaned with high pressure water or portable high pressure steam followed by soap and water wash and rinse. Loose material will be removed by brush.

4.2.2 Sample Containers

Exterior surfaces of sample bottles will be decontaminated prior to packing for transportation to the analytical laboratory. Sample containers will be wiped clean and placed in individual Zip-Loc bags at the sample site. It will be difficult to keep the sample containers completely clean. The samples will be further cleaned if necessary and transferred to a clean carrier and the sample identifies noted and checked off against the chain-of-custody record. The samples, now in a clean carrier, will be stored in a secure area prior to shipment.

4.2.3 Monitoring Equipment

Monitoring equipment will be protected as much as possible from contamination by draping, masking or otherwise covering as much of the instruments as possible with plastic without hindering the operation of the unit. The HNU meter, for example, can be placed in a clear plastic bag which allows reading of the scale and operation of the knobs. The HNU sensor can be partially wrapped, keeping the sensor tip and discharge port clear.

The contaminated equipment will be taken from the drop area and the protective coverings removed and disposed of in the appropirate containers. Any dirt or obvious contamination will be brushed or wiped with a disposable paper wipe and the used wipers discarded. The units will then be taken inside in a clean plastic tub, wiped off with damp disposable wipes and dried. The units will be checked, standardized and recharged as necessary for the next day's operation. They will then be covered with new protective coverings.

4.2.4 Respirators

Respirators will be decontaminated daily. Taken from the drop area, the masks will be disassembled, the cartridges set aside and the rest placed in a cleansing solution. (Parts will be precoded, e.g., #1 on all parts of mask #1). After an appropriate time within the solution, the parts will be removed and rinsed off with tap water. The old cartridges will be marked to indicate length of usage and will be discarded into the contaminated trash container for disposal when considered spent. In the morning the masks will be re-assembled and new cartridges installed if appropriate. Personnel will inspect their own masks to be sure of proper readjustment of straps for proper fit.

5.0 DOCUMENTATION AND RECORD KEEPING

Samples of field activity documentation forms are attached. Minimum documentation consists of:

- o daily field record kept by individuals
- o hazardous site surveillance record kept by Site Safety Officer
- o chain-of-custody records and lab results of samples collected
- o personal hazardous material exposure record

The Site Safety Officer is also responsible for immediate notification of SEMCO Inc's Health and Safety Coordinator in the event of personal injury.

6.0 UPDATING OF HEALTH AND SAFETY PLAN

Each individual involved in field operations is responsible for maintaining weekly safety sheets. If any deficiency is encountered in the Health and Safety Plan, a report will be prepared and forwarded to the Health and Safety Coordinator. The Site Safety Officer will immediately initiate necessary changes to improve protection of field staff.