

RWL Investments., Inc

4919 Tidewater Ave. Unit B
Oakland, CA 94601

April 17, 2012

Mark Detterman, Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

RECEIVED

5:32 pm, Apr 24, 2012

Alameda County
Environmental Health

Subject: Letter of Transmittal for
Investigative and Interim Remedial Action Workplan
4919 Tidewater Ave., Oakland, CA

Case No. RO0000107

Dear Mr. Detterman,

On behalf of RWL Investments Inc., Environmental Restoration Services has prepared the attached *Investigative and Interim Remedial Action Workplan* dated April 17, 2012, for the above referenced site.

I declare, under penalty of perjury, that the information and/or recommendations contained in the report are true and correct to the best of my knowledge.

Sincerely,
RWL Investments Inc.



Bob Lawler
President

Environmental Restoration Services

Site Investigations * Fuel Tank Closures and Installations * Site Remediation * Regulatory Reporting

Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

April 17, 2012

Attn: Mr. Mark Detterman ; Haz Mat. Specialist for : DiSalvo Trucking
4919 Tidewater Ave., Oakland

Re: **Investigative Workplan and Interim Remedial Action Workplan**

Dear Mr. Detterman,

1.0 INTRODUCTION

This Workplan has been prepared by Environmental Restoration Services, (ERS) to address requirements by the Alameda County Department of Environmental Health (ACDEH) for the performance of a subsurface investigation and an interim remedial action, at a Underground Storage Tank (UST) site, 4919 Tidewater Ave., Oakland, California.

The purpose of the investigative phase of this workplan is to investigate the possibility of subsurface groundwater preferential pathways. The purpose of the remedial action phase of this workplan is to stop petroleum impacted groundwater from migrating off-site in the vicinity of San Leandro and to attempt to recover fugitive petroleum impacted groundwater.

1.2 Site Location

The site is located in a light industrial district of Oakland, California on property at 4919 Tidewater Ave.(Figure 1).

1.3 Previous Subsurface Work at Site

Previous subsurface work at the site includes soil excavation and bio remediation, groundwater disposal, soil borings and sampling, monitor well construction and sampling. Description and chemical results from all work conducted to date are given in reports by Geo Environmental Technology (GET) dated April, 1989, June 1989 and February 1991, in a report by Gen-Tech Environmental, Inc., (GTE) dated May 1994 and November 1994, in a Report by ERS dated September of 1995, a report by PIERS Environmental Service Inc. (PIERS) dated December 2000, a report by Eras Environmental Inc. (Eras) dated May 2006 and a report by ETIC Engineering Inc. (ETIC) dated January 2009. Other subsurface investigation includes a geotechnical investigation prepared by Murray Engineers Inc. (Murray) dated April 2006 and an aquifer dewatering analysis prepared by Applied Remedial Technologies (ART) dated May 2006.

2.0 SITE DESCRIPTION

2.1 Site Description and Hydrogeologic Setting

The essentially flat, approximately 3.61-acre site is located on the southwest side of Tidewater Avenue near the eastern edge of the San Leandro Bay in Oakland, California. It appears that the site was raised above the surrounding marshland by the placement of between approximately 1 and 9 feet of various fill materials. The majority of the subject site is surfaced with asphaltic concrete (AC) pavement. There is an approximately 11,800 square foot, single-story trucking terminal building along the north side of the property, an approximately 2,770 square-foot, single-story truck repair shop at the southern property boundary, and an above-ground fuel storage tank located on the north side of the repair shop. The site is currently in use as a trucking facility and large trucks are continuously parked throughout the site. The AC paving throughout the site exhibits some cracking, which is typical for sites placed on old fills over the soft bay soils.

2.2 Vicinity Map

A vicinity map is given in Figure 1 which includes the location of any known hydraulic influences. The San Leandro Bay lies approximately 200 feet southeast of the site. A site map is given in Figure 2 which includes information on adjacent streets, site building locations, locations of existing wells, past soil borings and former tanks.

2.3 Existing Analytical Results

The most recent soil and groundwater analytical data can be found in a Subsurface Investigative report by Eras Environmental Inc. of Hayward, CA, dated May 2006 and a Subsurface Investigative report by ETIC Engineering Inc. of Pleasant Hill, CA, dated January 2009. These reports are contained in the State of California's Geotracker database which is available on-line for public view. Analytical data of concern is groundwater sample data collected during the ETIC September 2008 investigation. The sample points, C-15 and C-16, indicated elevated concentrations of TPH/ as diesel (9.3 mg/l and 3.8 mg/l respectively) and were located along the southern boundary of the subject site. The ETIC site map (Figure 4) and ETIC boring logs for borings C-15 and C-16, are contained in the appendix of this Workplan.

2.3.2 Depth to Groundwater

Depth to groundwater based on the monitor well sampling is approximately 1 to 3.5 feet below ground surface.

2.3.3 Soil Profile

The most recent boring logs show predominantly imported silty/clayey sands and gravels underlain with young bay mud.

3.0 RECOMMENDATIONS FOR INTERIM REMEDIAL ACTION

Analytical groundwater sample data collected during the ETIC September 2008 investigation indicated elevated concentrations of TPH as diesel at sample points C-15 (9.3 mg/l) and C-16 (3.8 mg/l) located along the southern property line (Figure 4) of the subject site. ERS concurs with the ACDEH belief that elevated levels of diesel in the groundwater may be migrating to the south, through possible preferential pathway(s), and are likely fugitive and therefore a threat to the surface waters of San Leandro Bay.

3.1 Subsurface Investigative Trench/Slurry Wall Installation

The September 2008 ETIC boring logs for soil borings C-15 and C-16 (appendix) indicated organic materials, and also described “wood chips” from a depth of approximately 4 feet bgs. to approximately 11’ bgs in soil boring SB-16. ERS believes this could be a possible preferential pathway for impacted groundwater and should be further investigated. ERS proposed to install approximately 150 feet of exploratory trench along the southern subject property line.

Because this imported subsurface organic material may be acting as a preferential pathway for impacted groundwater, ERS is proposing that the trench be backfilled with impervious concrete slurry or Controlled Density Fill (CDF), as an interim remedial action, to help prevent future migration of petroleum impacted groundwater off-site.

3.1.1 Trenching Procedure

The trenching will be begin at the southern corner of the “truck repair building” , near the location of ETIC boring C-15, and approximately 90 feet north east of the southern property corner, and will advance along the property line (approximately 4 feet off the property line) towards the southern property corner. From the southern property corner, trenching will be advance along the property line (approximately 4 feet off the property line) approximately 60 feet north west of the southern property corner, to towards the western property corner. The trench location is shown in Figure 2.

The proposed investigative trench will be 18 inches wide and as deep as required so that the bottom of the trench is a minimum 12” into native clayey material. Soil excavated from the trench (approximately 100 cubic yards) will be stockpiled on-site. The soil will be profiled per Republic Services Inc. (Republic) disposal profile requirements and properly transported and disposed of at a selected Republic Class III landfill.

The lithography along the trench sidewalls will be logged by a registered professional. After logging, the trench will be shored to prevent sidewall collapse prior to backfill. The trench will be constantly de-watered. The recovered groundwater will be stored on-site in an aboveground 5000 gallon poly-tank. The groundwater will be profiled and disposed of per EBMUD special discharge permit. All open trench will be backfilled at the end each day with a concrete CDF.

3.2 Recovery of Fugitive Impacted Groundwater

Based on the results groundwater analysis performed by ETIC in September of 2008, it is likely that petroleum impacted groundwater may have migrated off-site along the southern property line. ERS proposes the attempt to recover the impacted groundwater by extracting from a recovery trench installed along the "outside" of sub-surface slurry wall.

3.2.1 Recovery Trench Construction

Approximately 150 feet of recovery trench will be excavated along slurry wall, between the wall and the property line. (Figure 2). The proposed trench will be 18 inch wide by 6 feet deep and will be lined with a filter fabric. The trench will have a 8" perforated drain line at the bottom and will be backfilled with 1-inch drain rock to within 18 inched from the surface. The trench will then be capped with concrete CDF. At each end of the trench and at minimum 60 foot intervals, a 4 inch perforated stand pipe will be installed as extraction and groundwater elevation inspection points (Detail, Figure 2). Soil excavated from the trench (approximately 50 cubic yards) will be stockpiled on-site. The soil will be profiled per Republic disposal profile requirements and properly transported and disposed of at a selected Republic Class III landfill.

3.2.2 EBMUD Discharge Permit

A permit from East Bay Municipal Utility District (EBMUD) will be obtained to discharge up to 5 gallons per minute of groundwater to the sanitary sewer system. The permit will require that the groundwater be pre-treated before discharge.

3.2.3 Groundwater Recovery and Treatment

Groundwater will be extracted from (a) selected extraction stand pipe(s) located along the recovery trench (Figure 2). Submersible pump(s) will be used to draw groundwater from the extraction point(s) to the treatment location. Groundwater will be pumped through a half inch braided poly line contained within a 1 1/2 inch, schedule 40, ABS pipe that will have a minimum 2 % fall from the treatment location back to the recovery point. (Detail in Figure 2.)

The groundwater treatment system (Figure 3) will consist of a 1000 gallon, closed top, three-stage oil water separator tank (Separator) . The Separator will be equipped with a high water shut off switch. From the Separator, treated groundwater will be pumped into twin 5000 gallon discharge tanks. The holding tanks will be equipped with a high water shut off switch. Each 10,000 gallon "batch" of groundwater will be profiled and disposed of per EBMUD special discharge permit.

Any floating product will be passively skimmed from the top of the first separation unit of the Separator using passive Selective Oil Skimmer (SOS). The skimmer will be emptied weekly into a double contained 55 gallon drum. The drum contents will be disposed of periodically as hazardous waste.

3.2.4 Groundwater Extraction System Reporting

Included in the next semi-annual well monitoring report will be a report describing the amount of groundwater discharged, the amount of product recovered from passive skimming, influent analytical results collected bi-monthly, sidewall lithography of the investigative trench and soil disposal manifests.

3.3 Expansion of On-Site Groundwater Extraction System

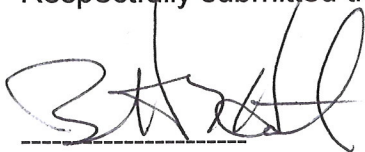
Upon approval from EBMUD to increase the treated groundwater discharge, ERS proposes to add additional on-site groundwater recovery trenches as a corrective action. Proposed additional on-site groundwater recovery trenches are shown in Figure 2 and will be constructed as described in section 3.2.1 and 3.2.3.

4.0 SITE SAFETY PLAN

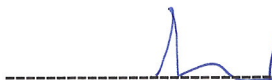
A site safety plan will be prepared by the consultant prior to initiation of the field activities. The site safety plan will comply with all federal and state regulations for worker safety and hazardous material handling, transport, and disposal. The site safety plan will consider possible worker exposure during drilling and sampling operations in accordance with applicable OSHA standards.

If you have any questions regarding these comments or scope of work, or wish to add to or alter the scope, please do not hesitate to call Ben Halsted at 408-655-9434 so I may resubmit any revisions.

Respectfully submitted this 17th day of April, 2012,



Bennett T Halsted
Project Manager



Samuel H Halsted P.E.
CE 14095



FIGURES



VICINITY MAP
 4919 Tidewater Ave., Oakland, CA
 DATE 3/19/12 | SCALE 1"=0.6 Miles | **FIGURE 1**
Environmental Restoration Services
 PO Box 2006, Menlo Park, CA 94026



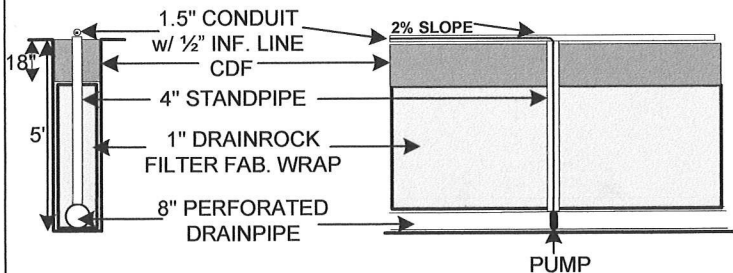
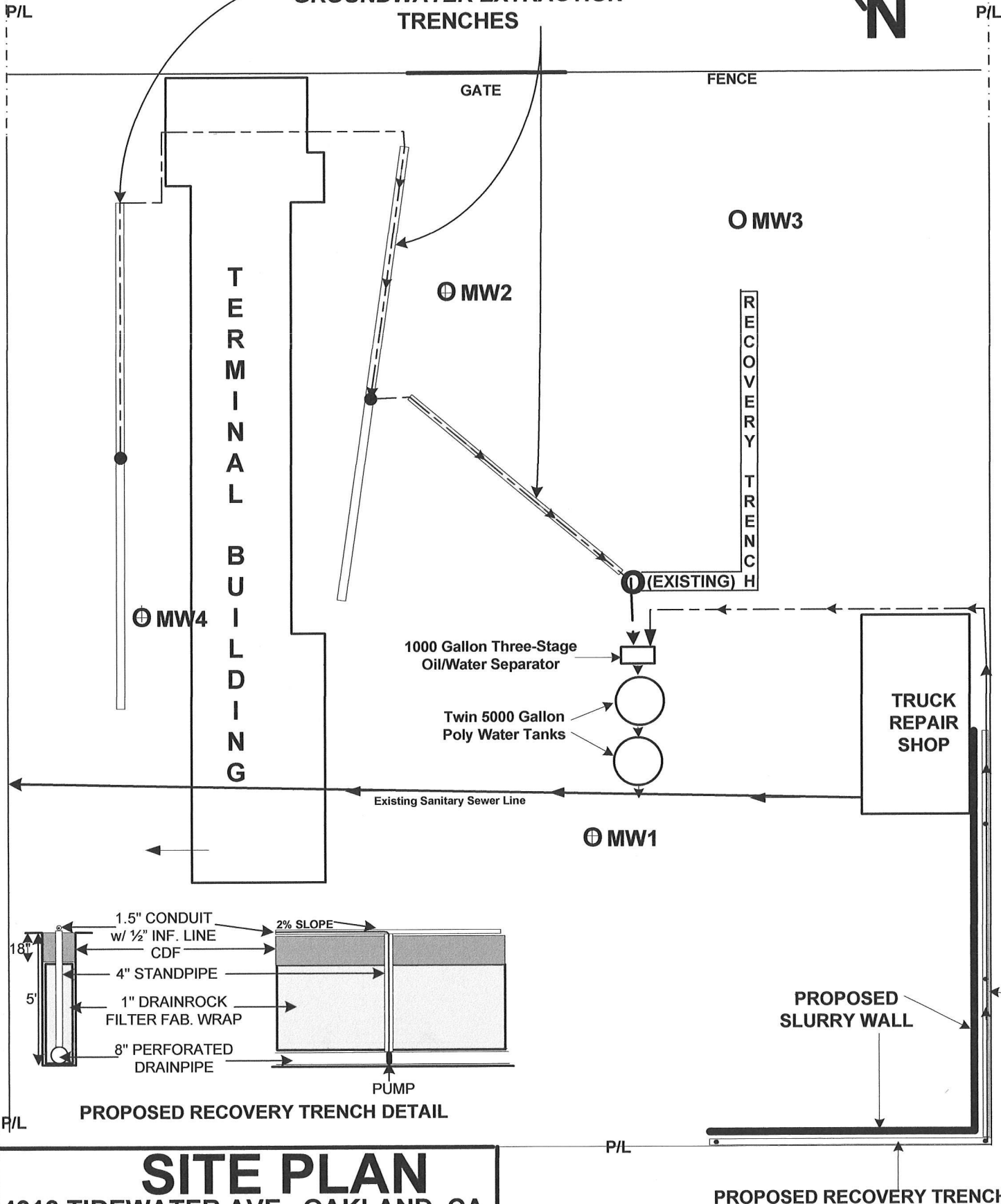
1 SOUTH SHORE SHOPPING CENTER
 2 STONOROCK WALK
 3 FLORENCE WALK
 4 HEATHER WALK
 5 BEACON WALK
 6 FERRIS WALK
 7 WITALE WALK

NORTH MAPS
 BRIDGEWAY
 Bay Farm Island

SEE MAP IN OUR 400
 1 BAYVIEW LANDING
 2 BAYVIEW BAY
 3 BAYVIEW BAY
 4 BAYVIEW BAY
 5 BAYVIEW BAY
 6 BAYVIEW BAY
 7 BAYVIEW BAY
 8 BAYVIEW BAY
 9 BAYVIEW BAY
 10 BAYVIEW BAY
 11 BAYVIEW BAY
 12 BAYVIEW BAY
 13 BAYVIEW BAY
 14 BAYVIEW BAY
 15 BAYVIEW BAY

TIDEWATER AVE.

PROPOSED FUTURE GROUNDWATER EXTRACTION TRENCHES



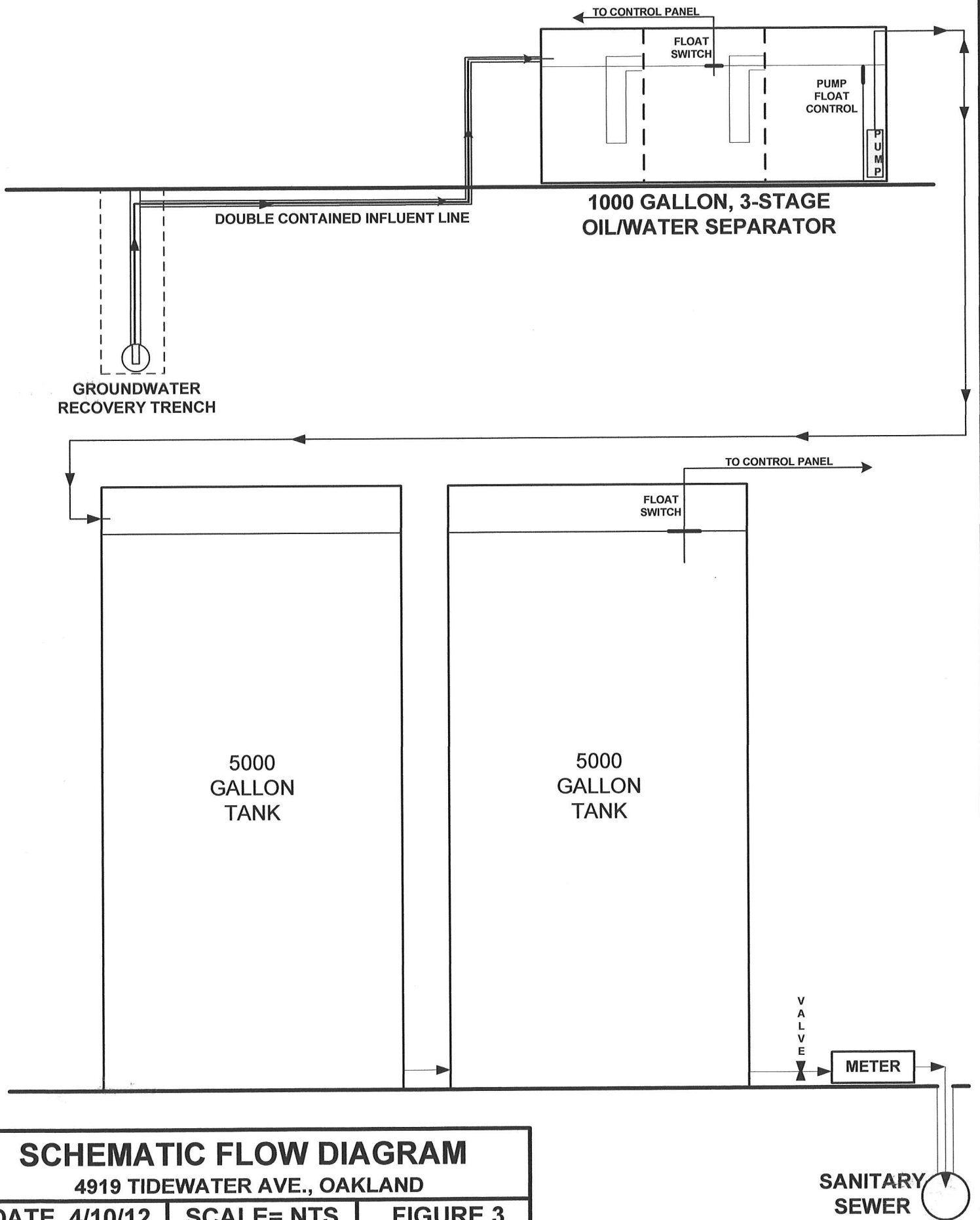
SITE PLAN

4919 TIDEWATER AVE., OAKLAND, CA

4/15/12 SCALE 1" = 30' FIGURE 2

Environmental Restoration Services

PO Box 2006, Menlo Park, CA 94026



SCHEMATIC FLOW DIAGRAM

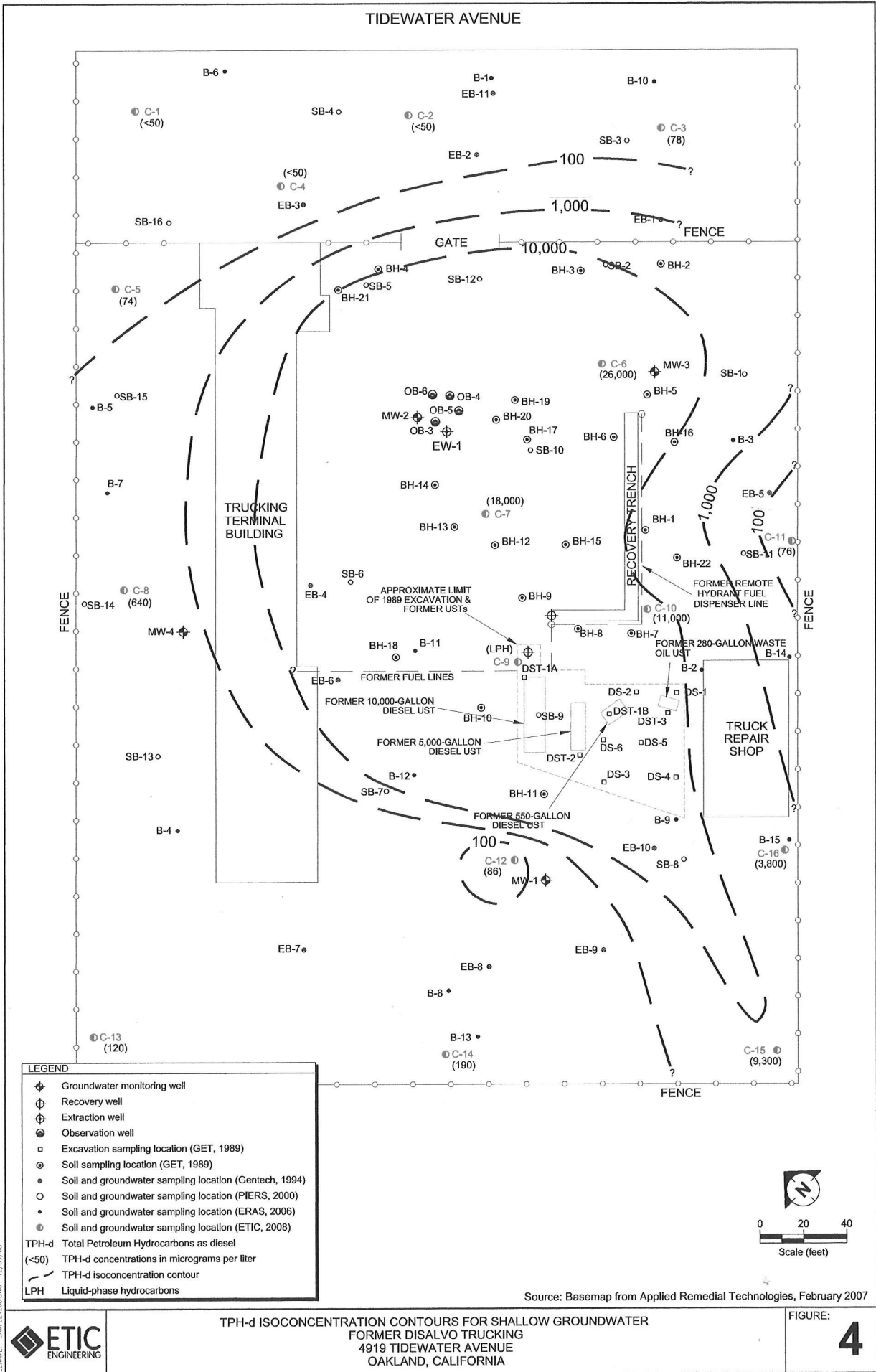
4919 TIDEWATER AVE., OAKLAND

DATE 4/10/12 | SCALE= NTS | FIGURE 3

ENVIRONMENTAL RESTORATION SERVICES

PO BOX 2006 MENLO PARK CA 94026

TIDEWATER AVENUE



LEGEND

- ⊕ Groundwater monitoring well
- ⊕ Recovery well
- ⊕ Extraction well
- ⊕ Observation well
- Excavation sampling location (GET, 1989)
- Soil sampling location (GET, 1989)
- Soil and groundwater sampling location (Gentech, 1994)
- Soil and groundwater sampling location (PIERS, 2000)
- Soil and groundwater sampling location (ERAS, 2006)
- Soil and groundwater sampling location (ETIC, 2008)

TPH-d Total Petroleum Hydrocarbons as diesel
 (<50) TPH-d concentrations in micrograms per liter
 - - - TPH-d isoconcentration contour
 LPH Liquid-phase hydrocarbons

Source: Basemap from Applied Remedial Technologies, February 2007

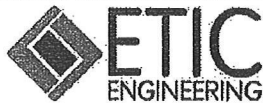
FILENAME: SAMPLE1008.DWG 12/09/08



TPH-d ISOCONCENTRATION CONTOURS FOR SHALLOW GROUNDWATER
 FORMER DISALVO TRUCKING
 4919 TIDEWATER AVENUE
 OAKLAND, CALIFORNIA

FIGURE:
4

**ETIC 2008
BORING LOGS
C-15 and C16**



CLIENT R.W.L. Investments, Inc.	SITE NUMBER TIDEWATER	LOCATION 4919 Tidewater Avenue Oakland, California
------------------------------------	--------------------------	--

LOG OF SOIL BORING: **C-15**

DRILLING AND SAMPLING METHODS: Hand cleared to 2 feet bgs with hand auger. Drilled and sampled with Geoprobe 5410 utilizing direct-push technology and driving 1.25-inch diameter dual-tube and 2-inch micro-core soil sampling system

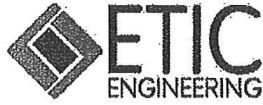
COORDINATES:
ELEVATION TOP OF CASING:
CASING BELOW SURFACE:

WATER LEVEL	▽ 3.8	▽ 20.0		
TIME	1639	1740	START TIME 1635	FINISH TIME 1750
DATE	9/25/08	9/25/08	DATE 9/25/08	DATE 9/25/08
REFERENCE	GS	GS		

DRILLING COMPANY: ECA
LICENSE NUMBER: 695970

INCHES		BLOWS / 6" SAMPLER	OVA READING	DEPTH (feet)	AIR SAMPLE	WATER SAMPLE	SOIL SAMPLE	RECOVERED	GRAPHIC LOG	SURFACE CONDITIONS	
DRIVEN	RECOVER									Soil	
										DESCRIPTION BY: M. Garcia	
48				0					AC/AB	Asphalt to 3 inches bgs. Hand cleared to 2 feet bgs with hand auger.	
	36			1						SANDY SILT - dark yellowish brown (10YR 4/6), stiff, very fine grained sand, with angular to subangular gravels from 0.25 to 0.5 inches in diameter, dry.	
			0.0	2						- firm, moist, strong petroleum hydrocarbon odor.	
				3							
48	48		0.0	4					ML	- organic material.	
				5						Groundwater sample collected at 1645 by peristaltic pump and temporary PVC casing screened between 4 and 8 feet bgs.	
				6							
48	48			8						CLAY - very dark greenish gray (GLE Y1 10Y), soft to very soft, low plasticity, moist.	
			0.0	10					CL		
				11							
48	48			12						SANDY CLAY - very dark greenish gray (GLE Y1 10Y), very soft, low plasticity, moist to wet.	
				13							
				14					CL		
			0.0	15							
48	48			16						CLAYEY SAND - very dark greenish gray (GLE Y1 10Y), very fine grained sand, dense, moist.	
				17					SC		
				18							
				19							
			0.0	20					SM	CLAYEY SILTY SAND - dark greenish gray (GLE Y1 10Y), very fine grained sand, dense.	
48	48			20					SW	SAND - very dark greenish gray (GLE Y1 10Y), well-graded, fine to medium grained sand, with small shell fragments, medium dense, moist.	
				21							

LOG OF SOIL BORING TIDEWATER.GPJ ETIC.GDT 1/19/09



CLIENT R.W.L. Investments, Inc.	SITE NUMBER TIDEWATER	LOCATION 4919 Tidewater Avenue Oakland, California
------------------------------------	--------------------------	--

LOG OF SOIL BORING: **C-16**

DRILLING AND SAMPLING METHODS: Hand cleared to 2 feet bgs with hand auger. Drilled and sampled with Geoprobe 6600 utilizing direct-push technology and driving 1.25-inch diameter dual-tube soil sampling system.

COORDINATES:
ELEVATION TOP OF CASING:
CASING BELOW SURFACE:

WATER LEVEL	▽ 6.5			START TIME	FINISH TIME
TIME	0910			0855	1020
DATE	9/25/08			DATE	DATE
REFERENCE	GS			9/25/08	9/25/08

DRILLING COMPANY: ECA
LICENSE NUMBER: 695970

INCHES		BLOWS / 6" SAMPLER	OVA READING	DEPTH (feet)	AIR SAMPLE WATER SAMPLE SOIL SAMPLE RECOVERED	GRAPHIC LOG	SURFACE CONDITIONS	
DRIVEN	RECOVER						Asphalt	
DESCRIPTION BY:							N. Diem	
				0		AC/AB	Asphalt to 3 inches bgs.	
				1			Hand cleared to 2 feet bgs with hand auger; sampled with slidehammer, no recovery.	
18	18		0.0	3		CL	SILTY CLAY - very dark greenish brown (2.5Y 3/2), stiff, with little angular gravels 0.25 inches in diameter, moist, slight petroleum hydrocarbon odor.	
48				4			4' to 6' - no recovery; soil fell out in water.	
				5			Groundwater sample collected at 0910 by peristaltic pump and temporary PVC casing screened between 4 and 8 feet bgs.	
	24		0.0	6			Wood chips, very little to no soil, wet.	
48				8			8' to 10' - no recovery.	
	24			10			Wood chips, wet.	
48	48		0.0	12		CL	SANDY SILTY CLAY - dark greenish gray (GLE Y1 4/1), stiff, low plasticity, wet.	
				13			- slightly more sand, soft, wet.	
48	48		0.0	16		ML	SANDY SILT - very dark greenish gray (GLE Y1 3/1), stiff, moist.	
				17		CL	CLAY - very dark greenish gray (GLE Y1 3/1), stiff, low plasticity, moist.	
				18			SANDY SILT - very dark greenish gray (GLE Y1 3/1), stiff, moist.	
			0.0	20		ML	Boring terminated at 20 feet bgs.	

LOG OF SOIL BORING TIDEWATER.GPJ ETIC.GDT 1/19/09