



Edd Clark & Associates, Inc.

Environmental Consultants

Serving the North Bay for Over 20 Years

March 31, 2015
Job No.: 0459,001.03

Mr. Dick Cochran
P.O. Box 20327
Oakland, California 94620

Alameda County

APR 05 REC'D

Environmental Health

Workplan: Monitoring Well Destruction, Waste Disposal and Closure Reporting
Salle's Paint & Body Shop
1049 9th Avenue
Oakland, California

Dear Mr. Cochran:

Edd Clark & Associates, Inc. (EC&A) is pleased to present this workplan for the destruction of three groundwater monitoring wells, the disposal of investigation-generated waste materials, and case-closure reporting for 1049 9th Avenue (site) in Oakland, California (Figures 1 and 2). Corrective action has been conducted at the site at the request of the Alameda County Health Care Services (ACHCS). In a letter dated April 7, 2014, the ACHCS directed the submittal of a *Focused Site Conceptual Model* and a *Data Gap Investigation Workplan* in response to eight technical comments in their letter. The primary concerns expressed by the ACHCS were that free product may be present in the gasoline and/or waste-oil UST excavations because highly impacted soil may have been used to backfill the excavations. EC&A's June 27, 2014, *Soil Disposal Documentation* report addressed those concerns and recommended that the site be considered for closure. EC&A's July 21, 2014, *Focused Site Conceptual Model* and a *Data Gap Investigation Work Plan* recommended that a search be done for domestic water wells within 250 feet of the former UST locations, and if none were found, the site should be considered for closure.

In an email dated August 14, 2014, the ACHCS reported that a search of their records showed that there were no domestic wells in the vicinity of the site. In an email dated October 20, 2014, the ACHCS stated that because the public comment period had closed with no comments, the site wells could be decommissioned.

Monitoring Well Destruction Procedures

Prior to well-destruction activities, a well-destruction permit will be acquired from the ACHCS and encroachment permit from the City of Oakland (to be obtained following approval of this workplan). EC&A understands that the City of Oakland will not issue an encroachment permit until they are provided documentation from the ACHCS approving the well destruction workplan. A Traffic/Pedestrian Control Plan will be submitted to the City of Oakland along with the encroachment permit application. The well destruction permit application with the applicable fee is included in Appendix A. Underground utilities will be located and marked for Underground Service Alert (USA). The ACHCS and USA will be notified at least 48 hours prior to well destruction activities. Two-inch-diameter monitoring wells MW-1, MW-2 and MW-3 extend to depths of approximately 20 feet (ft) below ground surface (bgs). Copies of the well

boring logs are in Appendix B. EC&A will subcontract Clear Heart Drilling, Inc., of Santa Rosa, California, to destroy the wells using a truck-mounted drill rig equipped with 8-inch-diameter, hollow-stem augers. The well boxes and well casings will be removed, and the well bores will be over-drilled to remove the cement/bentonite grout, bentonite seal and sand filter packs from the boreholes.

Drilling will continue to a depth of at least 1 ft to 2 ft below the total depth of the wells to remove all well materials. Following well destruction, the borings will be backfilled with cement grout by tremie grouting as designed by the licensed C-57 well driller and in accordance with the California Well Standards, Bulletin 74-90. The upper few feet of the borings will be filled with asphalt and/or concrete to match the surrounding grade.

Monitoring well MW-3 has been paved over and will be located by triangulating from MW-1 and MW-2. A copy of the well survey map is attached in Appendix C.

Waste Material Disposal

The concrete and well boxes will be hauled off to a Class III landfill for disposal. The well casings will either be hauled by Clear Heart Drilling, Inc., to Global Materials Recovery Services of Santa Rosa, California, for recycling, or transported to an appropriate landfill for disposal. Soil cuttings generated during the destruction of the wells will be temporarily stored onsite in properly labeled and sealed DOT 17H, 55-gallon drums pending laboratory analytical results. EC&A will collect one 4-point composite sample from the drummed soils for the analysis of total petroleum hydrocarbons multi scan (gasoline, diesel and motor oil), benzene, toluene, ethylbenzene and xylenes (BTEX), and methyl tert-butyl ether (MTBE) by Methods SW8015Bm/8021B, for the CAM 5 Metals by Method 200.8, and for Petroleum Oil & Grease. The disposal facility or ACHCS may require additional laboratory analysis. Pending laboratory analytical results, the waste soil will be disposed of at an appropriate disposal facility. Any decontamination water generated during the destruction of the wells will be temporarily stored onsite in properly labeled and sealed DOT 17H, 55-gallon drums. EC&A anticipates that the water will be disposed of by either InStrat, Inc., of Rio Vista, California, or EnviroPacific of Vacaville, California. Disposal documentation will be provided to the ACHCS.

Site Safety Plan

Field work will be performed in accordance with the Site Safety Plan (SSP) provided in Appendix D. The SSP identifies the chemicals that may be encountered during site activities, describes precautionary measures to be taken when in the presence of these chemicals, and contains a map to the nearest medical facility.

Summary Report Preparation

Following completion of the well destruction and disposal of waste materials, EC&A will prepare a summary report documenting the completed scope of work. The report will be submitted to the ACHCS for their review and electronically uploaded to GeoTracker.

March 31, 2015

Job No.: 0459,001.03

Edd Clark & Associates, Inc.

Schedule

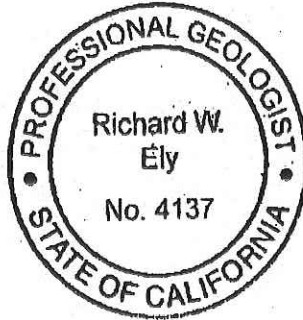
The wells will be abandoned upon receipt of ACHCS approval of this workplan, and receipt of the drilling and City of Oakland encroachment permits.

Thank you for allowing EC&A to provide environmental consulting services for you. Please call (707) 792-9500 if you have any questions.

Sincerely,



Richard Ely, PG #4137
Senior Geologist



Attachments

Figure 1 - Site Location Map

Figure 2 - Site Plan

Appendix A - Well Destruction Permit Application

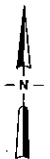
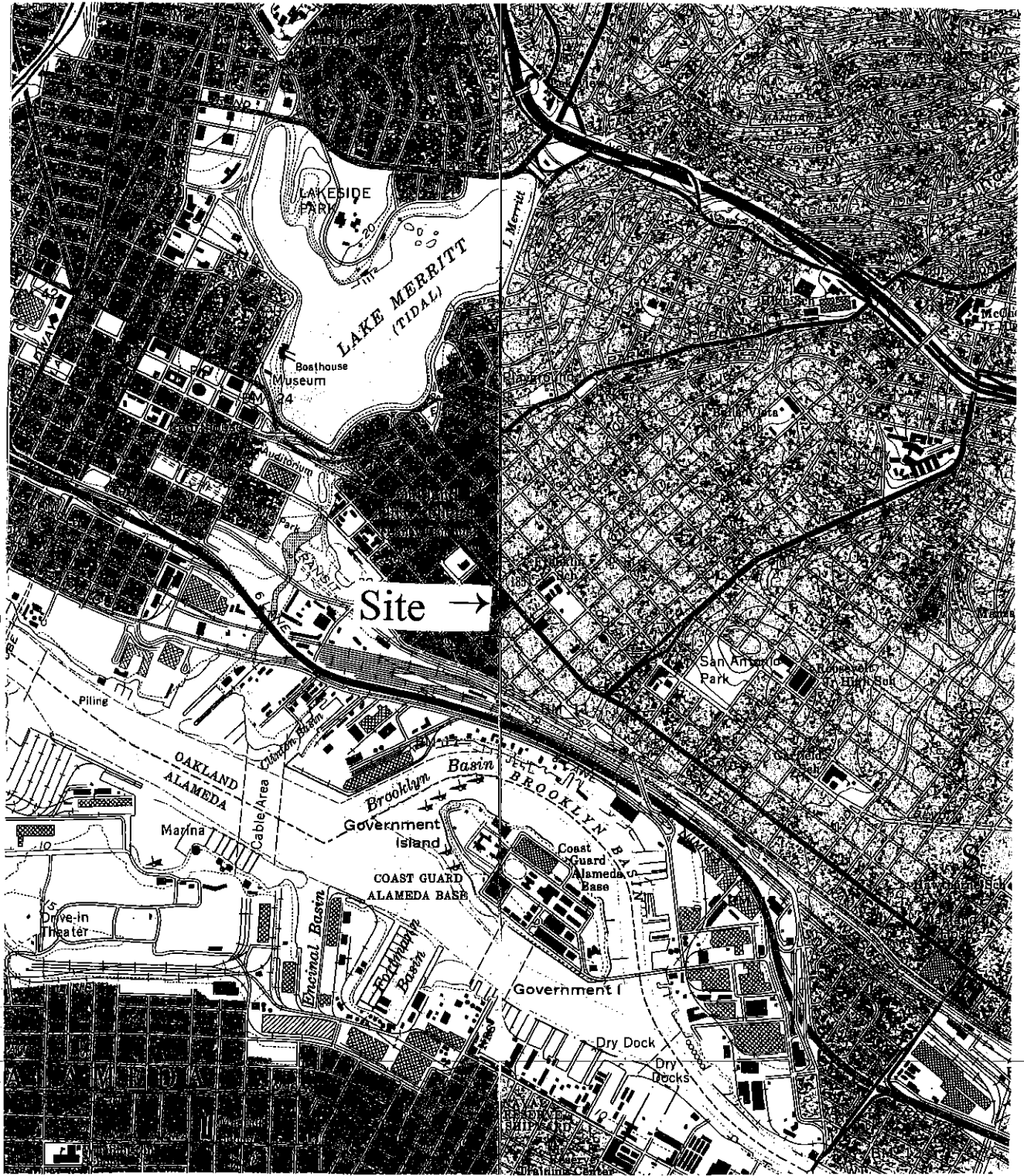
Appendix B - Well Boring Logs

Appendix C - Well Survey Map

Appendix D - Site Safety Plan

cc: Mark Detterman, Alameda County Health Care Services

0459\2014 well destruct wkpln



0 2000 feet

From USGS 1:24,000 Topographic map series, Oakland West & East Quadrangles

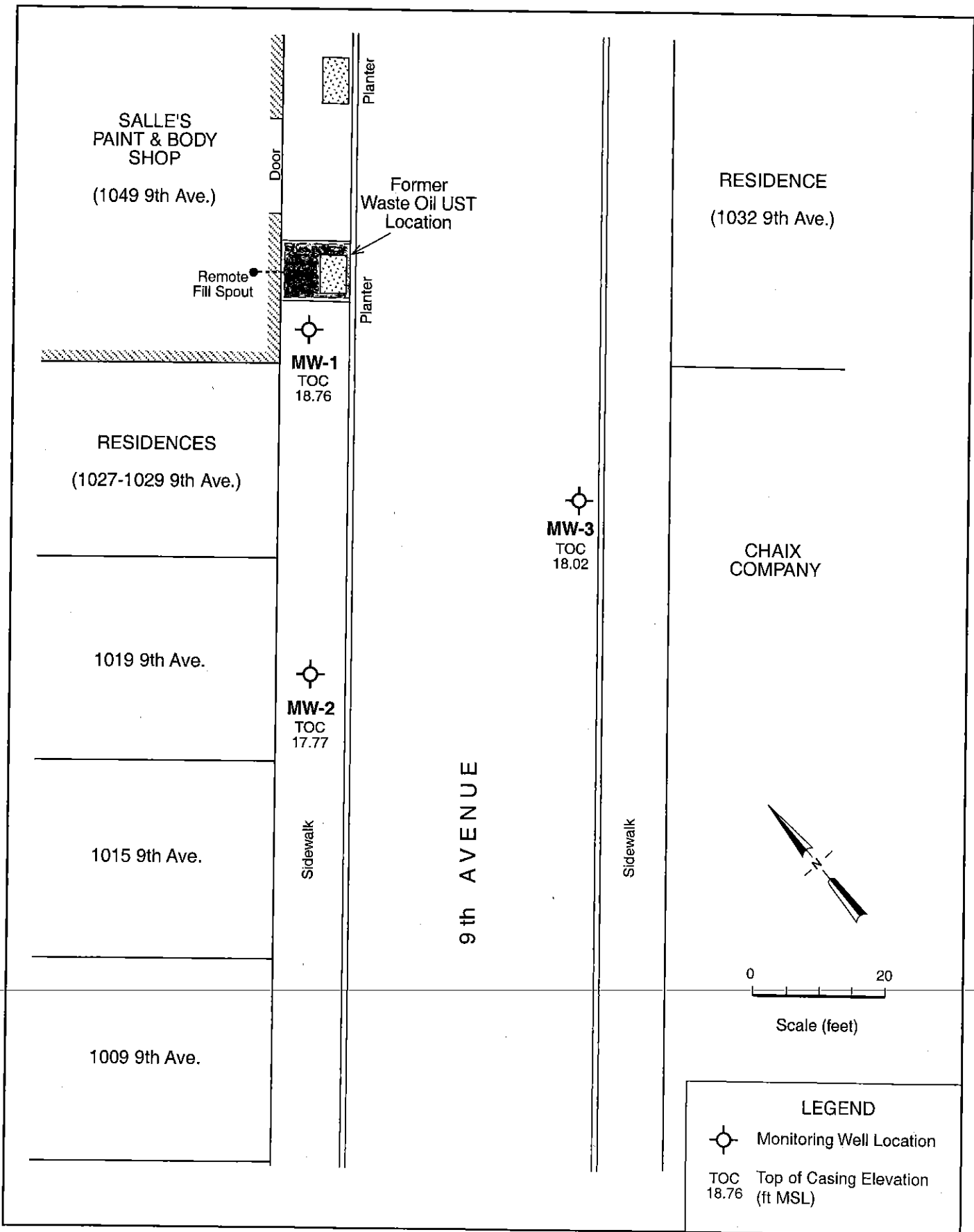
EDD CLARK & ASSOCIATES, INC.
 ENVIRONMENTAL CONSULTANTS

SITE LOCATION MAP
 1049 9th Avenue
 Oakland, California

PLATE
 1

JOB NUMBER	0459, 001.03	REVIEWED BY	EC&A, Richard Ely	DATE	June 2003	REVISED		SHEET NO. 1 of 1
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TRACE #383/IG/24Jun03



TRACE #389/RG/20Dec11)

EDD CLARK & ASSOCIATES, INC.
 ENVIRONMENTAL CONSULTANTS

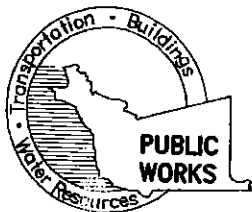
SITE PLAN
 1049 9th Avenue
 Oakland, California

FIGURE
 2

JOB NUMBER 0459, 001.03	REVIEWED BY EC&A, Richard Ely	DATE October 2000	REVISED December 2011	SHEET NO 1 of 1
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Appendix A

Well Destruction Permit Application



ALAMEDA COUNTY PUBLIC WORKS AGENCY
 Water Resources Section, Attn: James Yoo
 399 Elmhurst Street, Hayward, CA 94544-1395
 Phone: (510) 670-6633 Fax: (510) 782-1939
 General Info: www.acgov.org/pwa/wells or email at wells@acpwa.org

DRILLING PERMIT APPLICATION

Applicants: Please attach a site map for all drilling permit applications (include street names, North arrow, and label wells and boreholes).

Location of Project: 1049 9th Avenue
 City: OAKLAND Applicant's Signature: [Signature]
 Project start date: MAY 2015; dates TBD Project completion date: MAY 2015; dates TBD

Please Print Legibly

PROPERTY OWNER
 Name: Celli Family Partnership
WILLIS JEAN L
ME ET AL
 Address: P.O. Box 20327
 City, State, Zip: OAKLAND, CA
94620
 Phone: see client
 Email: see client

Please Print Legibly

APPLICANT (i.e., Geotechnical Consultant)
 Business Name: Edd Clark Associates, Inc.
 Contact Name: Kevin Cohen
 Address: 720 PROFESSIONAL CT DRIVE, #215
 City, State, Zip: ROCKLEDGE PARK, CA 94952
 Phone Office: 707 792-9500
 Cell: 707 716-9915 Fax: 707 792-9504
 Email: kevin@edclark.com
 cc Email: joanne@edclark.com

Please Print Legibly

CLIENT (If different than property owner, complete this section)
 Name: Richard Cochran
 Address: P.O. Box 20327
 City, State, Zip: OAKLAND, CA
94620
 Phone: (510) 715-7175
 Email: RONAN22@gmail.com

WORK CATEGORIES/WORK TYPES

Type of Project - Check All That Apply

<p>Well Construction - \$397 per well</p> <input type="checkbox"/> Water Monitoring <input type="checkbox"/> Monitoring Well Re-drill <input type="checkbox"/> Piezometer/Seismic <input type="checkbox"/> Cathode <input type="checkbox"/> Water Supply: (check one) <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> Irrigation <input type="checkbox"/> Geothermal <input type="checkbox"/> Other - Please explain: _____	<p>Well Destruction - \$397 per well</p> <input checked="" type="checkbox"/> Water Monitoring <input type="checkbox"/> Water Supply <input type="checkbox"/> Piezometer/Seismic <input type="checkbox"/> Cathode <input type="checkbox"/> Geothermal <input type="checkbox"/> Other - Please explain: _____ <p>Vapor Monitoring Well - \$265 per site/per work type</p> <input type="checkbox"/> Construction <input type="checkbox"/> Destruction	<p>Remediation Wells - \$265 per site/per work type</p> <input type="checkbox"/> Construction <input type="checkbox"/> Extraction <input type="checkbox"/> Construction <input type="checkbox"/> Injection <input type="checkbox"/> Destruction <input type="checkbox"/> Extraction <input type="checkbox"/> Destruction <input type="checkbox"/> Injection <p>Boreholes - \$265 per site/per work type</p> <input type="checkbox"/> Contamination <input type="checkbox"/> Environmental <input type="checkbox"/> Geotechnical
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Drilling Method - Check All That Apply (If more than one, explain below.)

Hollow Stem Auger CPT/MIP Concrete Core Other-Describe: _____
 Solid Stem Auger Mud Rotary Hand Auger
 Geo Probe (Direct Push) Air Rotary

Driller's Name/Method: CLEAR HEART DRILLING, Gary M. Sal Driller's License No.: 780357
 Driller's Name/Method: _____ Driller's License No.: _____

WELL PROJECTS (Add extra pages if needed; for well destruction, include documents)

Owner Well ID	Drill Hole Diameter (in.)	Casing Diameter (in.)	Surface Seal Depth (ft.)	Max. Depth (ft.)	Latitude	Longitude
1 MW-1	8"	2"	0-4	20		
2 MW-2	8"	2"	0-4	20		
3 MW-3	8"	2"	0-4	20		
4						
5						

BOREHOLE PROJECTS (Add extra pages if needed)

No. of Boreholes	Drilling Method	Hole Diameter (in.)	Max. Depth (ft.)
1			
2			
3			

Appendix B

Well Borings Logs

BORING LOCATION		1049 9th Avenue, Oakland, CA		ELEVATION/DATUM TOC 18.76 ft		BORING NO. MW-1	
DRILLING AGENCY		Gregg Drilling		DRILLER Rich		DATE STARTED DATE FINISHED 08 Sep 00 → 08 Sep 00	
DRILLING EQUIPMENT		Rhino D-15		COMPLETION DEPTH 20.0 ft		SAMPLER Push	
DRILLING METHOD		Hollow Stem Auger		DRILL BIT 8 inches		NO. OF SAMPLES DIST. 4	
SIZE AND TYPE OF CASING		2.0 inch PVC		FROM 20.0 ft TO 0.2 ft		WATER LEVEL FIRST 11.0 ft	
TYPE OF PERFORATION:		0.01 inch Slotted		FROM 20.0 ft TO 3.5 ft		CORE BARREL 2.0 inches	
SIZE AND TYPE OF PACK		RMC #2/12 Sand		FROM 20.0 ft TO 4.0 ft		LOGGED BY: R. Ely	
TYPE OF SEAL		NO. 1 Bentonite		FROM 4.0 ft TO 3.0 ft		COMMENTS:	
		NO. 2 Portland Cement		FROM 3.0 ft TO 0.2 ft			

DEPTH (feet)	SAMPLES	FLUN	MATERIAL DESCRIPTION	USCS	WELL CONSTRUCTION
			Concrete Sidewalk.		Lock Box
			Sandy Clay - 2 to 3 inch transitional, dark gray-brown.		Grout
			SANDY CLAY (CL) - native soil, strong brown (7.3YR 5/6).	CL	Bentonite
5	1		∇ Color change to dark brown (7.5YR 4.4), dry to moist, stiff.		
			∇ Color change to grayish-green (10GY 5/2), dry, hard.		
10	2		SAND (SP), grayish-green (SG 4-5/2), wet, dense, well-sorted medium-grained sand, subrounded to rounded quartz with trace mafics; faint product odor.	SP	0.010 Well Screen
15	3		SANDY SILT (ML), grayish-brown to grayish-green (10YR 5/2 to 10G 4/2) mottled brownish-yellow (10YR 6/6), damp, stiff, fine-grained sand with trace mica.	ML	
20	4		I SAND (SP) - 6 inch thick bed at 18.7-19.2 ft, olive-gray, damp, loose, well-sorted medium-grained sand (same as at 11 ft).		
			TD: 20.0 ft bgs		

BORING LOCATION		1049 9th Avenue, Oakland, CA		ELEVATION/DATUM TOC 17.77 ft		BORING NO. MW-2	
DRILLING AGENCY		Gregg Drilling		DRILLER Rich		DATE STARTED DATE FINISHED 08 Sep 00 → 08 Sep 00	
DRILLING EQUIPMENT		Rhino D-15		COMPLETION DEPTH 20.0 ft		SAMPLER Push	
DRILLING METHOD		Hollow Stem Auger		DRILL BIT 8 inches		NO. OF SAMPLES DIST 4 UNDIST. —	
SIZE AND TYPE OF CASING		2.0 inch PVC		FROM 20.0 ft TO 0.2 ft		WATER LEVEL FIRST None COLLECTED / MEASURED None	
TYPE OF PERFORATION:		0.01 inch Slotted		FROM 20.0 ft TO 5.0 ft		CORE BARREL 2.0 inches LENGTH 18 inches	
SIZE AND TYPE OF PACK		RMC #2/12 Sand		FROM 20.0 ft TO 4.0 ft		LOGGED BY: R. Ely CHECKED BY:	
TYPE OF SEAL		NO. 1 Bentonite		FROM 4.0 ft TO 3.0 ft		COMMENTS:	
		NO. 2 Portland Cement		FROM 3.0 ft TO 0.2 ft			
DEPTH (feet)	SAMPLES RUN	MATERIAL DESCRIPTION				USCS	WELL CONSTRUCTION
5	1	Concrete Sidewalk.					
		SANDY CLAY (CL), brown (7.5YR 5/6) to dark brown (2.5YR 3/2), dry, stiff, medium- to coarse-grained sand of subangular to subrounded quartz with trace lithics.				CL	
10	2	CLAYEY GRAVELLY SAND (SC), grayish-brown (2.3Y-5/2), moist, dense, poorly-sorted medium- to very coarse-grained sand, subangular to rounded mostly quartz with trace mafics and black chert (?), subrounded pebbles to 1 cm long of red and black chert.				SC	
		CLAYEY SILT (ML), light brownish-green (10YR 6/2) mottled yellowish-brown (10YR 5/4), moist, stiff, trace mica.				ML	
15	3						
		SILTY SAND (SP), light brownish-gray (2.5Y 6/3) to olive yellow (2.5Y 6/6), moist, dense, well-sorted fine-grained sand.				SP	
20	4						
TD: 20.0 ft bgs							

TRACE 285 **Harris & Lee** Environmental Sciences

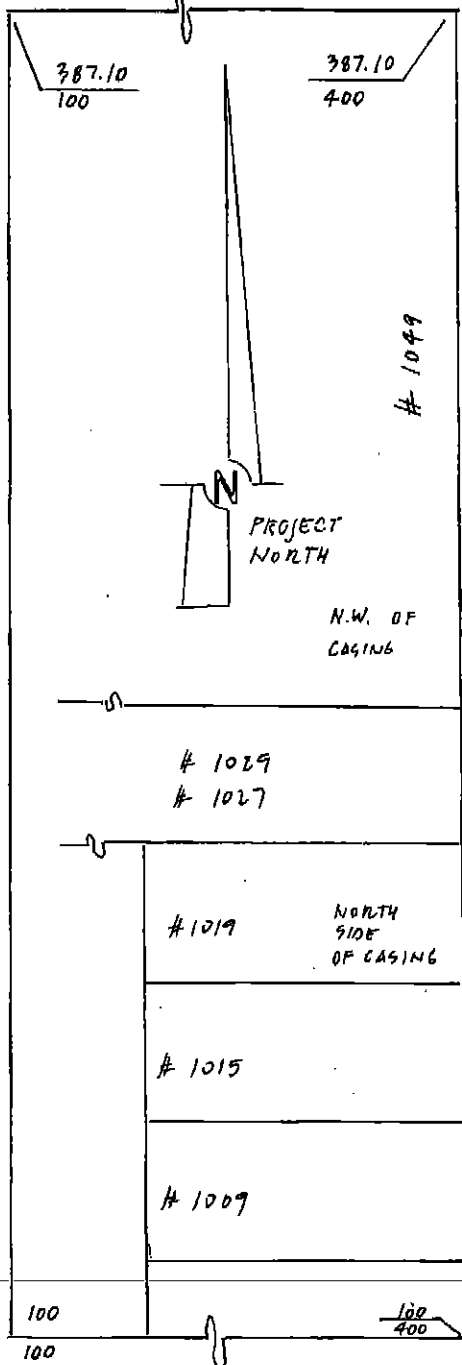
REVIEWED BY: Richard Ely	DATE: September 2000	FIELD LOG OF BORING NO. MW-2	SHEET NO. 1 OF 1
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BORING LOCATION		1049 9th Avenue, Oakland, CA		ELEVATION/DATUM		TOC 18.02 ft		BORING NO		MW-3	
DRILLING AGENCY		Gregg Drilling		DRILLER		Rich		DATE STARTED		08 Sep 00	
								DATE FINISHED		08 Sep 00	
DRILLING EQUIPMENT		Rhino D-15		COMPLETION DEPTH		20.0 ft		SAMPLER		Push	
DRILLING METHOD		Hollow Stem Auger		DRILL BIT		8 inches		NO. OF SAMPLES		DIST. 4	
								UNDIST.		—	
SIZE AND TYPE OF CASING		2.0 inch PVC		FROM 20.0 ft TO 0.2 ft		WATER LEVEL		FIRST None		COLLECTED / MEASURED None	
TYPE OF PERFORATION:		0.01 inch Slotted		FROM 20.0 ft TO 5.0 ft		CORE BARREL		2.0 inches		LENGTH 18 inches	
SIZE AND TYPE OF PACK		RMC #2/12 Sand		FROM 20.0 ft TO 4.0 ft		LOGGED BY:		R. Ely		CHECKED BY:	
TYPE OF SEAL		NO. 1 Bentonite		FROM 4.0 ft TO 3.0 ft		COMMENTS:					
		NO. 2 Portland Cement		FROM 3.0 ft TO 0.2 ft							

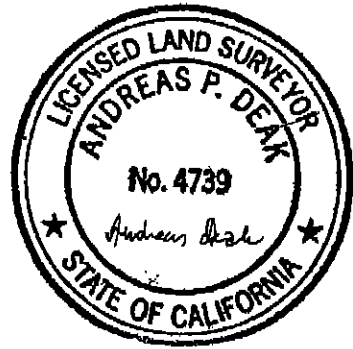
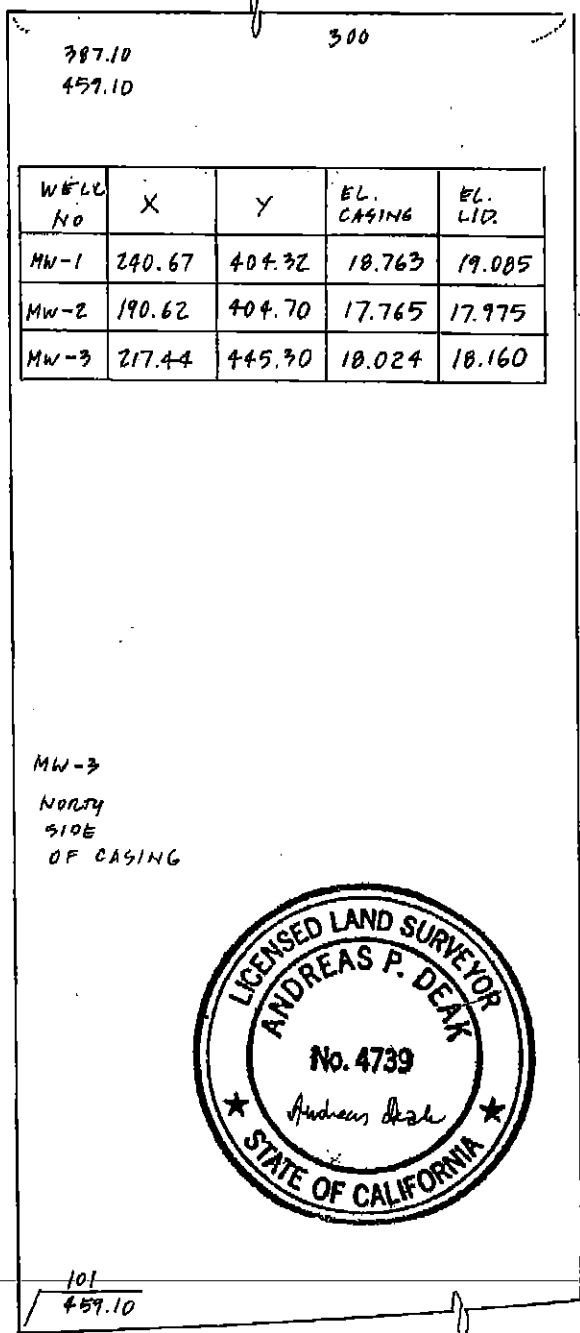
DEPTH (feet)	SAMPLES RUN	MATERIAL DESCRIPTION	USCS	WELL CONSTRUCTION
0 - 1		Asphalt.		Lock Box
1 - 2		Road Gravel.		Grout
2 - 5	1	SANDY CLAY (CL), light olive gray (5Y 6/2), dry to damp, stiff, well-sorted fine-grained sand.	CL	2" PVC Bentonite
5 - 10	2	Same as above.		
10 - 15	3	SAND (SP), brown to dark brown (10YR 3-5/3), moist, loose, well-sorted fine- to medium-grained sand, subangular to subrounded mostly quartz with trace mafics; trace quartz and chert pebbles to 4 mm long.	SP	0.010 Well Screen Sand
15 - 20	4	CLAYEY SAND and SANDY CLAY (SC/CL), light brownish-gray (10YR 6/2) mottled yellowish-brown (10YR 5/4-6), well-sorted fine-grained sand.	SC/CL	
20 - 20.2		Same as above, except moderate-sorted fine- to medium-grained sand with trace coarse sand.		
TD: 20.0 ft bgs				

Appendix C
Well Survey Map

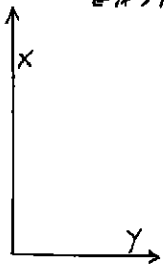
EAST 11 TH STREET



9 TH AVENUE (59.10 WIDE)



EAST 10 TH STREET



VERTICAL AND HORIZONTAL CONTROL OF MONITORING WELLS. ALL ELEVATIONS ARE BASED ON CITY OF OAKLAND DATUM. TO CONVERT TO MEAN SEA LEVEL ADD 2.99 CLIENT: C&C PROPERTY MANAGEMENT 499 EMBARCADERO OAKLAND	DATE 9-22-2000
	SCALE 1" = 40'
ANDREAS DEAK LICENSED LAND SURVEYOR 216 BUENA VISTA AVENUE ALAMEDA CA 94501 PHONE: 865-4289	SURVEY DEAK
	PLAT DEAK
	APN BLOCK 19-19-6
	JOB NO.

Appendix D

Site Safety Plan

A. GENERAL INFORMATION

Site Location: Salle's Paint & Body Shop, 1049 9th Avenue, Oakland, California

Plan Prepared By:

John Robinson For
Kevin Coker, Project Scientist

Date: March 31, 2015

Site Description: The site is located at the northwestern corner of 9th Avenue and East 11th Street, with the physical address of 1049 9th Avenue (site) in Oakland, California. The site is known as Salle's Paint & Body Shop, an automotive paint and body shop. The site is located as shown on the Site Location Map, Figure 1; general site features are as shown on the Site Plan, Figure 2.

UST History (Agency Action, Complaints, Injuries, etc.): One 1000-gallon UST for gasoline was removed on December 29, 1993, and one 280-gallon UST for waste oil was removed on July 20, 1994. Three monitoring wells were installed on September 8, 2000. In a letter dated April 7, 2014, the Alameda County Health Care Services (ACHCS) directed the submittal of a *Focused Site Conceptual Model* and a *Data Gap Investigation Workplan* in response to eight technical comments in their letter. The primary concerns expressed by ACHCS were that free product may be present in the gasoline and/or waste-oil UST excavations because highly impacted soil may have been used to backfill the excavations. EC&A's June 27, 2014, *Soil Disposal Documentation* report addressed those concerns and recommended that the site be considered for closure. EC&A's July 21, 2014, *Focused Site Conceptual Model* and a *Data Gap Investigation Work Plan* recommended that a search be done for domestic water wells within 250 feet of the former UST locations, and if none were found, the site should be considered for closure. In an email dated August 14, 2014, the ACHCS reported that a search of their records showed that there were no domestic wells in the vicinity of the site. In an email dated October 20, 2014, the ACHCS stated that because the public comment period had closed with no comments, the site wells could be decommissioned.

Objective(s): Decommission three groundwater monitoring wells and dispose of all investigation-derived wastes to lead the site to Case Closure.

Background Review:

Complete Preliminary

Documentation/Summary Overall Hazard:

Serious Moderate Low Unknown

Unusual Features (power lines, terrain, utilities, etc.): Work in the sidewalk and shoulder of 9th Avenue; appropriate traffic/pedestrian control will be employed.

Status:

Active Inactive Unknown

B. SITE WASTE CHARACTERISTICS

Waste Type(s): Liquid x (water) Solid x (soil) Sludge Gas

Characteristic(s): Corrosive Ignitable Radioactive
 Volatile x Toxic x Reactive Unknown Other (name)

Principle Disposal Method: Soils from the monitoring well borings and rinsate from decontamination procedures will be temporarily contained onsite in properly covered and labeled DOT 17H 55-gallon drums for temporary onsite storage. Disposal documentation will be provided to the ACHCS.

C. HAZARD EVALUATION

Constituents of Concern (COC)	Description	8-hour Time Weighted Average (TWA) ^a	15-minute Short-term Exposure Limit (STEL) ^a	Exposure Routes	Symptoms	Target Organs
Benzene	Carcinogen, aromatic HC	1.0 ppm	5.0 ppm	Inhalation, dermal ingestion	Headache, dizziness	Eye, skin, respiratory system, blood, CNS, bone marrow
Toluene	Aromatic HC	200 ppm	500 ppm ^b	Inhalation, dermal, ingestion	Headache, dizziness	Eye, skin, respiratory system, CNS, liver, kidneys
Ethylbenzene	Aromatic HC	100 ppm	125 ppm	Inhalation, dermal, ingestion	Headache, dizziness	Eye, skin, respiratory system, CNS
Xylenes	Aromatic HC	100 ppm	150 ppm	Inhalation, dermal, ingestion	Headache, dizziness	Eye, skin, respiratory system, CNS, GI tract, blood, liver, kidneys
Gasoline	Flammable liquid	-	-	Inhalation, dermal, ingestion	Headache, dizziness	Irritation, CNS
Diesel Fuel	Flammable liquid	-	-	Inhalation, dermal	Headache, dizziness, eye/skin irritation	-
MTBE	Flammable liquid, Oxygenate	50 ppm ^c	-	Inhalation, dermal, ingestion	Headache, dizziness, eye/skin irritation,	Mucus membrane, irritation, CNS

					nausea	
Lead	Possible Carcinogen	0.050 mg/m ³	-	Inhalation, ingestion, dermal	Headache, dizziness, eye/skin irritation	Liver, GI tract, blood and Kidneys
Naphthalene	Possible Carcinogen	10 ppm	-	Inhalation, dermal	Headache, dizziness, eye/skin irritation	Liver and Kidneys
1,2-DCA	Flammable liquid, lead scavenger	50 ppm	200 ppm ^d	Inhalation, dermal, ingestion	Nausea, vomiting, eye/skin irritant	Eye irritant, corneal opacity, CNS, cardiovascular system
2-methyl-naphthalene	Solid	---	---	Inhalation, skin & digestion	Similar to naphthalene	Similar to naphthalene
PCE	VOC, solvent	5 ppm	---	Inhalation, dermal & ingestion	Eye, nose, throat, skin irritation, nausea, flushed face vertigo	Eyes, skin, CNS, liver
TCE	VOC, solvent	100 ppm	300 ppm ^b	Inhalation, dermal & ingestion	Headache, vertigo, visual disturbance, vertigo	Eyes, skin, respiratory system, heart, liver kidneys, CNS
Chlorobenzene	Colorless liquid, almond odor	75 ppm	---	Dermal, inhalation & eyes	Burning eyes, nose, skin & throat	Skin, eyes, CNS, liver, respiratory system

^a OSHA PEL regulation, unless otherwise stated ^b Based on a 10-minute maximum peak ^c ACGIH exposure guidelines ^d Based on 5-minute exposure every 3 hours

Special Precautions and Comments: Follow standard safety procedures for working around heavy equipment. Verify that all equipment is in good condition. Conduct air monitoring to evaluate respiratory and explosion hazards. There will be no eating, smoking, or drinking within the work zone. Appropriate traffic and pedestrian control measures will be employed, as required by the City of Oakland. The work zone will be controlled to prevent pedestrian and vehicular traffic from entering.

D. SITE SAFETY WORKPLAN

Perimeter Establishment:

Map/Sketch Attached x * Site Secured x
Perimeter Identified: x Zone(s) of Contamination Identified: x

*See Workplan

Personal Protection: Level of Protection A B C D x

Modifications: Upgrade to level C based on COCs' STELs (see table)

Surveillance Equipment and Materials: Instrument PID

Action Level: Based on STEL on each COC (see table)

Level of Protection: Equipment to protect the body from contact with chemical hazards has been categorized by the Environmental Protection Agency into levels A, B, C, & D. Level A equipment is used when the highest level of protection is needed; Level D equipment is used when minimum protection is needed. The chemical hazard associated with VOCs is typically low and Level D protection (see equipment list below) is adequate. In case of high levels of contamination, an upgrade to Level C protection equipment may be advised. Level C and D equipment are listed below.

Level C Equipment: NIOSH/MSHA approved air purifying respirator, chemical resistant clothing, chemical resistant inner and outer gloves, chemical resistant boots with steel toe and shank, safety glasses and hard hat.

Level D Equipment: Coveralls, gloves, chemical resistant boots or shoes with steel toe and shank, safety glasses or chemical splash goggles, and hard hat. Tyvek overalls and Solvex or equivalent gloves are recommended.

Site Procedures: The area of excavation will be marked for Underground Service Alert (USA). The ACHCS will be notified 48 hours prior to commencement of the monitoring well decommissioning activities.

Work Limitations (time of day, weather, heat/cold, stress): Normal business working hours.

Hazards: Potential hazards onsite comprise proximity to the drill rig, exposure to explosive and flammable petroleum vapors and carcinogens, and area vehicular traffic.

Equipment required for this Project: Normal work clothing may be worn. Following additions listed below.

Drilling and Excavating: Wear a hard hat when near the drill rig; wear a safety vest when working near the roadway(s).

Soil Sampling: Chemical-resistant gloves are required when sampling.

Groundwater Sampling: Chemical-resistant gloves are required when sampling.

Air Monitoring: The combustible gas indicator is to be used to monitor air in breathing zone. Continuous readings of COCs at or greater than their respective STEL may require Level C (incusing a half face respirator) or exiting the work zone.

Decontamination Procedures:

Personal: Remove gloves, wash hands; clean boots in decontamination area.

Equipment: Steam cleaning of all drilling equipment in the decontamination area.
TSP wash of sampler between samples.

E. EMERGENCY INFORMATION

Local Resources:

Ambulance: 911
Poison Control Center: 911
Police: 911
Fire Department: 911
Explosives Unit: 911
Hospital Emergency Room: Highland Hospital
1411 East 31st Street
Oakland, California
(510) 437-4800

For emergency route see Figure H attached.

Site Resources:

Water Supply: Onsite
Telephone: Onsite
Radio: None
Other: _____

Agency Contact: Mark E. Detterman, Alameda County Health Care Services
(510) 567-6876

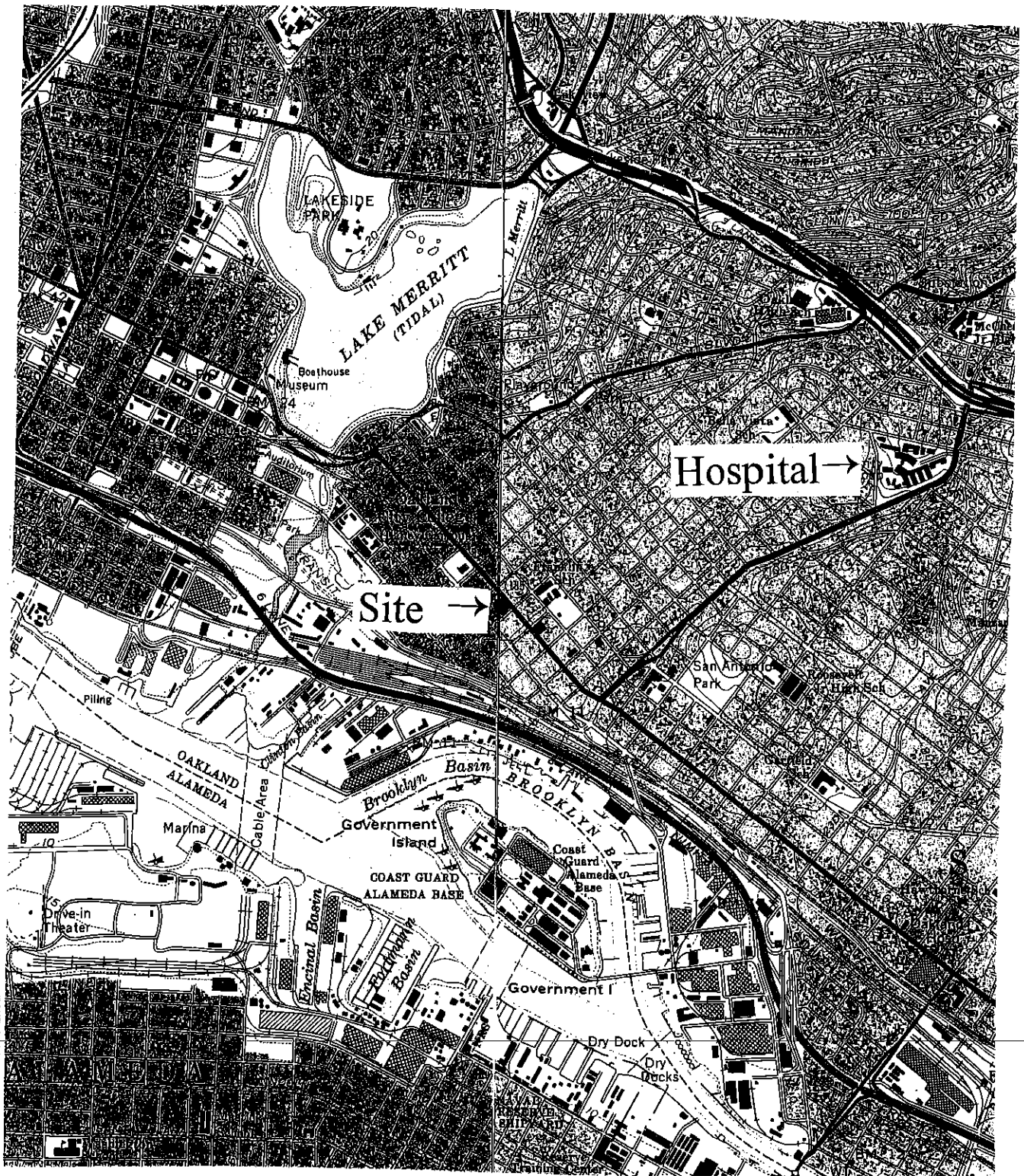
Emergency Contact: Name: Dick Cochran
Phone: (510) 834-9816

EC&A Project Manager: Name: Richard Ely
Phone: (707) 321-7267

Signature

Date

0459/WP/SHSP



EDD CLARK & ASSOCIATES, INC.
 ENVIRONMENTAL CONSULTANTS

Hospital Map
 Highland Hospital
 1411 East 31st Street
 Oakland, California

PLATE
H

JOB NUMBER
 0459,001.03

REVIEWED BY
 R.Ely

DATE
 06/03

REVISED DATE

REVISED DATE