ALISTO ENGINEERING GROUP

1683

00 NOV 28 PM 4:07
ENVIRONMENTAL PROTECTION

November 17, 2000

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

10-479-03-006

Subject: Well Rehabilitation and Replacement Report
6301 San Pablo Avenue
Oakland, California

Dear Mr. Chan:

On behalf of Ms. Connie Lam, Alisto Engineering Group is pleased to submit this report on the rehabilitation and replacement of monitoring wells at 6301 San Pablo Avenue, Oakland, California.

Please call if you have questions or need additional information.

Sincerely,

ALISTO ENGINEERING GROUP

Brady Nagle
Project Manager

Enclosure

cc: Ms. Connie Lam (with enclosure)
Mr. Brad Ledesma, ExxonMobil (with enclosure)

3732 MT. DIABLO BLVD., SUITE 270 • LAFAYETTE, CA 94549 • (925) 962-6970 • FAX (925) 962-6971
CONTRACTORS LICENSE NO. A-652544

WELL REHABILITATION AND REPLACEMENT REPORT

6301 San Pablo Avenue
Oakland, California

NOV 2000

Alisto Project No. 10-479

November 2000

MONITORING WELL REHABILITATION AND REPLACEMENT REPORT

6301 San Pablo Avenue
Oakland, California

Project No. 10-479-03-006

Prepared for:

Ms. Connie Lam
200 Dorado Terrace
San Francisco, California

Prepared by:

Alisto Engineering Group
3732 Mt. Diablo Boulevard, Suite 270
Lafayette, California

November 7, 2000

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

REGISTERED PROFESSIONAL ENGINEER
ALBERTO SANCHEZ SEVILLA
26392
Exp. Date 3-31-04
CIVIL
STATE OF CALIFORNIA

TABLE OF CONTENTS

1.0 INTRODUCTION

Alisto Engineering Group was retained by Ms. Connie Lam to rehabilitate existing monitoring wells and install a replacement well at 6301 San Pablo Road, Oakland, California. A site vicinity map is shown on Figure 1, and a site plan is shown on Figure 2.

1.1 Purpose and Scope of Work

The scope of work was developed to address the concerns of the Alameda County Health Care Services Agency as set forth in the March 3 and May 3, 2000 letters. In accordance with the approved work plan dated June 6, 2000, the scope of work included the following tasks:

- Obtained a permit to install one onsite groundwater monitoring well
- Drilled and logged one soil boring for collection of soil samples and installation of Monitoring Well MW-5
- Rehabilitated existing Wells MW-2 and MW-3, which were damaged during construction activities
- Developed and surveyed Monitoring Wells MW-2, MW-3 and MW-5
- Analyzed soil samples for specific hydrocarbon constituents and physical parameters
- Evaluated the data and analytical results and prepared this report

1.2 Site Location and Description

The property at 6301 San Pablo Road is currently doing business as Oil Changers, and is on the northwest corner of San Pablo Avenue and 63rd Street in Oakland, California. The site was formerly a Mobil service station with underground storage tanks and is currently under an ongoing environmental investigation to assess dissolved-phase petroleum hydrocarbons in soil and groundwater. All tanks, dispensers, and associated piping have been removed from the site.

The elevation of the site is approximately 50 feet above mean sea level with regional surface topography sloping generally to the west. Properties neighboring the site are commercial to the north and south and residential to the west. East of the site, across San Pablo Avenue, is Golden Gate Jr. High School.

2.0 FIELD METHODS

A well installation permit was obtained from the Alameda County Public Works Department before commencing with field activities. A copy of the permit is included in Appendix A. The methods and procedures used during the field activities are described in the following sections.

2.1 Drilling and Soil Sampling for Well Installation

On September 6, 2000, Soil Boring MW-5 was drilled onsite at the location shown on Figure 2 to a depth of approximately 21.5 feet. The boring was drilled by V&W Drilling using a Mobile B-61 drilling rig equipped with 10-inch-diameter, hollow-stem augers. Soil samples were collected at depth intervals of 5 feet, beginning at 5 feet below grade to the total depth of the boring. Each soil sample was field screened using a Thermo Model 580B organic vapor meter to assist in selecting samples for laboratory analysis. The drilling and soil sampling procedures are presented in Appendix B.

Soil samples were described in general accordance with the Unified Soils Classification System, including color, moisture, density, and consistency. The boring log prepared for MW-5 is presented in Appendix C.

2.2 Monitoring Well Installation and Construction

Boring MW-5 was converted into Monitoring Well MW-5 in accordance with the field procedures described in Appendix B. The well was constructed of 4-inch-diameter, flush-threaded, Schedule 40 PVC casing, with blank casing from the surface to 5 feet and 0.010-inch slotted screen to 20 feet. Well construction details for all the wells are included in the boring logs presented in Appendix C.

2.3 Monitoring Well Rehabilitation

On September 6, 2000, Monitoring Wells MW-2 and MW-3, which were damaged during reconstruction of the property in 1999, were rehabilitated by V&W Drilling. In both wells, approximately 3 feet of temporary piping was installed from the top of the well casing to the ground surface, where a concrete slab had been installed. The opening in the concrete slab was first enlarged to accommodate a replacement well vault. The soil around the casing was removed by hand, and the temporary piping removed to expose the well casing at approximately 3 feet below grade. The well casing was cut to remove any damaged portion, and a new section of 4-inch-diameter well casing installed to approximately ½ foot below grade. The neat cement seal was extended to near the surface grade, and street-rated well vaults installed at the well head.

After conducting the well repair, approximately 10 feet of soil was removed from Monitoring Well MW-2 by inserting 1-inch-diameter PVC piping into the well and using compressed air to lift the soil to the surface. This procedure was repeated until all soil was removed and the total depth of the well casing was restored. There was no soil or debris observed in Monitoring Well MW-3.

2.4 Monitoring Well Development and Surveying

Monitoring Wells MW-2, MW-3, and MW-5 were developed on October 8, 2000 to consolidate and stabilize the filter pack to optimize well production and reduce the turbidity of subsequent groundwater samples. The monitoring wells were developed using a submersible pump to evacuate the water and sediment. Development continued until the groundwater was

relatively free of sediment (approximately 10 casing volumes). Well development fluids were placed into DOT-approved drums for disposal to an approved facility. Well development data is presented in the field survey forms in Appendix D.

All the wells were surveyed to the top of each well casing in reference to an established benchmark by a licensed land surveyor, Frame Surveying & Mapping, Davis, California. The survey data for the three wells are included in Appendix E.

3.0 ANALYTICAL METHODS

Soil samples collected during installation of Monitoring Well MW-5 were analyzed by Argon Laboratories, Inc., a state-certified laboratory, using standard test methods of U.S. EPA and the California Department of Health Services for the following:

- Total petroleum hydrocarbons as gasoline (TPH-G) using EPA Methods 8015A and California LUFT Manual
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method Modified 8020A
- Methyl tert-butyl ether (MTBE) using EPA Method Modified 8020A

The laboratory results for the soil samples are summarized in Table 1. The field procedures for chain of custody documentation, the laboratory reports, and chain of custody records are included in Appendix F.

TABLE 1 - SUMMARY OF RESULTS OF SOIL SAMPLING
6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-479

BORING LOCATION	DEPTH OF SAMPLE (feet)	DATE OF SAMPLING	TPH-G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	LAB
MW-5	11-11.5	9/6/00	ND<1.0	0.009	ND<0.005	ND<0.005	0.014	ND<0.050	Argon
MW-5	16-16.5	9/6/00	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.050	Argon

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
mg/kg	Milligrams per Kilogram
Argon	Argon Laboratories, Inc.

SOURCE:
USGS MAP, OAKLAND WEST QUADRANGLE,
7.5 MINUTE SERIES, 1959.
PHOTOREVISED 1980.

N

QUADRANGLE LOCATION

0 1000' 2000'

FIGURE 1

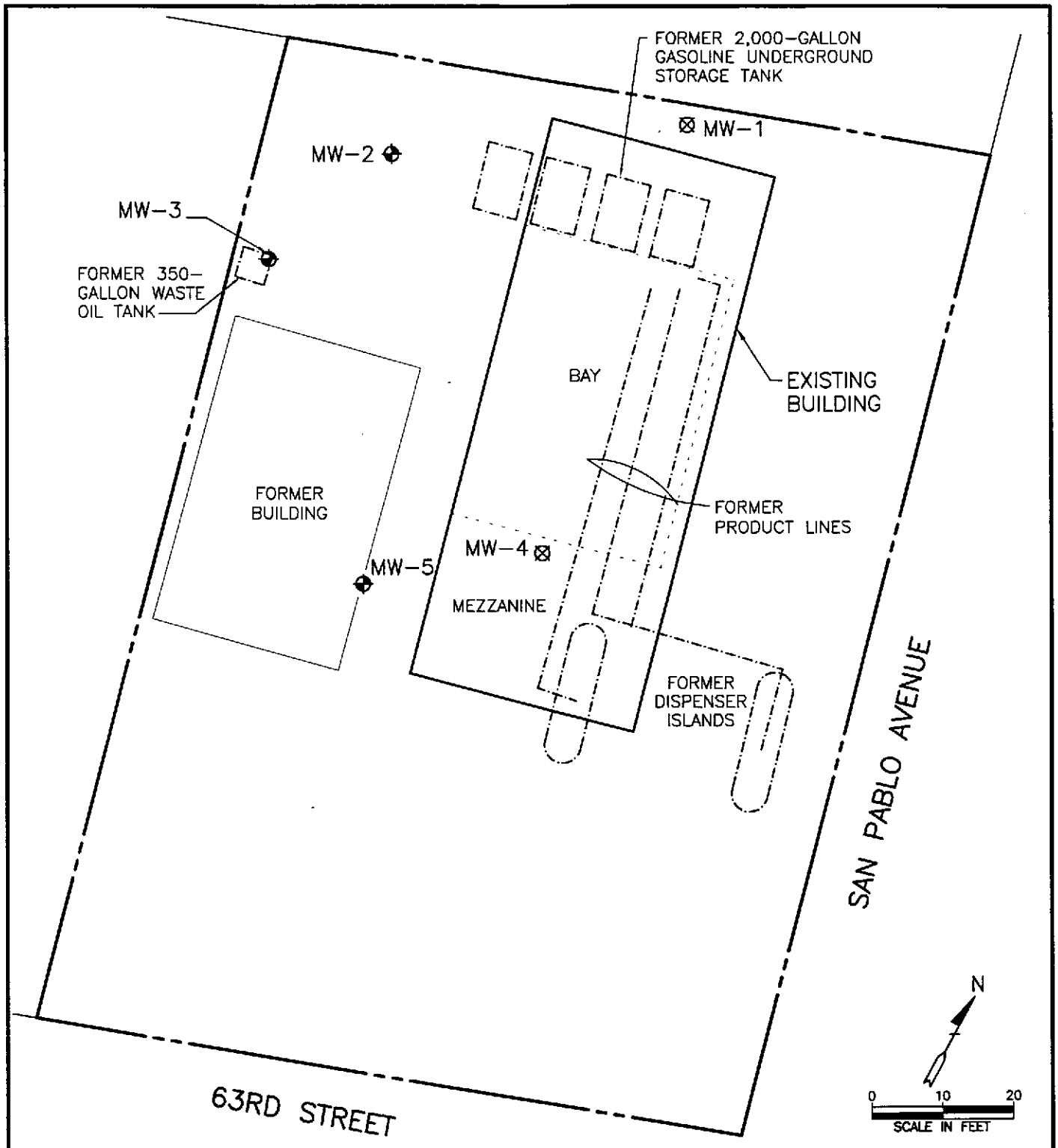
SITE VICINITY MAP

6301 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-309

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10309A DWG 9 22-95 MAP 1=1



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL

FIGURE 2

SITE PLAN

6301 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-479

ALISTO ENGINEERING GROUP
LAFAYETTE, CALIFORNIA

10479GA-DWG 09-22-00 DME 1-20

APPENDIX A

WELL INSTALLATION PERMIT

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST STR. HAYWARD, CA 94544
PHONE (510) 670-5554 FAX 510-782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Farmer Mobil Station No. 99-145
6301 San Pablo Ave, Oakland

California Coordinates Source ___ / ___ % Accuracy ± ___ ft.
CCN ___ / CCE ___ / ___ ft.
APN ___ / ___ / ___

CLIENT
Name Cannie Lam
Address 200 Dorado Terrace Phone 415-978-0521
City San Francisco Zip 94112

APPLICANT
Name Brady Vogle @ Alisto Engineering Group Fax 925-962-0970
Address 3723 Mt. Diablo Blvd Phone 925-962-0970
City Lafayette St. CA Zip 94549

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☒	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other ___	☐

N/A

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☒
Cable	☐	Other			

DRILLER'S LICENSE NO. C57-720904 Exp-4-30-02

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 25 ft.
Surface Seal Depth 5 ft. Number MW1

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 9/6/00
ESTIMATED COMPLETION DATE 9/6/00

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] DATE 8/23/00

FOR OFFICE USE
PERMIT NUMBER W00-508
WELL NUMBER ___
APN ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources WELL COMPLETION REPORT
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet

D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS
Call James Yoo at (510) 670-6633 for inspection time.

APPROVED [signature] DATE 8-24-00

APPENDIX B

FIELD PROCEDURES FOR DRILLING, SOIL SAMPLING, AND GROUNDWATER MONITORING WELL INSTALLATION

FIELD PROCEDURES
FOR
DRILLING, SOIL SAMPLING,
AND GROUNDWATER MONITORING WELL INSTALLATION

Drilling

The soil borings were drilled using 10-inch-diameter, hollow-stem augers. To avoid cross-contamination, drilling equipment in contact with potentially contaminated material was decontaminated by steam cleaning before and after each use. Decontamination fluids were placed into DOT-approved drums for disposal.

Soil Sampling

During drilling, samples were collected at intervals of up to 5 feet, beginning at 5 feet below grade to the total depth of the borings. Before and after each use, the sampler was washed using a phosphate-free detergent followed by tap water and deionized water rinses. Soil was sampled using a California-modified, split-spoon sampler lined with stainless steel tubes. A 140-pound slide hammer falling 30 inches was used to advance the sampler 18 inches ahead of the hollow-stem augers into undisturbed soil, and blow counts were recorded for every 18 inches of penetration to evaluate the density of the soil.

After retrieval from the augers, the sampler was split, the sample tubes were removed, and a soil sample was selected for possible chemical analysis. The sample was retained within the stainless steel tube, and both ends were immediately covered with Teflon sheeting and polyurethane caps. The caps were sealed with tape and labeled with the following information: Alisto's project number, boring number, sample depth interval, sampler's initials, and date of collection. The sample was immediately placed in a waterproof plastic bag and stored in a cooler containing blue ice. Possession of the samples was documented from the field to a state-certified analytical laboratory by using a chain of custody form.

Soil samples and, when representative, drill cuttings were described by Alisto's personnel using the Unified Soils Classification System; and field estimates of soil type, color, moisture, density, and consistency were noted on the boring logs. The logs were reviewed by a civil engineer registered in the State of California.

Groundwater Monitoring Well Installation

Construction of the groundwater monitoring wells was based on the stratigraphy encountered in the soil borings. The well construction materials were introduced into the boring through the hollow-stem augers to centralize the well casing and minimize the possibility of native material entering the annular space of the well.

The 4-inch-diameter PVC well casing consisted of 0.010-inch slotted casing from the bottom of the boring to a depth interval above the highest anticipated water level, and solid casing was installed from the top of the slotted casing to approximately 4 inches below grade.

FIELD PROCEDURES
FOR
DRILLING, SOIL SAMPLING,
AND GROUNDWATER MONITORING WELL INSTALLATION
(continued)

The annular space surrounding the screened portion was backfilled with No. 2/12 Lonestar sand (filter pack) to approximately 1 foot above the top of the screened section. An approximately 0.5-foot-thick interval of bentonite pellets was added to the annulus above the filter pack and hydrated with approximately 2 to 3 gallons of deionized water to minimize intrusion of well seal into the filter pack. A 3-foot-thick interval of Portland Type I/II neat cement was placed above the bentonite, and a traffic-rated utility box was installed around the top of the well casing. An expanding, watertight well cap and lock were installed on top of the well casing to secure the well from surface fluid and tampering.

APPENDIX C

BORING LOG AND WELL CONSTRUCTION DETAILS

ALISTO ENGINEERING GROUP
LAFAYETTE, CALIFORNIA

LOG OF WELL MW-5

SEE SITE PLAN

ALISTO PROJECT NO: 10-479-3-1 DATE DRILLED: 09/06/00
WELL OWNER: ExxonMobil
LOCATION: 6301 San Pablo Ave, Oakland, California
DRILLING METHOD: 10" Hollow-stem auger
DRILLING COMPANY: V & W Drilling CASING ELEVATION:
LOGGED BY: Dan Birch APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	GEOLOGIC DESCRIPTION
		Concrete to 1/2 foot.
		Base rock to 1 foot.
9, 9,12	0	SANDY SILTY CLAY: light brown with blue mottling, moist, very stiff, fine sand (5%), occasional coarse sand.
7,12,13	3	
		SANDY CLAY: Rusty brown, moist, very stiff, fine sand 20%
8, 8, 7	1	
		SAND: brown, wet, dense, fine to medium grained.
8, 5, 8	NR	Boring terminated @ 21.5 feet.

WELL DIAGRAM: Grout; Bentonite; 4" Sch 40 PVC Casing; 4" PVC 0.010" Slotted; # 2/12 Sand

DEPTH feet: 5, 10, 15, 20, 25, 30

SOIL CLASS: CL, SC, SP

APPENDIX D

GROUNDWATER MONITORING WELL DEVELOPMENT FIELD SURVEY FORMS

ALISTO

ENGINEERING GROUP

3732 MT. DIABLO BOULEVARD, SUITE 270
LAFAYETTE, CALIFORNIA 94549 (925)962-6970 FAX 962-6971

Field Report / Development Data Sheet

Project No. 10-479-03-003 Date: 10-8-00
Address 6301 San Pablo Ave Day: M T W TH F (SUN)
Contract No. n/a City: Oakland
Station No. Oil Changers Sampler: DJTBIRCH

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-2		4"	20'	7.11			
MW-3		4"	20	9.06			
MW-5		4"	20'	7.27			

FIELD INSTRUMENT CALIBRATION DATA

pH METER AQV 4.00 X 7.00 X 10.00 X TEMPERATURE COMPENSATED Y N TIME _____ WEATHER _____
D.O. METER _____ ZERO d.O. SOLUTION no BAROMETRIC PRESSURE _____ TEMP _____
CONDUCTIVITY METER _____ 10,000 _____ TURBIDITY METER LAMOTTE 5.0 NTU _____ OTHER _____
LEAK DETECTOR : NONE ALARM MODE — NON ALARM MODE — TURBIDITY

Well ID	epth to Wat	Diam	Cap/Locl	Product De	Iridescenc	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-5	7.27	4"	dr/dr	NONE	Y (N)	5	1500	66.6	7.11	200.6	
						12	1510	65.2	7.26	96.1	
						17	1520	65.0	7.31	42.6 NTUs	

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.

Purge Method: ~~Surface~~ Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments: RED FLOW

Clears up after 17 gallons, Dry @ 12.

- O EPA 601_____
- O TPH-G/BTEX___
- O TPH Diesel____
- O TOG 5520 ___

TIME/SAMPLE ID

ALISTO

Field Report / Development Data Sheet

ENGINEERING
GROUP
3732 MT. DIABLO BOULEVARD, SUITE 270
LAFAYETTE, CALIFORNIA 94549 (925)962-6970 FAX 962-6971

Project No. 10-479-03-003 Date: 10-8-00
Address 6301 San Pablo Ave Day: M T W TH F (SUN)
Contract No. n/a City: Oakland
Station No. Oil Changers Sampler:

Well ID	epth to Wat	Diam	Cap/Locl	Product De	Iridescenc	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-2	7.11	4"	dk/lk	none	Y (N)	6	1533	65.1	6.99	75.1	NTUs
						11	1545	64.6	7.07	33.2	
						18	1600	64.9	7.10	10.6	NTU's

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments: Cleans up easily.

O EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___

TIME/SAMPLE ID
Development

Well ID	epth to Wat	Diam	Cap/Locl	Product De	Iridescenc	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-3	9.06	4	dk/lk		Y (N)	5	1616	64.6	7.21	19.6	
						10	1621	64.9	7.30	12.2	
						15	1633	64.9	7.31	5.2	NTU's

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments: Cleans up easily.

O EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___

TIME/SAMPLE ID

Well ID	epth to Wat	Diam	Cap/Locl	Product De	Iridescenc	Gal.	Time	Temp *F	pH	E.C.	D.O.
					Y N						

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

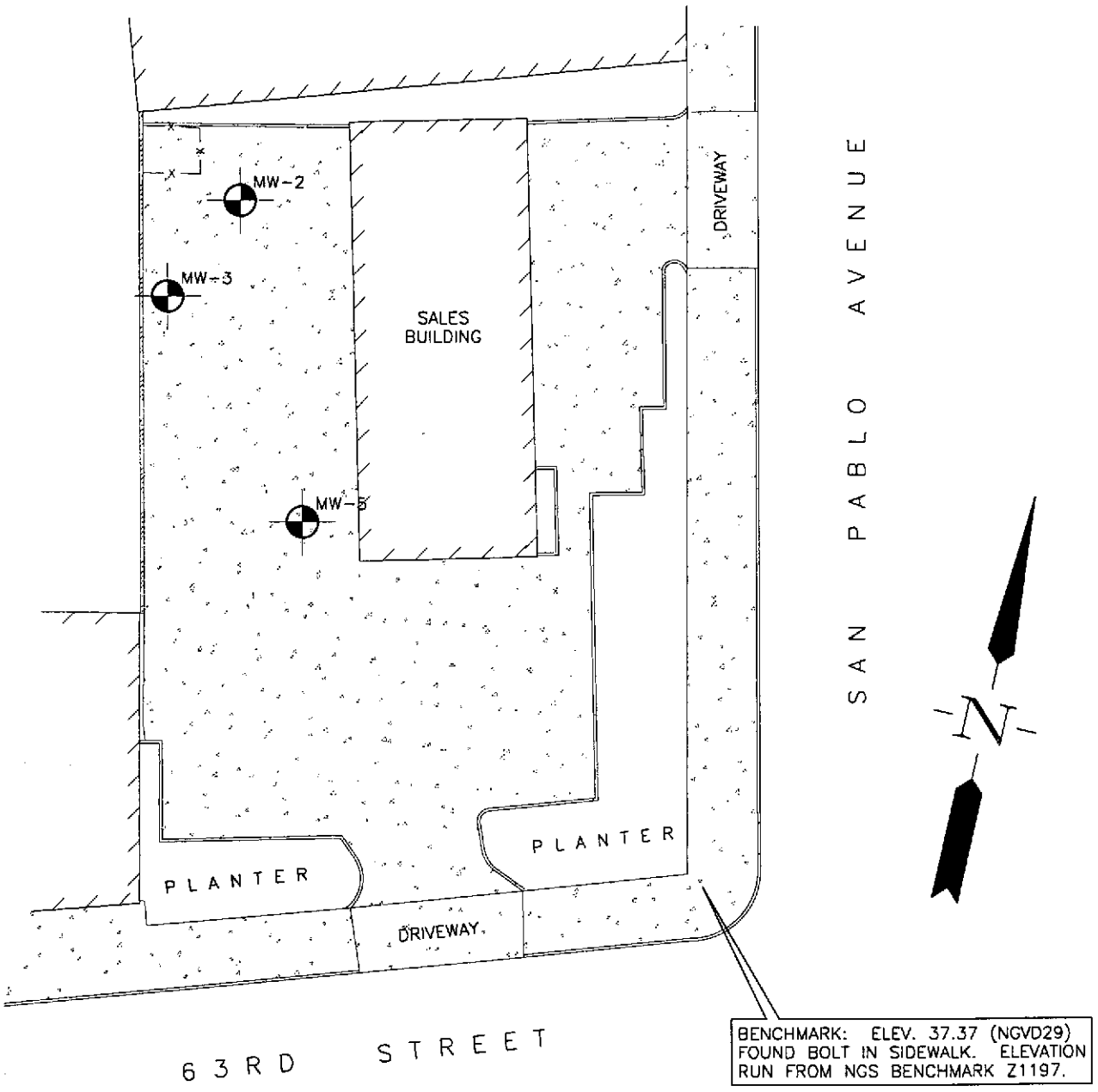
Comments:

O EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___

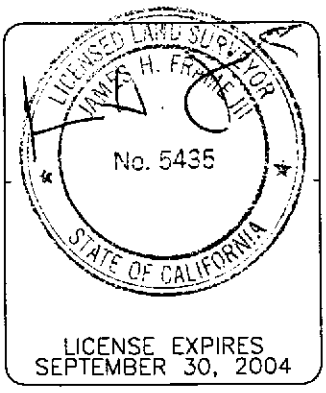
TIME/SAMPLE ID

APPENDIX E

WELL ELEVATION SURVEY MAP



DESCRIPTION	NORTHING	EASTING	ELEV (GROUND)	ELEV (PVC)
MW-2	5125.4	4954.1	39.6	39.34
MW-3	5105.6	4945.1	39.5	39.27
MW-5	5071.3	4977.9	39.4	39.18



LICENSE EXPIRES
SEPTEMBER 30, 2004

0 15 30 60 90

SCALE IN FEET

FRAME SURVEYING & MAPPING
809 A Street Davis, CA 95616
(530) 756-8584 (TEL) (530) 756-0201 (FAX)

0140-039

MONITORING WELL EXHIBIT

6301 SAN PABLO AVENUE
OAKLAND, ALAMEDA COUNTY, CALIFORNIA
SEPTEMBER, 2000 1"= 30'

APPENDIX F

FIELD PROCEDURES FOR CHAIN OF CUSTODY DOCUMENTATION, LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORDS

FIELD PROCEDURES
FOR
CHAIN OF CUSTODY DOCUMENTATION

Samples were handled in accordance with the California Department of Health Services' guidelines. Each sample was labeled in the field and immediately stored in an iced cooler for transport to a state-certified laboratory for analysis.

A chain of custody record accompanied the samples and included the site and sample identification, date of collection, analysis requested, and the name and signature of the sampling technician. When transferring possession of the samples, the transferee signed and dated the chain of custody record.

ORGANICS · INORGANICS · ON-SITE
GC / MS · GC · AA · IR

ARGON Laboratories, Inc.

3037 5th Street · Ceres, CA 95307 · (209) 581-9280 · Fax (209) 581-9282

ALISTO ENGINEERING GROUP
3732 MT. DIABLO BLVD., SUITE 270
LAFAYETTE, CA 94549

REPORT DATE: 09/20/00
DATE SAMPLED: 09/06/00

ATTN: BRADY NAGLE
CLIENT PROJ. ID: 10-479-3-4

AL JOB #: A09081

Project Summary:

On September 12, 2000, this laboratory received ~~8~~ 3 soil samples.

Samples were analyzed according to instructions in accompanying chain-of-custody. Results of analysis are summarized on the following pages. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Sample Control at (209)581-9280.

Hiram Cueto
Lab Director

ORGANICS · INORGANICS · ON-SITE
GC / MS · GC · AA · IR

ARGON Laboratories, Inc.

3037 5th Street · Ceres, CA 95307 · (209) 581-9280 · Fax (209) 581-9282

ALISTO ENGINEERING GROUP
3732 Mt. Diablo Blvd., Suite 270
Lafayette, CA 94549

Proj. ID: 10-479-3-4
Site: 6301 San Pablo Ave.
Oakland, CA

TPH-gas / BTX&E / MTBE

Method: 8015M / 8020A

Date Sampled: 09/06/00
Date Received: 09/12/00
Date Analyzed: 09/12/00

Lab ID:	A09082	A09083
Sample ID:	MW-5 11-11½	MW-5 16-16½
Matrix:	Soil	Soil
Total Petroleum Hydrocarbons @ Gasoline	<1.0	<1.0
Benzene	0.009	<0.005
Toluene	<0.005	<0.005
Xylenes	<0.005	<0.005
Ethyl Benzene	0.014	<0.005
Methyl tert-Butyl Ether	<0.050	<0.050
QA/QC:		
Surrogate Spike Recovery: Trifluorotoluene	73%	70%

* water samples are reported in ug/L; soil and sludge samples in mg/kg

Hiram Cueto
Lab Director
DHS Certification No. 2359

ORGANICS · INORGANICS · ON-SITE
GC / MS · GC · AA · IR

ARGON Laboratories, Inc.

3037 5th Street · Ceres, CA 95307 · (209) 581-9280 · Fax (209) 581-9282

ALISTO ENGINEERING GROUP
3732 Mt. Diablo Blvd., Suite 270
Lafayette, CA 94549

Date Analyzed: 09/12/00

Proj. ID: 10-479-3-4
Site: 6301 San Pablo Ave.
Oakland, CA

Blank / QC Data

Method: 8015M / 8020A

Lab ID:	Blank
Sample ID:	BLKA0912
Matrix:	Water

Total Petroleum Hydrocarbons @ Gasoline	<50
Benzene	<0.5
Toluene	<0.5
Xylenes	<0.5
Ethyl Benzene	<0.5
Methyl tert-Butyl Ether	<5.0
Surrogate Spike Recovery:	81%

Matrix Spike Recovery Summary

Lab ID	Client ID	Analyte	Percent Recovery MS / MSD	%RPD
A09061	NSA SB3-10	Ethyl Benzene	94 / 94	0

* water samples are reported in ug/L; soil and sludge samples in mg/kg

ORGANICS · INORGANICS · ON-SITE
GC / MS · GC · AA · IR

ARGON Laboratories, Inc.

3037 5th Street · Ceres, CA 95307 · (209) 581-9280 · Fax (209) 581-9282

ALISTO ENGINEERING GROUP
3732 Mt. Diablo Blvd., Suite 270
Lafayette, CA 94549

Date Analyzed: 09/13/00

Proj. ID: 10-479-3-4
Site: 6301 San Pablo Ave.; Oakland, CA
Matrix: Soil

Blank / QC Data

EPA Method: 7420

Lab ID	Sample ID	Result	Reporting Limit (mg/L)
BLKA0913	Blank	ND	5.0

Matrix Spike Recovery Summary

Lab ID	Client ID	Analyte	Percent Recovery MS / MSD	% RPD
A08172	TP B1-12.0	Lead	99 / 103	4

Note: Water samples are reported in mg/L , soil samples are reported in mg/kg.
ND = Not detected at or above the reporting limit.

ALISTO ENGINEERING GROUP

CHAIN OF CUSTODY

Project Information:	Report To:	Samples Submitted To:
Project No: 10-479-3-4 Project Title: WELL Rehabilitation and replacement Location: 6301 San Pablo Ave, Oakland	Consultant: Alisto Engineering Group Address: 3732 Mt. Diablo Boulevard, Suite 270, Lafayette, CA 94549 Contact: Brady Nagle Phone: (925) 962-6970 Fax: (925) 962-6971	Laboratory: Alpha Address: 3037 5TH St. Ceres CA 95307 Contact: Hisam Phone: Fax: 209.581.9280
Sampler's Name: (print) DAN Sampler's Signature: Birch	**Bill To:** Consultant: Alisto Engineering Address: 3732 Mt. Diablo Boulevard, Suite 270, Lafayette, CA 94549	Date Results Required: Date Report Required:

TURN AROUND TIME

RUSH	24 Hour	48 Hour	5 Day	Standard (10-14 days)
☐	☐	☐	☐	☒

ANALYSIS

Sample ID.	Date	# Containers	Matrix	TPH-Gasoline (EPA 8015)	BTEX/MTBE (EPA 8020)										COMMENTS Container / Preservative
MW-5 6-6½	9/6/00	1	Soil												HOLD
MW-5 11-11½	"	"	"	X	X										
MW-5 16-16½	"	"	"	X	X										

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	9/7/00	1500	[signature]	9/7/00	1500
[signature]	9/7/00	1600	[signature]	9/7/00	1600
[signature]	9/12/00	1445	[signature]	9/12/00	1445

SPECIAL INSTRUCTIONS: