

*Allied Glass Co.
20574 Wisteria St.
Castro Valley, CA 94546*

RECEIVED

10:41 am, Sep 04, 2008

Alameda County
Environmental Health

September 2, 2008

Mr. Paresh Khatri
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SOIL AND GROUNDWATER INVESTIGATION WORK PLAN CERTIFICATION
County Case # RO 2844
Allied Glass Company
20574 Wisteria Street
Castro Valley, CA

Dear Mr. Khatri:

You will find enclosed one copy of the following document prepared by RGA Environmental, Inc.

- Soil and Groundwater Investigation Work Plan dated September 2, 2008 (document 0463.W1).

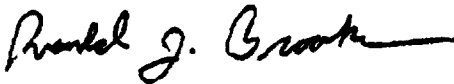
I declare, under penalty of perjury, that the information and/or recommendations contained in the above-mentioned document for the subject site is true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) (provide phone number).

Sincerely,

Robert A. Brooks Trust

Robert Brooks



(SIGNING FOR ROBERT A BROOKS)

Enclosure

0463.L1



September 2, 2008
Work Plan 0047.W6

Mr. Paresh Khatri
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SOIL AND GROUNDWATER INVESTIGATION WORK PLAN
(B1 THROUGH B5)
Fuel Leak Case No. RO 2844
Allied Glass Company
20574 Wisteria Street
Castro Valley, CA

Dear Mr. Khatri:

RGA Environmental, Inc. (P&D) is pleased to present this work plan for collection of soil and groundwater samples from four boreholes designated as B1 through B4 at the subject site. This work plan is written in response to a request by the Alameda County Department of Environmental Health (ACDEH) in a letter dated July 7, 2008. A Site Plan prepared by Tank Protect Engineering showing the former UST pit locations and associated sample collection locations is attached as Figure 1, a Site Plan prepared by others showing the locations of three groundwater monitoring wells at an adjacent downgradient property (Quality Tune Up at 2780 Castro Valley Boulevard) and a Site Vicinity Map showing the locations of proposed boreholes for groundwater sample collection is attached as Figure 3. All work will be performed under the supervision of a professional geologist.

BACKGROUND

Documentation of removal of one 1,000 gallon gasoline UST and one 300 gallon gasoline UST are provided in a Tank Closure Report prepared by Tank Protect Engineering dated August 26, 1993. The tanks were removed on February 24, 1993. Approximately 5 to 15 gallons of perched water was reported to be present in the bottom of the UST pit for the 1,000 gallon UST. Two soil samples (S-1 and S-2) were collected from the bottom of the 1,000 gallon UST pit and one soil sample (S-3) was collected from the bottom of the 300 gallon UST pit. All of the UST pit soil samples were collected at a depth of approximately 6 feet below the ground surface. Perched groundwater was reported to be present in the UST pit for the 1,000 gallon UST. One water sample (W-1) was collected from the bottom of the 1,000 gallon UST pit. In addition, soil stockpile samples (SP1-(A-D)) were collected. The UST pit and the sample collection locations are shown in Figure 1. The sample results for the soil samples are summarized in Table 1, and the sample results for the water sample are summarized in Table 2. Review of the soil sample results shows that no petroleum hydrocarbons were detected. Review of the water sample results shows that TPH-G was

detected at a concentration of 1,700 ug/L, and that ethylbenzene and xylenes were detected at 2.3 and 97 ug/L, respectively.

Review of the county website for nearby sites with impacted groundwater in the vicinity of the subject site identified the following sites.

- Quality Tune Up at 2780 Castro Valley Boulevard (at the northeastern corner of Castro Valley Boulevard and Wisteria Street). The site is located adjacent to and directly south of the Allied Glass Company site. Three groundwater monitoring wells are present at the site. The locations of the wells at the site is shown on Figure 2. Historic groundwater quality results for the wells is provided in Table 3. Based on the available information water level information for the wells at the site, the groundwater flow direction at the site is to the south-southeast. The historic distribution of petroleum hydrocarbons in the wells at the site is consistent with a south-southeasterly groundwater flow direction (well MW2 has historically not had detectable concentrations of petroleum hydrocarbons relative to suspected sources at the site or potentially upgradient of the site). All of the wells were constructed to depths of 20 or 25 feet. Bedrock (interbedded claystone and siltstone) was encountered in the boreholes for the wells at depths of 12 to 15 feet. The subsequent measured depth to water in the wells ranged from approximately 9 to 11 feet.
- Arco Station #4977 at 2770 Castro Valley Boulevard (at the northeastern corner of Castro Valley Boulevard). The site is located approximately 85 feet southeast of the Allied Glass Company site. Review of the reported groundwater flow direction for the site showed that the flow direction is predominantly due south. However, the north arrow on the report site plans is oriented more easterly than the north arrow on the site plans for the Allied Glass Company site the Quality Tune Up site, and a nearby Shell site (see below), suggesting that the groundwater flow direction at the Arco Station could be south-southwesterly. All of the wells were constructed to depths of 15 feet. Bedrock (undescribed) was encountered in the boreholes for the wells at depths of 13 to 15 feet. The subsequent measured depth to water in two of the wells was approximately 7 feet, and in one of the wells was approximately 11 feet.
- Former Shell Service Station at 2724 Castro Valley Boulevard (at the northeastern corner of Castro Valley Boulevard and Lake Chabot Road). The site is located approximately 360 feet southeast of the Allied Glass Company site. Review of available historic groundwater flow direction data indicates that the groundwater flow direction at the site is predominantly to the south-southeast. The wells were constructed to depths ranging from 15 to 23 feet. Review of the boring logs for the wells shows that bedrock (shale) was encountered at depths ranging from approximately 12 to 17 feet. The subsequent measured depth to water in the wells ranged from approximately 7 to 9 feet.

SCOPE OF WORK

P&D will perform the following tasks:

- Permitting and regulatory agency coordination.
- Health and safety plan preparation and mark drilling locations with white paint.
- Soil boring oversight for five soil borings and collection of one groundwater grab sample from each borehole.
- Arrange for analysis of the groundwater samples.
- Report preparation documenting collection of the groundwater samples and the laboratory analytical results.

Each of these is discussed below in detail.

Permitting and Regulatory Agency Coordination

A permit will be obtained from the Alameda County Public Works Agency (ACPPWA) for the drilling of the soil borings. Notification will be provided to the ACDEH and ACPWA prior to drilling.

Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan. Prior to the beginning of fieldwork, the drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location.

Soil Boring Oversight and Sample Collection

A total of five borings, designated as B1 through B5 will be drilled to characterize the horizontal extent of petroleum hydrocarbons in groundwater at the subject site.

The rationale for the location of each of the proposed boreholes is as follows:

- B1. In the former 1,000 gallon UST pit at the approximate location of pit water sample W-1 to evaluate petroleum hydrocarbon concentrations approximately 13 years after removal of the USTs.
- B2. In the former 300 gallon UST pit in accordance with a request from the ACDEH in the July 3, 2008 letter.
- B3. On the western edge of the site, to evaluate the western extent of petroleum hydrocarbons detected in groundwater in the 1,000 gallon UST pit.
- B4. To the north of the 1,000 gallon UST pit to evaluate the northern extent of petroleum hydrocarbons detected in groundwater in the UST pit.
- B5. To the north of the 1,000 gallon UST pit to evaluate the northern extent of petroleum hydrocarbons detected in groundwater in the UST pit.

Based upon the depth to groundwater in nearby groundwater monitoring wells, the anticipated depth to groundwater is approximately 10 feet. Based on the shallow depth to groundwater, the boreholes will be drilled to a depth of 15 feet below the ground surface for the collection of groundwater samples. Each boring will be continuously cored using Geoprobe Macrocore barrel samplers lined with transparent PVC tubes. The soil from the boreholes will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. The soil from the boreholes will be evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated with a 100 ppm isobutylene standard.

One groundwater grab sample will be collected from each borehole. The groundwater grab samples will be collected from the boreholes by placing slotted temporary PVC pipe into each borehole and retrieving the sample using a polyethylene tube with a stainless steel check valve. The samples will be placed into 40-milliliter VOAs and 1-liter amber glass bottles preserved with hydrochloric acid and capped with Teflon-lined screw caps. All sample containers will be clean and provided by the laboratory. The VOAs will be overturned and tapped to ensure that no air bubbles are present. The samples will then be stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling. The proposed locations of the soil borings are shown on the attached Site Vicinity Map, Figure 3.

All drilling and sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of sample collection activities, the boreholes will be filled with neat cement grout. Any soil or water generated during drilling will be stored in drums at the site pending characterization and disposal.

Arrange for Sample Analysis

The groundwater samples from the boreholes will be analyzed at McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California. McCampbell is a State-Accredited hazardous waste testing laboratory. The groundwater samples from each borehole will be analyzed for TPH-D, TPH-BO, and TPH-MO using EPA Methods 5030B in conjunction with modified EPA Method 8015; for MTBE and BTEX using EPA Method 8021B; and for dissolved lead using EPA Method 200.8.

Report Preparation

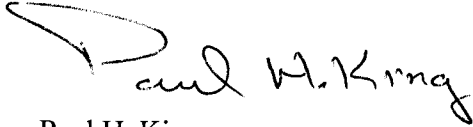
Upon receipt of the laboratory analytical results, a report will be prepared. The report will document groundwater sample collection procedures and sample results. The report will include a site plan showing the drilling locations, boring logs, tables summarizing the sample results, recommendations based on the sample results, and the stamp of an appropriately registered professional.

September 2, 2008
Work Plan 0463.W1

Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/09



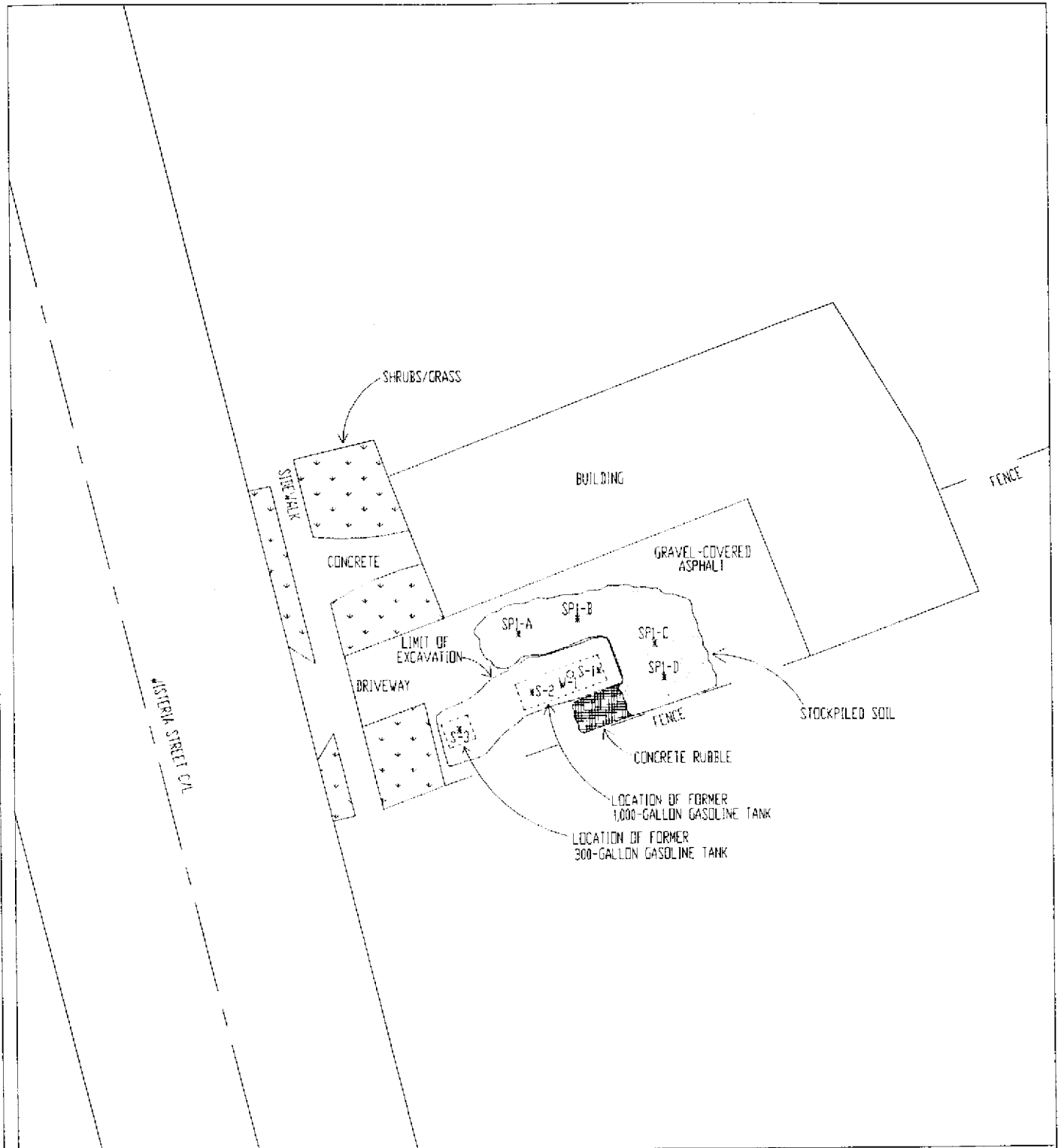
Attachments: Figure 1 – Site Plan showing UST pits prepared by Tank Protect Engineering
Figure 2 – Site Plan showing offsite Quality Tune Up site features and groundwater flow direction
Figure 3 – Site Vicinity Map showing proposed borehole locations.

Table 1 – Tank Protect Engineering report table showing soil sample results
Table 2 – Tank Protect Engineering report table showing water sample results
Table 3 – Offsite Quality Tune Up historic well sample results

cc: Mr. Robert Brooks, Brooks Family Trust

PHK
0463.W1

FIGURES



L E G E N D

S-1 * NAME AND LOCATION OF SOIL SAMPLE

W-1 ○ NAME AND LOCATION OF WATER SAMPLE



TANK PROTECT ENGINEERING

SITE PLAN
TANK REMOVAL (2/24/93)

ALLIED GLASS COMPANY
20574 WISTERIA STREET
CASTRO VALLEY, CA 94546

DATE	2/25/93
FIGURE	1
FILE #	251-1
DRAWN BY	MAC
CHECKED BY	

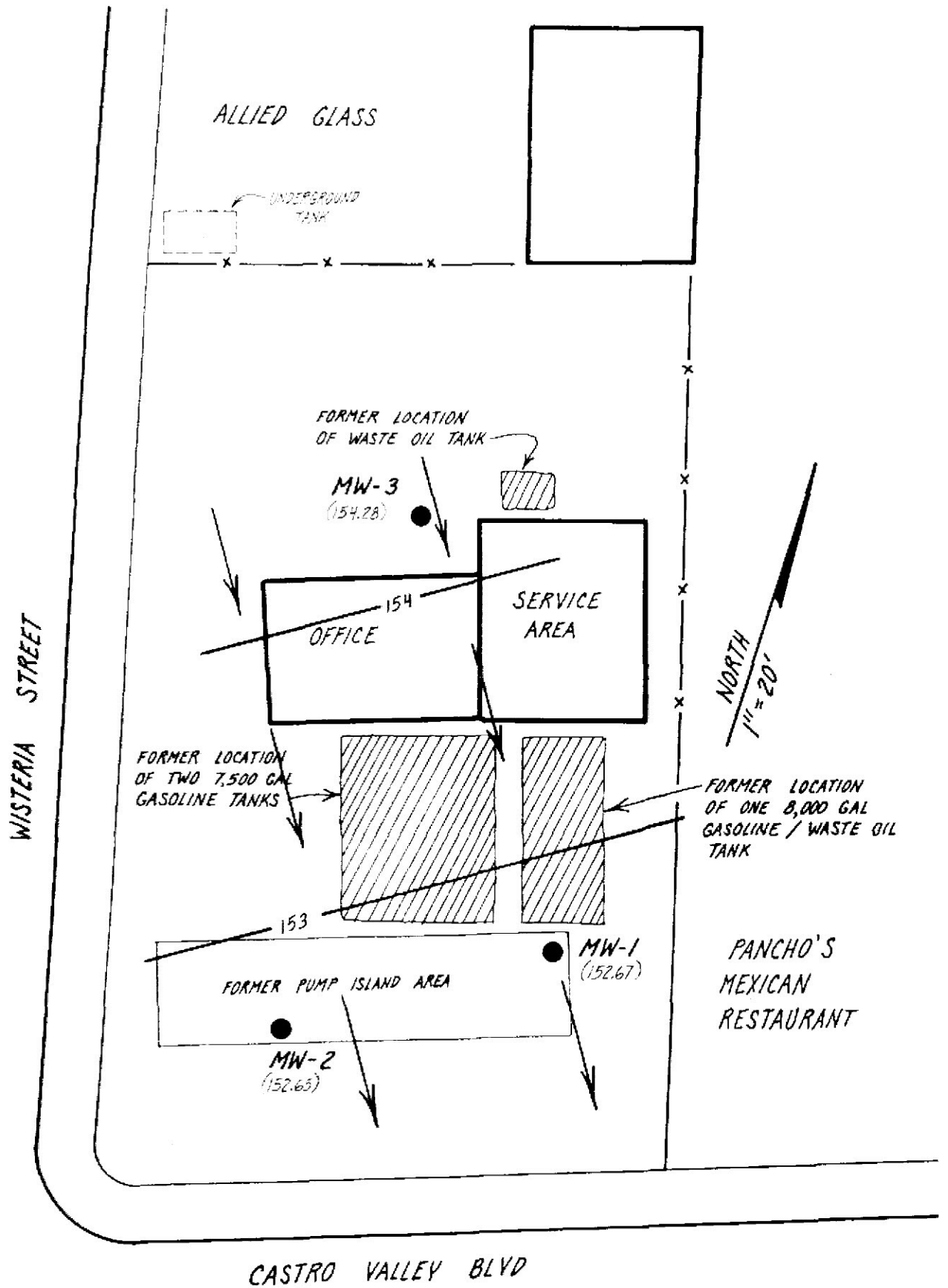
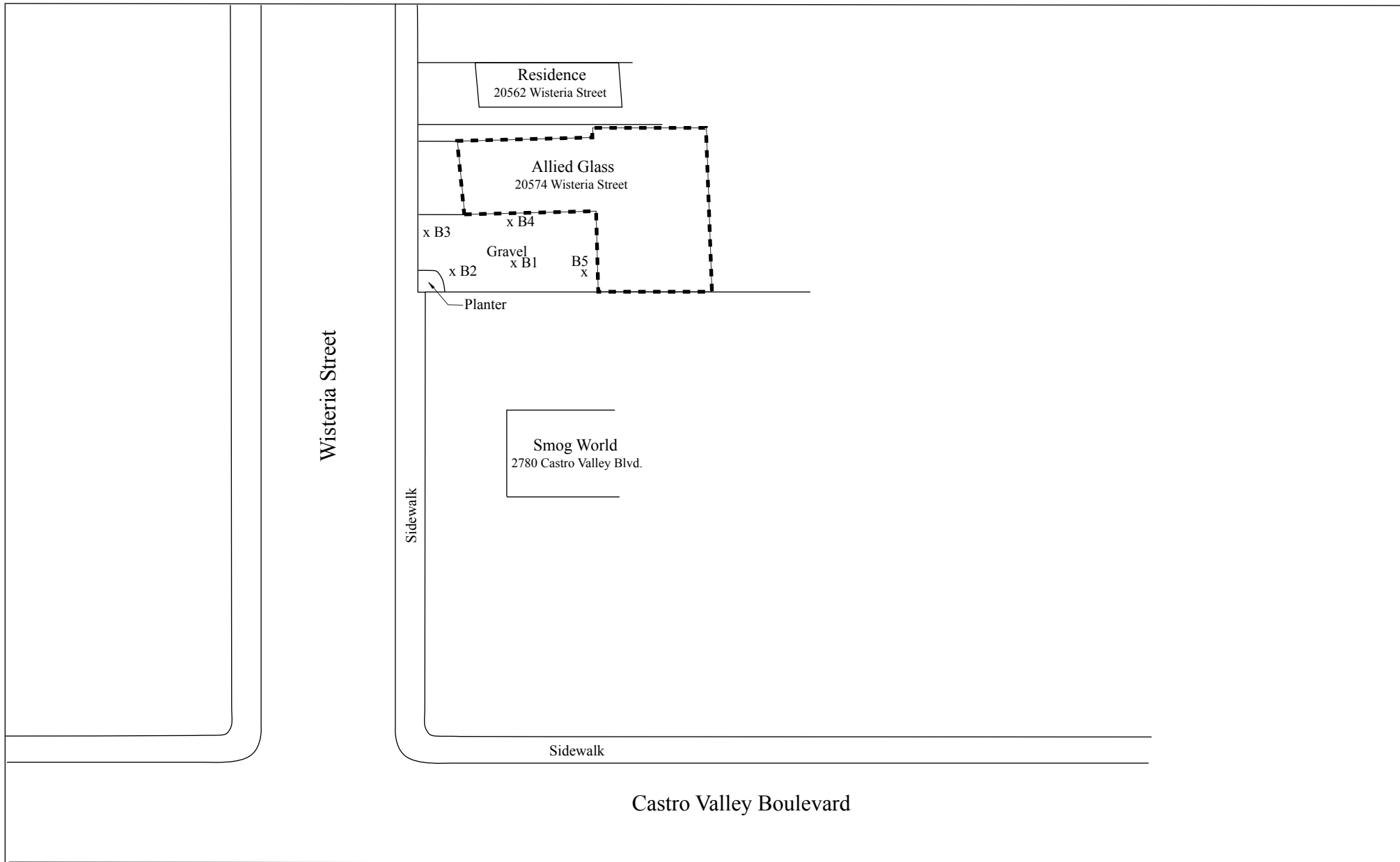


FIGURE 2 Shallow Groundwater Table Contour Map (May 20, 1992).



LEGEND

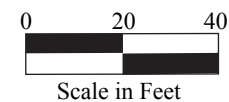
x B5 Proposed Borehole

Figure 3
 Site Vicinity Map
 Allied Glass Company
 20574 Wisteria Street
 Castro Valley, California



Base Map from:
 RGA Environmental, Inc.
 August 2008
 Prepared Using a Rolotape

RGA Environmental, Inc.
 1466 66th Street
 Emeryville, CA 94608



TABLES

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm¹) Allied Glass Site

Sample ID Name	Depth (feet)	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
S-1	6.0-6.5	<.500	<.0050	<.0050	<.0050	<.015	6.8
S-2	6.0	<.500	<.0050	<.0050	<.0050	<.015	3.0
S-3	6.0	<.500	<.0050	<.0050	<.0050	<.015	4.0
SP1-(A-D) ²	1.0-2.0	<.500	<.0050	<.0050	<.0050	<.015	150

¹ PARTS PER MILLION

² ALSO ANALYZED FOR SOLUBLE LEAD BY THE WET EXTRACTION TEST (WET) EPA METHOD 7420 AND BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE, EPA METHOD 7420; LEAD WAS DETECTED BY THE WET AT A CONCENTRATION OF 5.3 ppm.

TABLE 2
SUMMARY OF WATER SAMPLE ANALYTICAL RESULTS
(ppb¹) Allied Glass Site

Sample ID Name	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
W-1	1,700	<1.5	<1.1	2.3	97	<100

¹ PARTS PER BILLION

TABLE 3.

Shallow Groundwater Sampling Results
Quality Tune Up Site

Well	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-1	05-20-92	260	ND	ND	4.4	9.0	---
	08-19-92	ND	ND	ND	ND	ND	---
	11-18-92	160	0.9	4.0	2.6	9.4	---
	02-22-93	9,000	15	34	46	91	---
	05-24-93	540	0.5	0.9	2.0	4.5	---
	08-16-93	53	ND	ND	1.0	4.7	---
	11-15-93	780	0.6	0.9	1.1	5.2	---
	02-11-94	3,000	3.9	2.5	12	26	---
	06-28-94	180	ND	ND	4.2	9.0	---
	09-12-94	ND	ND	ND	ND	ND	---
	12-13-94	580	ND	ND	2.6	3.9	---
	03-24-95	1,500	7.3	6.2	12	28	---
	06-27-95	160	ND	ND	4.7	9.2	---
	09-03-99	ND	ND	ND	ND	ND	ND
MW-2	05-20-92	ND	ND	ND	ND	ND	---
	08-19-92	ND	ND	ND	ND	ND	---
	11-18-92	70	ND	ND	0.9	6.7	---
	02-22-93	ND	ND	ND	ND	ND	---
	05-24-93	ND	ND	ND	ND	ND	---
	08-16-93	ND	ND	ND	ND	ND	---
	11-15-93	ND	ND	ND	ND	ND	---
	02-11-94	ND	ND	ND	ND	ND	---
	06-28-94	ND	ND	ND	ND	ND	---
	09-12-94	ND	ND	ND	ND	ND	---
	12-13-94	120	ND	ND	ND	0.8	---
	03-24-95	290	ND	0.5	10	18	---
	06-27-95	63	ND	3.4	1.9	9.1	---
	09-03-99	ND	ND	ND	ND	ND	ND
Detection Limit		50	0.5	0.5	0.5	0.5	0.5

ND = Not Detected

TABLE 3. (continued)**Shallow Groundwater Sampling Results**
Quality Tune Up Site

Well	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-3	05-20-92	4,200	4.5	1.2	13	43	---
	08-19-92	280	5.3	16	25	61	---
	11-18-92	4,800	26	27	35	98	---
	02-22-93	6,200	9.4	15	30	66	---
	05-24-93	1,100	1.5	3.4	4.1	9.9	---
	08-16-93	420	2.1	3.0	3.8	23	---
	11-15-93	3,000	2.4	3.1	4.4	20	---
	02-11-94	3,700	7.7	6.8	12	29	---
	06-28-94	230	ND	4.0	8.5	19	---
	09-12-94	460	0.7	1.4	3.5	4.7	---
	12-13-94	1,400	1.1	2.1	5.4	9.5	---
	03-24-95	6,000	14	15	10	79	---
	06-27-95	1,100	6.2	39	26	43	---
	09-03-99	760	ND	1.5	2.9	4.1	22
Detection Limit		50	0.5	0.5	0.5	0.5	0.5

ND = Not Detected