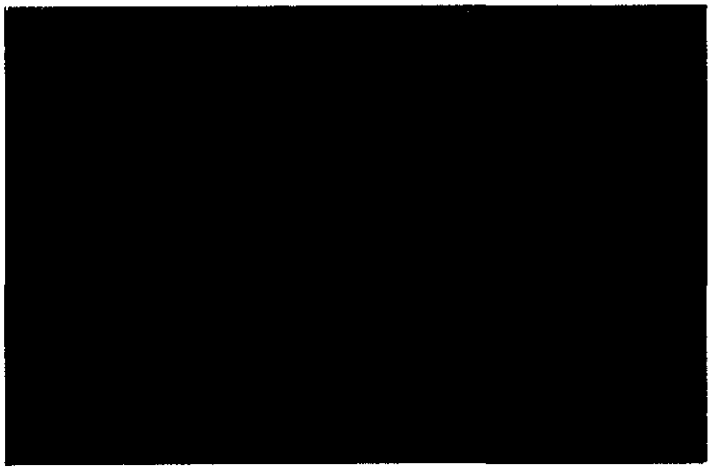

STEP 5, PHASE II SITE INVESTIGATION REPORT
E-Z SERVE PETROLEUM MARKETING COMPANY OF CALIFORNIA
FORMER STATION #100877
525 WEST A STREET
HAYWARD, CALIFORNIA

This report was prepared in accordance with the standards of the environmental consulting industry at the time it was prepared. It should not be relied upon by parties other than those for whom it was prepared, and then only to the extent of the scope of work which was authorized. This report does not guarantee that no additional environmental contamination beyond that described in this report exists at the site.

BROWN AND CALDWELL

March 23, 1995

Mr. Brian Cobb
E-Z Serve Petroleum Marketing
Company of California
2550 N. Loop West, Suite 600
Houston, Texas 77292-2021

1564-07/2

Subject: Draft Step 5, Phase II Site Investigation Report
E-Z Serve Petroleum Marketing Company of California Former
Station #100877, 525 West A Street, Hayward, California

Dear Mr. Cobb:

Brown and Caldwell is pleased to present this draft site investigation report detailing hydropunch groundwater sampling, soil sampling and well installation activities at E-Z Serve Petroleum Marketing Company of California's Former Station #100877 located at 525 West A Street in Hayward, California (Site). Site investigation activities were conducted between February 2 and February 13, 1995. The work was completed following the terms and conditions of the June 28, 1994 Master Service Agreement between E-Z Serve Petroleum Marketing Company of California and Brown and Caldwell, and Work Order Number 2, dated August 24, 1994.

The purpose of this investigation was to further delineate the lateral limits of petroleum hydrocarbon-affected groundwater in the vicinity of the Site. This investigation has been performed in accordance with the Tri-Regional Board Staff Recommendations for the Preliminary Evaluation and Investigation of Underground Storage Tank Sites, dated August 10, 1990. Field work was performed, according to the September 29, 1994 work plan submitted to Alameda County Department of Environmental Health, in response to the California Regional Water Quality Control Board San Francisco Bay Region's letter, Legal Request for Submittal of a Technical Report Resulting from the Alameda County Department of Environmental Health's Enforcement Panel Meeting of June 21, 1994, dated August 26, 1994. This work plan was approved by the Alameda County Department of Health (County) in a letter dated December 1, 1994. The investigation was not initiated immediately after approval from the County was received because Brown and Caldwell was waiting for the City of Hayward (City) to approve an encroachment permit for working in the City's right-of-way.

Environmental Engineering And Consulting • Analytical Services

P O. Box 8045, Walnut Creek, CA 94596-1220
3480 Buskirk Avenue, Pleasant Hill, CA 94523-4342
(510) 937-9010 Fax (510) 937-9026

The attached report summarizes the site-specific background information; discusses the work completed during this investigation; and presents the results of the field and analytical laboratory data. Brown and Caldwell's conclusions, based on the data collected during this and previous investigations, are presented in Chapter 4 of the attached report. The risk assessment included in the work plan will be completed as a separate document, once the lateral extent of the hydrocarbon plume has been fully delineated.

Please review this report at your earliest possible convenience. We would like to submit a final report to the County no later than March 17, 1995. Therefore, we request that you submit your comments to us by March 10, 1995.

If you have any questions or require additional information, please contact me or Mr. Tom Wheeler at your earliest convenience at (510) 210-2278 or (510) 210-2227, respectively.

Sincerely,

BROWN AND CALDWELL

Todd Miller

Todd Miller
Project Manager

TM:evm
Enclosure

cc: Madhulla Logan, Alameda County Department of Health Services
Jon Wactor, Attorney
Levonard Thomsen

CONTENTS

APPENDIX C ANALYTICAL LABORATORY DATA SHEETS
CHAIN OF CUSTODY FORMS

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Number

LIST OF FIGURES
(located at end of chapters)

Number

PROFESSIONAL CERTIFICATION

DRAFT STEP 5, PHASE II SITE INVESTIGATION REPORT
525 WEST A STREET
HAYWARD, CALIFORNIA

March 23, 1995

This report has been prepared by the staff of Brown and Caldwell, under the professional supervision of the registered civil engineer whose seal and signature appear below.

The findings, recommendations, specifications, and professional opinions presented herein, have been prepared within the limits prescribed by the client, after being prepared in accordance with generally accepted professional engineering and geologic practices and appropriate and pertinent county regulations. Information collected by other consulting firms and presented herein cannot be verified or certified for content or accuracy. There is no other warranty, either expressed or implied.

Houshang Esmaili,
Civil Engineer No. 22969

CHAPTER 1

INTRODUCTION

This Step 5, Phase II Site Investigation Report describes the procedures followed for the collection of in-situ groundwater and soil samples, the installation of four off-site groundwater monitoring wells, an off-site underground utility investigation, and a local well survey at E-Z Serve Petroleum Marketing Company of California's (E-Z Serve) Former Station #100877, located at 525 West A Street, Hayward, California (Site). The following sections describe the site history and the purpose of this site investigation. The background information has been compiled from previous site investigation reports prepared by Converse Environmental Consultants California (Converse) and Associated Soils Analysis, Inc. (ASA).

Site Description

The Site is located on the northwest corner of West A Street and Garden Avenue in the City of Hayward, County of Alameda, State of California's Township 3 South, Range 2 West, Mount Diablo Base and Meridian (Figure 1-1). The Assessor's Parcel Number for the Site is 432-0016-026-03. The Site is currently not in use. The only structures on the Site are the canopy over the former dispenser islands and some lights. The Site is surrounded by a chain link fence with a locked gate.

Seven on-site and four off-site shallow groundwater monitoring wells have been installed as a result of previous investigations (Figure 1-2). Previous investigations indicate that soils in the vicinity of the Site consist predominantly of silts and clays. Sandy units have been observed in some borings at an approximate depth of 10 to 15 feet below ground surface (bgs) and again at approximately 25 to 30 feet bgs. The maximum depth explored to date is 30 feet bgs. The depth to groundwater beneath the site has ranged historically from approximately 16 feet to 22 feet bgs. Prior to this investigation, the highest reported concentration of petroleum hydrocarbons in any soil sample taken from the Site was 19 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) in the boring for Well MW-4. The highest concentration of benzene reported in any soil sample (2.7 ppm) was also from the boring for Well MW-4. All other on-site borings contained reportable concentrations of TPHg and benzene in the soil. The highest concentrations of dissolved TPHg and benzene, toluene, ethylbenzene, and xylene isomers (BTEX) identified in groundwater during past sampling events have occurred in Well MW-1.

Site History

The following information was gathered from previous reports prepared for E-Z Serve by Converse and ASA.

The Site was formerly operated as a service station from 1966 until 1990 with one 10,000 gallon diesel and three 10,000 gallon gasoline underground storage tanks (USTs). A discrepancy in the inventory reconciliation and tank tightness tests in November 1986 resulted in the investigation of soil and groundwater beneath the site and eventual removal of all fueling equipment. Neither the volume of product lost nor the duration of the leak are known.

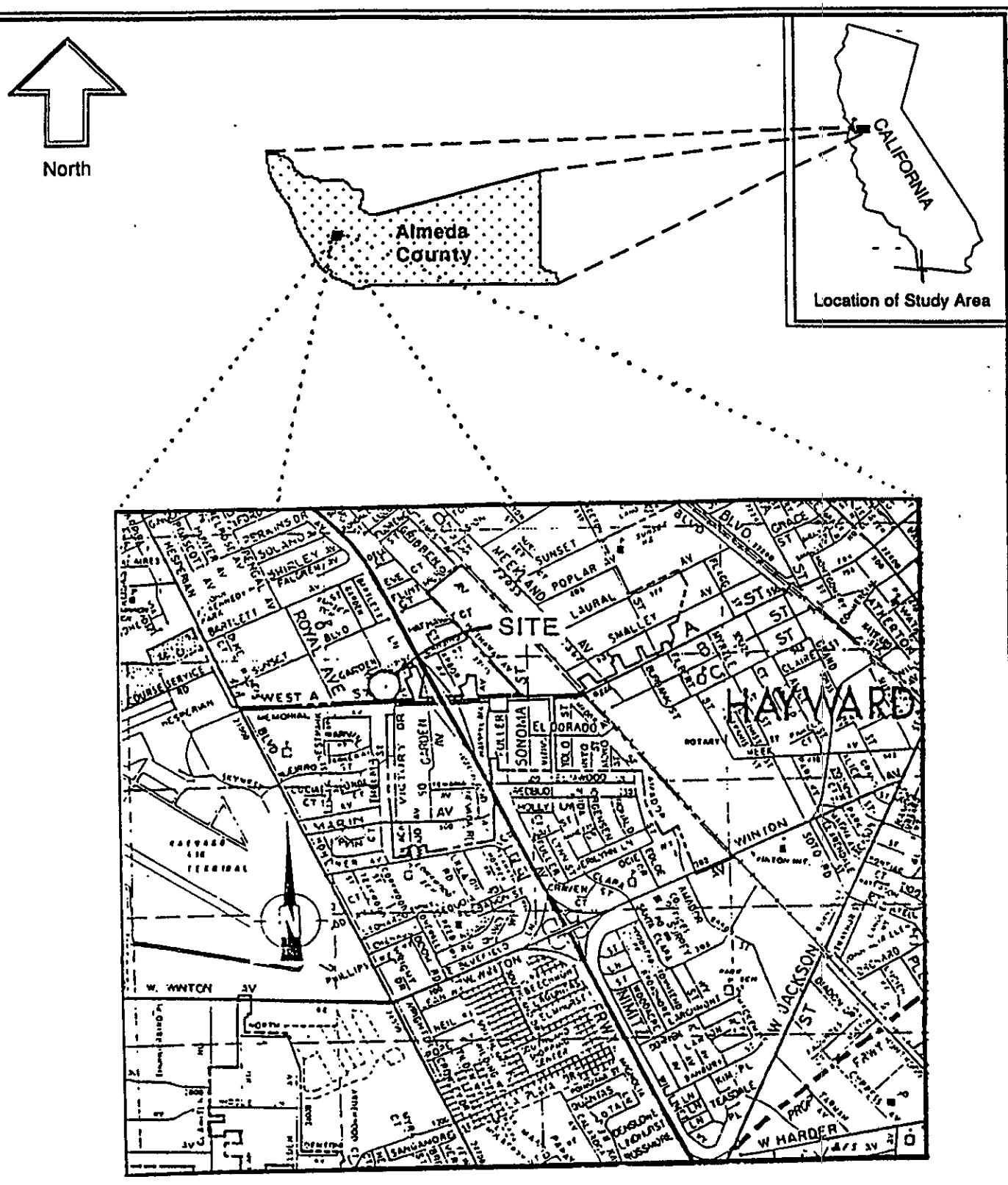
Converse conducted an initial Phase II site assessment for E-Z Serve in December of 1986. Three soil borings were drilled on site and converted into groundwater monitoring wells. Analytical laboratory results of soil and groundwater samples collected during that initial investigation indicated that soil and groundwater had been impacted by petroleum hydrocarbon constituents. Converse implemented Step 2 of the Phase II site assessment in June of 1987. Step 2 included the installation of three additional on-site groundwater monitoring wells. Results of the Step 2 investigation indicated that petroleum hydrocarbons had impacted the soil and groundwater beneath the Site to the property boundary.

The USTs, dispenser islands, and associated piping were excavated and removed from the property on June 15, 1990. During this phase of work Wells MW-3, MW-5, and MW-6 were destroyed and Wells MW-1, MW-2, and MW-4 were damaged.

During October 1991, ASA abandoned two of the three remaining on-site wells (Wells MW-2 and MW-4), reconstructed the wellhead of Well MW-1 and redesignated the well as Well MW-1a, and installed four additional on-site wells as Step 3 of the Phase II site investigation. ASA prepared a Site Assessment Report dated March 2, 1992, which summarized that investigation. That report concluded that the lateral extent of the petroleum hydrocarbon affected groundwater remained undefined.

ASA performed Step 4 of the Phase II site investigation between June 21 and June 24, 1993. ASA install Wells MW-7 through MW-10, north, east, west, and south of the Site boundaries. The Site investigation activities and results were described in ASA's July 10, 1993, Site Assessment Study of Petroleum Hydrocarbon Constituents In Soil and Groundwater at E-Z Serve Location #100877, 525 West "A" Street, Hayward, California. ASA concluded in this report that the lateral extent of the petroleum hydrocarbon affected groundwater still remained undefined.

Brown and Caldwell was retained by E-Z Serve during June 1994 to continue delineating the lateral extent of hydrocarbon plume (Step 5, Phase II) and to move the Site into Phase III (remediation) as quickly as possible.

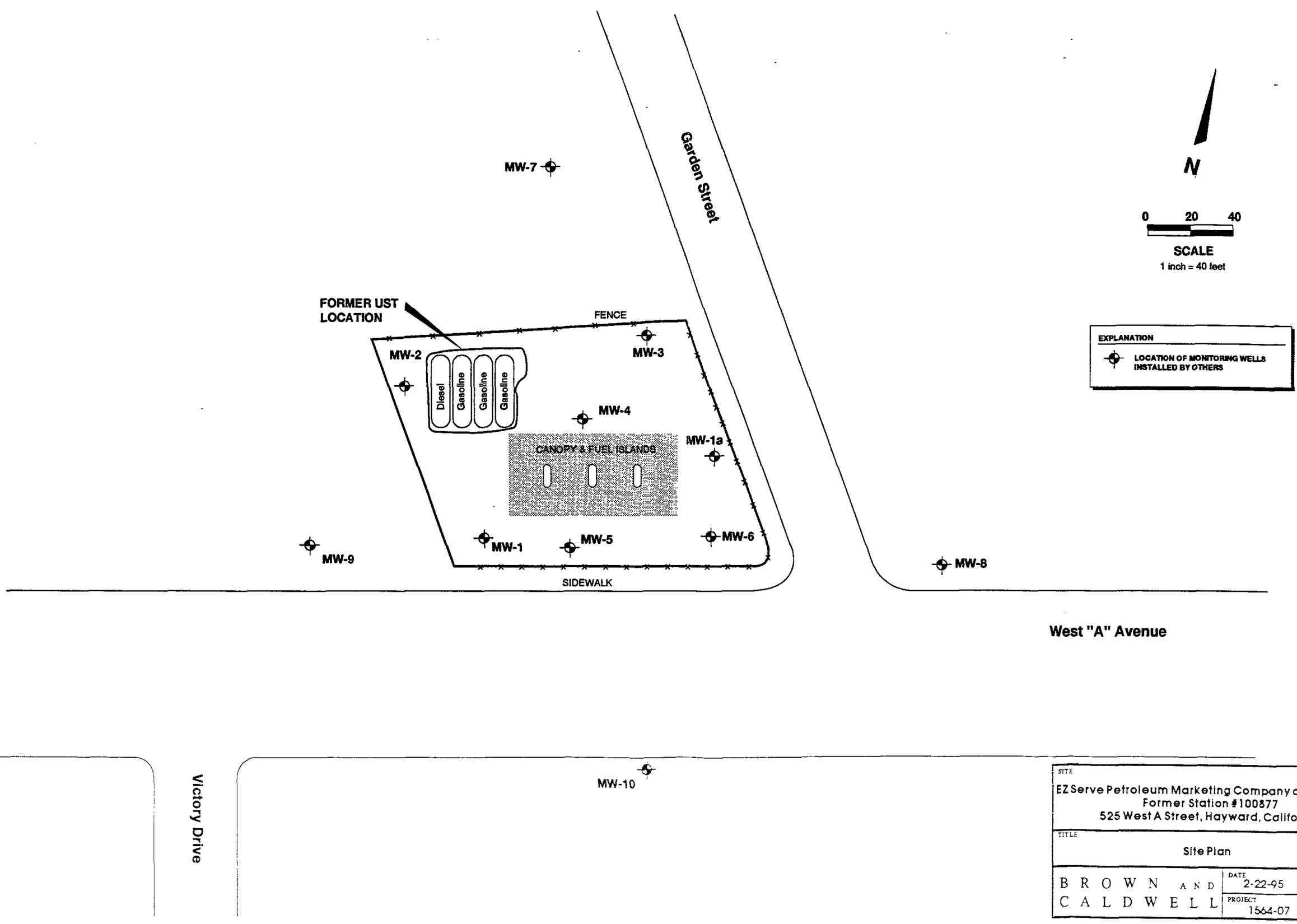


VICINITY MAP **Figure 1-1**

JOB LOCATION: EZ Serve location 100877
525 West "A" Street
Hayward, California

JOB NUMBER: ASA# 238-91

Associated Soils Analysis
1141 Batavia Court • Tulare, California 93274
(209) 688-1011 • FAX (209) 688-1195



SITE
EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE
Site Plan

BROWN AND CALDWELL	DATE 2-22-95	Figure 1-2
	PROJECT 1564-07	

CHAPTER 2

FIELD ACTIVITIES

The purpose of this Step 5, Phase II investigation was to delineate the horizontal limits of petroleum hydrocarbon affected groundwater in the vicinity of the Site. The field activities conducted during this investigation were performed in accordance with the Tri-Regional Board Staff Recommendations for the Preliminary Evaluation and Investigation of Underground Storage Tank Sites, dated August 10, 1990. Field work was performed, according to the September 29, 1994 work plan, prepared by Brown and Caldwell and submitted to Alameda County Department of Environmental Health (County), in response to the California Regional Water Quality Control Board San Francisco Bay Region's letter Legal Request for Submittal of a Technical Report Resulting from the Alameda County Department of Environmental Health's Enforcement Panel Meeting of June 21, 1994, dated August 26, 1994. This work plan was approved by the County in a letter dated December 1, 1994 (Appendix A).

Field Investigation

Site investigation activities were conducted by Brown and Caldwell between February 2 and February 13, 1995. The following sections describe the procedures for: the collection of in-situ groundwater samples; soil boring and soil sample collection; the installation, development, and sampling of four groundwater monitoring wells; an off-site underground utility survey; and a local well survey. All work was completed in the City of Hayward right-of-way following the guidelines outlined in the encroachment permit (Appendix B) issued by the City. Prior to beginning the field work, Underground Service Alert was notified of the work (Reference No.'s #14937 and #18215) so that the locations could be cleared by the local utility companies.

In-Situ Groundwater Sampling. The purpose of this in-situ investigation was to further evaluate the extent to which shallow groundwater has been affected by petroleum hydrocarbon constituents while minimizing the quantity of soil cuttings produced and the number of wells necessary to complete the objectives. In-situ groundwater samples were collected by Gregg In Situ, Inc., a California licensed water well driller, from 17 off-site locations (Figure 2-1), using a Hydropunch™ brand in-situ groundwater sampling device. Permits were not required for this in-situ survey. Hydropunch samples were collected from the first water bearing unit, approximately 17 to 23 feet below ground surface (bgs). Hydropunch sample collection was conducted as follows: a series of 2-inch outside-diameter hollow push-rods connected to a

sacrificial stainless-steel drive point were pushed to a maximum depth of 23 feet using a 40,000 pound maximum yield hydraulic system mounted on a heavy duty truck. A 1½-inch diameter slotted and blank, flush-threaded, polyvinyl chloride (PVC) casing was placed inside the push rods as they were driven to depth. The rods were then pulled back approximately 5-feet, exposing the slotted interval of the PVC pipe and allowing the casing to fill with groundwater. Once an appreciable quantity of water had entered the casing, a 1-inch outside diameter, stainless-steel bailer was lowered inside the casing to collect a groundwater sample. The casing was purged of approximately four to five bailer volumes prior to collecting the sample.

Each in-situ groundwater sample was carefully transferred from the stainless-steel bailer to two laboratory prepared, 40-milliliter, glass, volatile organic analysis (VOA) vials. The VOA vials were labeled with the appropriate sample number, the date and time the sample was collected, and the analyses to be performed on the sample. The sample vials were immediately delivered to an on-site mobile laboratory and were analyzed for the presence of total petroleum hydrocarbons as gasoline and benzene, toluene, ethylbenzene, and xylene isomers following Environmental Protection Agency Methods 8015 modified and 8020. BC Analytical, a State of California certified mobile laboratory was used for the analysis of the in-situ groundwater samples.

The results of the in-situ groundwater investigation were used to select the placement of the four additional off-site groundwater monitoring wells. A summary of the in-situ groundwater analytical results are included in Table 2-1 and illustrated on Figure 2-2. Analytical laboratory data sheets for the in-situ groundwater samples are included in Appendix C. All hydropunch borings were backfilled from the bottom to land surface with neat cement grout containing approximately 5-percent powdered bentonite. The surface was repaired, to meet existing grade, with asphalt patch.

Soil Borings. The locations for drilling the four soil borings were selected based on the results of the in-situ groundwater survey. The rationale used in selecting the locations of the four monitoring wells was described in Brown and Caldwell's March 2, 1995 letter to the Alameda County Department of Health Services, included in Appendix B. The four soil borings (MW-11, MW-12, MW-13, MW-14) were advanced to 25 to 30 feet below ground surface (bgs), at the locations shown on Figure 2-1, by Tonto Environmental Drilling, Inc (Tonto). Tonto is a California licensed water well driller. Prior to drilling, each borehole location was hand augered to a depth of approximately 5 feet below ground surface to check for underground utilities. The borings were drilled utilizing a truck-mounted CME 55 drilling rig equipped with nominal 10-inch outside diameter, continuous flight, hollow stem augers.

Soil samples for laboratory analysis and lithologic description were collected at 5-foot intervals, until groundwater was encountered, using an 18-inch California modified split spoon sampler. The sampler was driven its entire length into undisturbed soil using a 140-pound drop hammer. The sampler was extracted from the borehole, the brass tubes were removed and the ends of the tubes were immediately screened for the presence of petroleum hydrocarbon constituents with a photoionization detector (PID). One sample per 5-foot sampling interval was selected for possible chemical analysis on the basis of the highest PID reading. The ends of the selected brass tube were covered with aluminum foil and plastic caps, which were then taped with plastic tape to provide an air-tight seal; labeled and placed into zip-lock plastic bags; and stored in a ice chest containing crushed ice for delivery to the analytical laboratory. These procedures minimize the potential for cross contamination and volatilization of volatile organic compounds prior to chemical analysis. The remaining soil samples were viewed for lithologic description following the Unified Soil Classification system. Copies of the boring logs and well permits are presented in Appendix B.

To help prevent cross contamination during drilling and sampling, all equipment was steam-cleaned before and between each use.

Well Installation. Groundwater monitoring wells were constructed in each of the four soil borings on February 6 and 7, 1995. The wells were constructed utilizing 2-inch diameter schedule 40 PVC, slotted and blank casing. The slotted interval of each well was constructed using 20 feet of 0.02-inch factory slotted PVC. R.M.C. Lonestar #2/12 sand was placed in the annulus as a filter pack material and was surged to allow for settling of the sand. After the sand settled, additional sand was added, until the top of the filter pack extended approximately 2-feet above the top of the slotted casing. Approximately 2- to 3-feet of bentonite chips were placed above the filter pack and hydrated with potable water to act as a water tight seal. Cement-bentonite grout was pumped through the augers to fill the remainder of the annulus as the augers were removed. Each well was completed at the surface using a flush mounted, traffic-rated well containment box set in concrete. Well construction details are summarized in Table 2-2 and illustrated on the boring logs included in Appendix B.

Well Development and Sampling. The four wells were developed and sampled between February 10 and 13, 1995. Prior to developing the wells, sediment deposits were removed from each well using a stainless steel bailer connected to clean polyethylene cord. The saturated interval of the slotted well casing was then swabbed using a nominal 4-inch diameter rubber swab. The wells were alternately swabbed and purged until relatively sediment-free water was produced. Purging of each well continued until a minimum of five well volumes were removed; the pH, specific conductance, and temperature of the purge water had stabilized (three

consecutive readings not varying by more than ten percent); and the turbidity of the purge water was 100 NTUs or less. Purge data for each of the wells were recorded on well development forms, included in Appendix B, and are summarized in Table 2-3.

Groundwater samples were collected from each of the four wells immediately following development. Samples were collected using a disposable polyethylene bailer connected to clean polyethylene cord. A portion of the sample collected in the bailer was placed in a beaker to record the pH, specific conductance, and temperature of the sample. The remainder of the water contained in the bailer was carefully transferred to the appropriate laboratory-prepared VOAs. The containers were sealed, insuring that no head space was left in the container, and immediately placed in a cooler containing crushed ice. For quality control purposes, a field blank sample was collected at Well MW-14 by pouring deionized water into laboratory prepared VOAs and submitted to the analytical laboratory as a blind blank.

To help prevent cross-contamination, all non-disposable downhole equipment was washed prior to use and in between each well using a non-phosphate, laboratory grade, detergent and rinsed twice using tap water, and rinsed a third time with deionized water.

Off-Site Underground Utility Investigation. An off-site underground utility investigation was completed on February 2 and February 6, 1995. The soil and soil gases near the underground utilities were inspected for the presence of volatile constituents using the following procedures.

The location of the underground utilities were identified by: 1) identifying the location of the street-level utility box; and 2) following the markings placed on the sidewalks and roadways by the local utility companies as part to the Underground Service Alert notification of construction work. The pipes in the street-level utility boxes were uncovered by hand and the soil was visually inspected for discoloration. The soil and soil gasses surrounding the underground pipes contained in the street-level utility boxes were tested for the presence of volatile constituents using a PID. The soil was placed in a zip-lock baggie and allowed to sit in the sun for approximately 5 minutes. The gasses inside the bag were then check with the PID for the presence of volatile constituents.

For underground utilities underneath the street it was necessary to use a hand auger to dig down to the level of the underground piping. Once the piping was encountered the soil immediately above the piping was retrieved and placed in a zip-lock bag. The soil was allowed to sit in the sun for approximately 5 minutes. The gasses inside the bag were then check with the PID for the presence of volatile constituents.

The locations where utilities were checked for the presence of volatile constituents are illustrated on Figure 2-3. Results of this survey are discussed in Chapter 3.

Non-Hazardous Waste Disposal. All soil cuttings, auger rinsate, and purge water generated during this investigation were placed in 55-gallon capacity Department of Transportation (DOT)-approved drums and were labelled with the boring/well number and date. Analytical laboratory results of soil and groundwater samples collected during this investigation were submitted to Integrated Wastestream Management, Inc. (IWM) in Milpitas, California. IWM profiled the waste as non-hazardous and arranged for transportation and disposal of the material. IWM transported the non-hazardous waste to the appropriate disposal facilities on February 24, 1995.

Local Well Survey

The purpose of this survey was to locate private, municipal, and agricultural wells located within a one-half mile radius of the site. A local well survey was conducted by reviewing Alameda County Department of Environmental Health's local oversight program list, the State of California Department of Toxic Substance Control hazardous waste sites list, and the State Water Quality Control Board's well list. The results of this well survey are discussed in Chapter 3.

Table 2-1 Summary of Analytical Results for In-Situ Groundwater Samples Collected from Former E-Z Serve Station #100877, 525 West A Street, Hayward, California

Sample Location	Date Collected	Concentration (micrograms per liter)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg[a]
HP-1	2/2/95	15	3.4	8.1	3.9	1,100
HP-2	2/2/95	600	180	3,800	13,000	170,000
HP-3	2/2/95	78	<5	73	180	2,800
HP-4	2/2/95	<0.5	<0.5	3.2	12	240
HP-5	2/2/95	<0.5	<0.5	1.3	5.1	230
HP-6	2/2/95	1,000	40	1,500	1,500	22,000
HP-7	2/2/95	1,000	32	490	340	11,000
HP-8	2/2/95	4.6	2.2	2.1	5.0	780
HP-9	2/2/95	<0.5	<0.5	1.3	4.0	100
HP-10	2/3/95	<0.5	<0.5	<0.5	<0.5	<50
HP-11	2/3/95	<0.5	0.84	<0.5	<0.5	<50
HP-12	2/3/95	<0.5	<0.5	<0.5	<0.5	<50
HP-13	2/3/95	<0.5	<0.5	<0.5	<0.5	<50
HP-14	2/3/95	<0.5	<0.5	<0.5	<0.5	<50
HP-15	2/3/95	<0.5	<0.5	<0.5	<0.5	<50
HP-16	2/3/95	4.2	<0.5	11	26	310
HP-17	2/3/95	3.8	<0.5	5.8	15	110

[a]Total petroleum hydrocarbons as gasoline: analyzed by Modified EPA Method 8015
Benzene, toluene, ethylbenzene, xylene isomers analyzed by EPA Method 8020

Table 2-2 Summary of Well Construction Details, Former E-Z Serve Station #100877
525 West A Street, Hayward, California

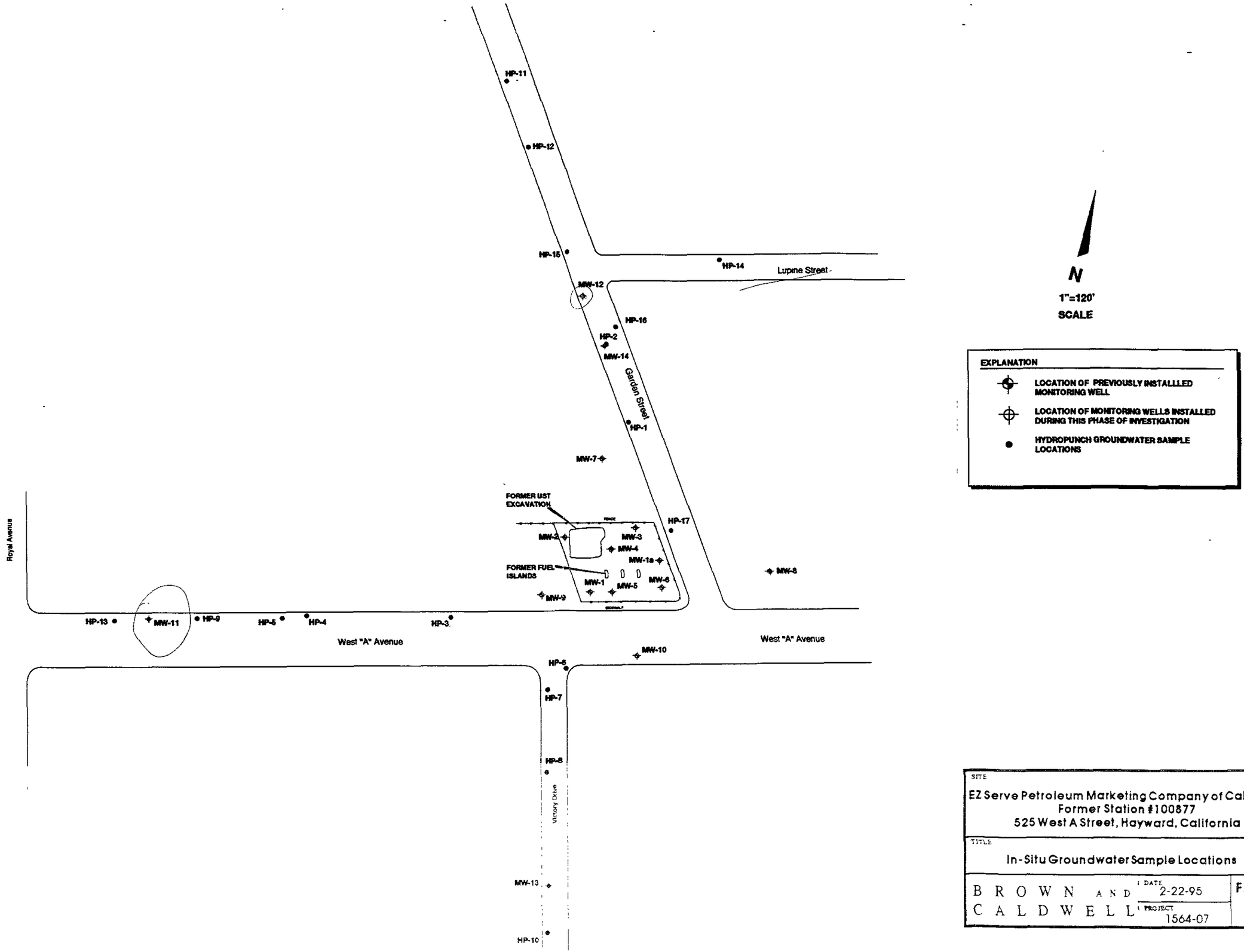
Well ID	Date Constructed	Total Depth[a]	Depth to Groundwater[b]	Slotted Interval[a]	Filter Pack[a]	Well Seal[a]
MW-11	2/06/95	25	approx. 13	5 - 25	4 - 25	1 - 4
MW-12	2/06/95	30	approx. 13	10 - 30	8 - 30	1 - 8
MW-13	2/07/95	30	approx. 17	10 - 30	8 - 30	1 - 8
MW-14	2/07/95	30	approx. 13	10 - 30	8 - 30	1 - 8

[a]Feet, below ground surface
[b]Depth groundwater encountered during drilling, feet below ground surface

Table 2-3 Summary of Well Development Information
E-Z Serve Station #100877, 525 West A Street, Hayward, California

Well ID	Date Developed	Depth to Water[a]	Gallons Purged	pH	Temperature (°C)	Specific Conductance	Turbidity (NTU)
MW-11	2/13/95	11.80	110	6.75	20.0	850	100
MW-12	2/10/95	16.30	125	6.81	20.0	983	78.1
MW-13	2/13/95	14.45	85	6.94	20.2	971	87.6
MW-14	2/10/95	16.28	75	6.88	20.1	890	14.0

[a]Depth to water measured in all four wells on February 10, 1995.



SITE

EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE

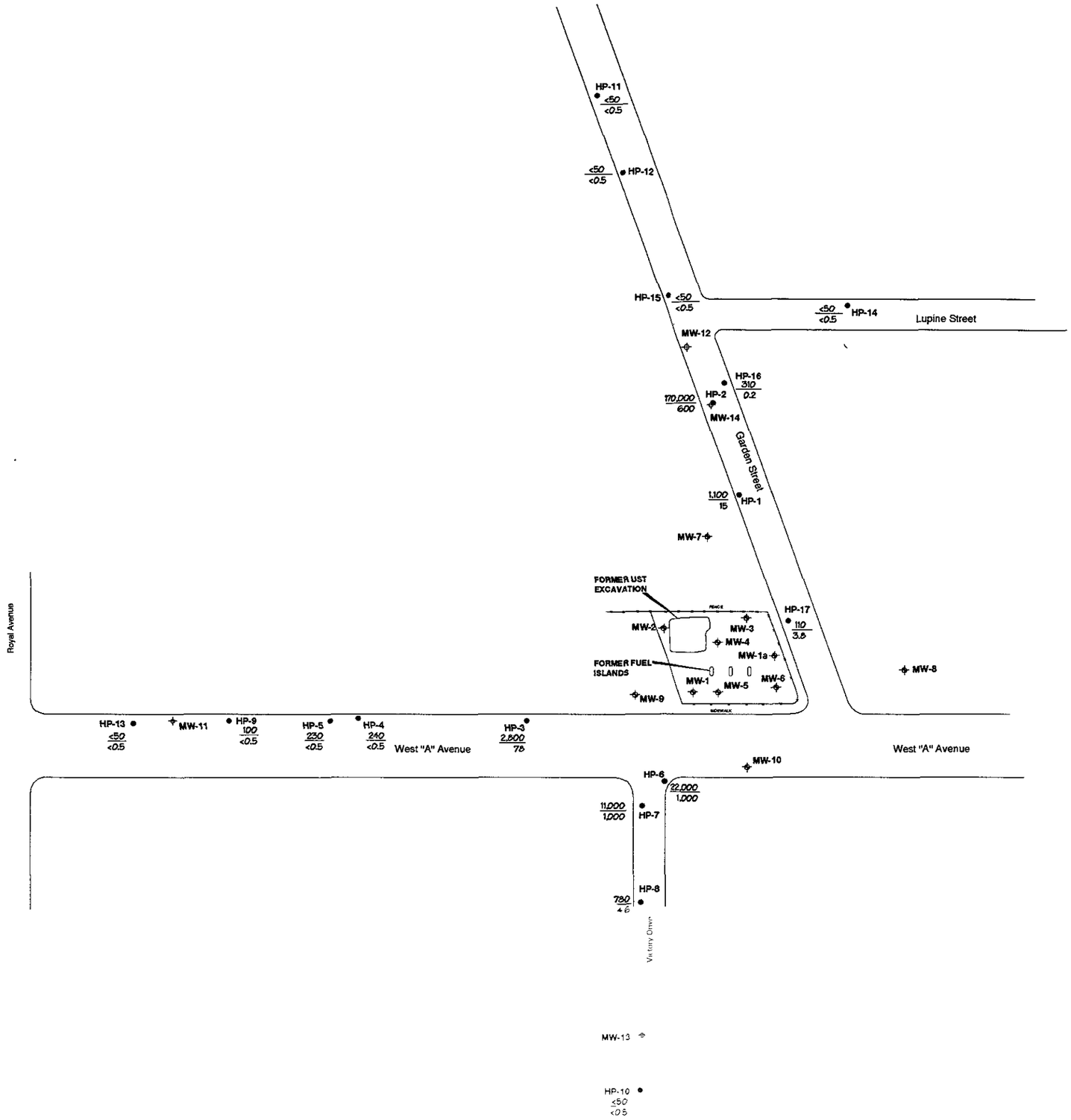
In-Situ Groundwater Sample Locations

BROWN AND CALDWELL

DATE 2-22-95

PROJECT 1564-07

Figure 2-1



EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

In-Situ Groundwater Sample Results

BROWN AND CALDWELL

DATE 2-22-95

PROJECT 1564-07

Figure 2-2

SITE
EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE
Off-Site Underground Utility Investigation Locations

BROWN AND CALDWELL

DATE 2-22-95

PROJECT 1564-07

Figure 2-3

CHAPTER 3

SITE INVESTIGATION RESULTS

The following sections summarize the geologic information and analytical results of the soil and groundwater samples collected as part of the Step 5, Phase II site investigation at E-Z Serve Petroleum Marketing Company of California's (E-Z Serve) Former Station #100877, located in Hayward, California, at 525 West A Street (Site).

Site Geology and Hydrogeology

The sediments encountered during this investigation consist primarily of silty- and clayey-sands with occasional sandy-silt or sandy-clay layers. Water was encountered between 13 and 17 feet below ground surface (bgs). Figure 3-1 identifies the locations of two geologic cross sections generated using the information collected during this and previous investigations. Geologic cross sections A-A' and B-B', illustrating the local geology in the vicinity of the site, are presented as Figures 3-2 and 3-3, respectively.

A local groundwater flow direction was not determined from the information collected during this investigation because access to the site and on-site wells was not available at the time the investigation was conducted and the wells installed during the investigation were not developed. However, depth-to-groundwater was measured in all 14 wells on March 10, 1995. The depth-to-groundwater measurements and calculated groundwater elevations are included in Table 3-2. A groundwater surface elevation contour is included as Figure 3-4.

Off-Site Underground Utility Investigation

The off-site underground utility investigation did not identify the presence of volatile constituents at the locations tested (Figure 2-3).

Local Well Survey

A list of private, industrial, and agricultural wells for this area was not available from either the County or the State. Therefore, Brown and Caldwell reviewed the County's local

oversight program list to identify wells near the Site. Review of the County's local oversight program list identified 3 facilities with monitoring wells within ½-mile of the site. The locations of the properties, relative to the Site, are illustrated on Figure 3-5.

Analytical Results

In-situ groundwater sample results were discussed previously, in Chapter 2. Analytical laboratory data sheets are included in Appendix C.

Soil and groundwater samples collected as part of the wells installation procedures were submitted to Southern Petroleum Laboratory, Inc. (SPL) in Houston, Texas. SPL is certified by the State of California Department of Toxic Substance Control for the analysis of hazardous materials. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg); and benzene, toluene, ethylbenzene, and xylene isomers (BTEX) following Environmental Protection Agency (EPA) Methods 8015 modified and 8020. Copies of the analytical laboratory data sheets are included as Appendix C.

Soil Sample Results. Soil samples from 10 and 15 feet bgs from each boring were selected for analysis, and analyzed by SPL for the constituents identified above. The remaining samples were placed on hold at the laboratory. TPHg concentrations in samples from the borings submitted for analyses ranged from less than 100 milligrams per kilogram (mg/Kg) to 760 mg/Kg. BTEX compounds were also identified in the samples submitted for analysis at concentrations ranging from less than 0.001 mg/Kg to 0.011 mg/Kg. Analytical results for soil samples collected during this investigation are summarized in Table 3-1. A TPHg isoconcentration map is included as Figure 3-6.

Groundwater Sample Results. TPHg was identified in the groundwater samples collected from the four groundwater monitoring wells at concentrations ranging from less than 50 micrograms per liter (μg/L) to 12,000 μg/L. BTEX constituents were identified in the groundwater samples collected from the four groundwater monitoring wells at concentrations ranging from less than 0.5 μg/L to 2,100 μg/L.

Analytical results of the in-situ groundwater sample collected from sample location HP-2 identified 170,000 μg/L of TPHg in the groundwater at this location. However, analytical results of the groundwater sample collected from Well MW-14, installed within 10 feet of sample location HP-2, identified TPHg at a concentration of 12,000 μg/L, an order of magnitude less than the in-situ sample result. Conversely, analytical results of the in-situ groundwater sample collected from sample location HP-9 identified TPHg at a concentration of 100 μg/L, while analytical results of the groundwater sample collected from Well MW-11, installed within 30 feet of sample location HP-9, identified TPHg at a concentration of 7,000 μg/L, several orders of magnitude greater than the in-situ sample result.

Analytical results for groundwater samples collected during this, and previous, investigations are summarized in Table 3-2 and shown on Figure 3-7.

Table 3-1 Summary of Analytical Results for Soil Samples Collected from Former E-Z Serve Station #100877, 525 A Street, Hayward, California

Soil Boring/ Soil Sampling Depth (feet)	Date Sampled	Concentration (μg/kg)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg[a]
MW-11-10'	2/06/95	<1	<1	2	5	<100
MW-11-15'	2/06/95	<1	<1	2	5	100
MW-12-10'	2/06/95	<1	<1	1	4	310
MW-12-15'	2/06/95	<1	<1	<1	1	<100
MW-13-10'	2/07/95	<1	<1	<1	<1	<100
MW-13-15'	2/07/95	<1	<1	<1	1	<100
MW-14-10'	2/07/95	<1	<1	<1	<1	<100
MW-14-15'	2/07/95	1	<1	1	9	760

[a]Total petroleum hydrocarbons as gasoline; analyzed by Modified EPA Method 8015
Benzene, toluene, ethylbenzene, xylene isomers analyzed by EPA Method 8020

Table 3-2 Summary of Groundwater Elevation Data and Analytical Laboratory Results for Groundwater Samples Collected at Former E-Z Serve Station # 100877 525 West A Street, Hayward, California

Well I.D.	Date Sampled	Well Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (feet)	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	5-Feb-92	99.91	20.82		79.09	46,000	76,000	23,000	2,400	6,500
	11-Sep-92		20.08		79.83	48,000	9,000	1,200	1,800	4,600
	22-Dec-92		19.79		80.12	84,000	22,000	1,600	4,800	17,000
	3-Mar-93		16.23		83.68	54,000	16,000	1,600	1,900	4,300
	23-Jun-93	96.73	16.86		79.87	30,000	18,000	1,100	1,400	3,700
	30-Sep-93		18.04		78.69	33,000	10,000	440	940	1,700
	6-Feb-94		18.15		78.58	64,000	18,000	1,600	4,700	12,000
	2-May-94		17.26		79.47	7,200	2,100	29	490	520
	1-Jul-94		17.60		79.13	13,000	3,700	150	550	12,000
	20-Sep-94		20.59		76.14	10,000	3,100	75	440	870
	5-Dec-94		17.83		78.90	8,700	3,700	87	520	950
	10-Mar-95		14.67		82.06					
MW-1A	23-Jun-93	97.59	17.80	0.21	80.00	Sample Not Analyzed				
	30-Sep-93		Not Recorded			Well Not Sampled				
	6-Feb-94		18.89		78.70	8,900	1,700	42	1,000	400
	2-May-94		18.35	0.09	79.33	Well Not Sampled				
	1-Jul-94		18.45		79.14	12,000	1,100	< 1	920	1,100
	20-Sep-94		21.72	0.22	76.09	Well Not Sampled				
	5-Dec-94		18.87	0.07	78.79	Well Not Sampled				
	10-Mar-95		15.83		81.76					
MW-2	5-Feb-92	101.45	22.35		79.10	67,000	13,000	4,700	820	1,300
	11-Sep-92		21.67		79.78	57,000	9,000	1,400	1,200	8,400
	22-Dec-92		21.39		80.06	31,000	9,900	350	2,000	4,100
	3-Mar-93		17.75		83.70	17,000	5,100	1,300	720	1,900
	23-Jun-93	98.06	18.42		79.64	60,000	23,000	1,500	4,500	17,000
	30-Sep-93		19.63		78.43	38,000	12,000	780	1,500	6,500
	6-Feb-94		19.61		78.45	34,000	8,900	450	2,000	5,500
	2-May-94		19.84		78.22	18,000	3,800	260	1,100	3,500
	1-Jul-94		19.18		78.88	18,000	3,700	510	870	2,600
	20-Sep-94		22.17		75.89	19,000	4,500	300	1,200	4,000
	6-Dec-94		19.37		78.69	22,000	4,700	340	1,400	4,500
	10-Mar-95		16.33		81.73					

Table 3-2 Summary of Groundwater Elevation Data and Analytical Laboratory Results for Groundwater Samples Collected at Former E-Z Serve Station # 100877 525 West A Street, Hayward, California

Well I.D.	Date Sampled	Well Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (feet)	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-3	5-Feb-92	101.50	21.85		79.65	5,900	1,100	<1	<1	<1
	11-Sep-92		21.13		80.37	9,400	1,200	180	550	1,100
	22-Dec-92		20.88		80.62	12,000	2,800	190	850	1,600
	3-Mar-93		17.29		84.21	11,000	2,200	360	570	900
	23-Jun-93	97.66	17.88		79.78	33,000	12,000	2,700	1,300	3,500
	30-Sep-93		19.18		78.48	4,300	1,100	160	690	670
	6-Feb-94		19.21		78.45	20,000	4,800	430	1,500	2,900
	2-May-94		18.30		79.36	4,200	680	48	310	540
	1-Jul-94		18.63		79.03	4,600	600	63	240	470
	20-Sep-94		21.64		76.02	8,200	2,200	130	670	930
	6-Dec-94		19.15		78.51	4,000	640	34	290	480
	10-Mar-95		15.86		81.80					
MW-4	5-Feb-92	100.50	21.31		79.19	16,000	2,700	410	<1	3,400
	11-Sep-92		20.62		79.88	43,000	7,600	1,600	1,400	4,100
	22-Dec-92		20.37		80.13	29,000	8,800	1,200	1,500	3,700
	3-Mar-93		16.78		83.72	17,000	5,000	1,500	680	1,700
	23-Jun-93	97.10	17.45		79.65	5,700	3,000	120	560	790
	30-Sep-93		18.64		78.46	21,000	7,000	2,100	970	2,600
	6-Feb-94		18.59		78.51	24,000	7,200	1,600	990	3,200
	2-May-94		17.81		79.29	10,000	2,200	440	470	1,200
	1-Jul-94		18.13		78.97	8,200	2,000	370	350	930
	20-Sep-94		21.13		75.97	7,200	2,000	360	380	1,000
	6-Dec-94		18.36		78.74	9,000	2,300	400	440	1,100
	10-Mar-95		15.25		81.85					

Table 3-2 Summary of Groundwater Elevation Data and Analytical Laboratory Results for Groundwater Samples Collected at Former E-Z Serve Station # 100877 525 West A Street, Hayward, California

Well I.D.	Date Sampled	Well Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (feet)	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-5	5-Feb-92	100.48	20.93		79.55	78,000	7,900	5,000	2,900	1,800
	11-Sep-92		20.27		80.21	49,000	4,700	400	1,400	4,100
	22-Dec-92		19.99		80.49	34,000	8,600	340	2,200	4,800
	3-Mar-93		16.49		83.99	22,000	7,500	640	1,300	3,400
	23-Jun-93	96.73	17.02		79.71	15,000	5,800	120	1,100	2,100
	30-Sep-93		18.25		78.48	25,000	7,600	410	1,000	4,400
	6-Feb-94		18.26		78.47	23,000	6,000	180	2,000	5,900
	2-May-94		17.50		79.23	8,000	1,300	29	440	770
	1-Jul-94		17.79		78.94	10,000	1,700	97	600	1,400
	20-Sep-94		20.77		75.96	8,400	1,600	54	650	1,400
	duplicate					9,300	1,700	56	670	1,600
	5-Dec-94		18.02		78.71	10,000	1,800	<50	620	1,400
	10-Mar-95		14.93		81.80					
MW-6	5-Feb-92	100.97	21.29		79.68	51,000	5,400	3,500	3,600	10,000
	11-Sep-92		20.56		80.41	24,000	2,500	830	1,400	2,300
	22-Dec-92		20.31		80.66	23,000	5,100	630	2,000	3,100
	3-Mar-93		16.83		84.14	18,000	4,400	820	1,400	2,400
	23-Jun-93	97.09	17.30		79.79	18,000	4,600	850	2,700	3,400
	30-Sep-93		19.05	0.03	78.07	Sample Not Analyzed				
	6-Feb-94		18.55		78.54	20,000	4,600	690	2,100	2,500
	2-May-94		17.74		79.35	5,300	930	54	610	240
	1-Jul-94		18.09		79.00	10,000	1,500	160	850	690
	20-Sep-94		21.05		76.04	11,000	2,000	140	1,200	760
	6-Dec-94		18.33		78.76	8,600	1,300	87	980	610
	10-Mar-95		15.35		81.74					

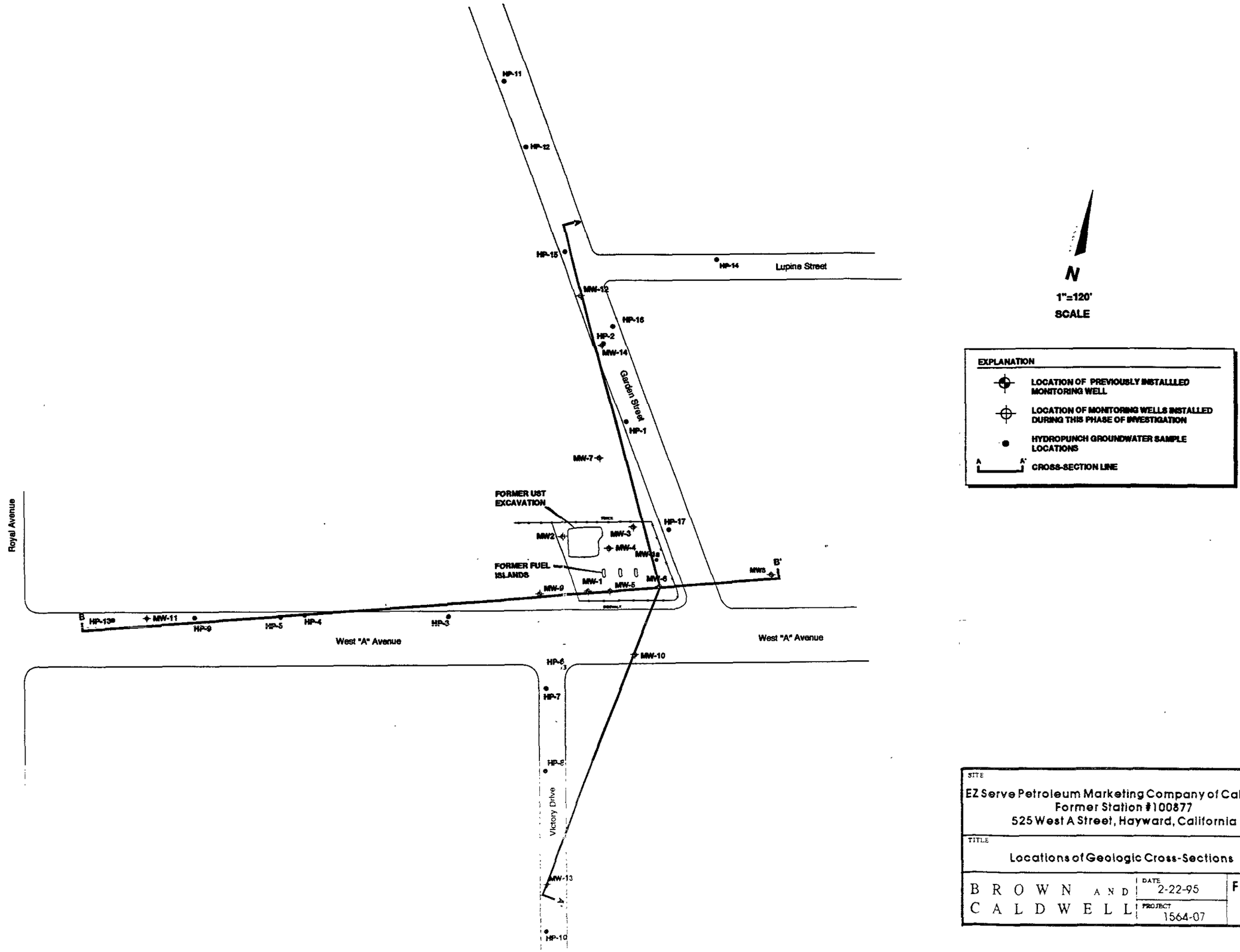
Table 3-2 Summary of Groundwater Elevation Data and Analytical Laboratory Results for Groundwater Samples Collected at Former E-Z Serve Station # 100877 525 West A Street, Hayward, California

Well I.D.	Date Sampled	Well Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (feet)	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-7	23-Jun-93	97.44	17.87		79.57	29,000	4,200	71	4,400	5,600
	30-Sep-93		18.94		78.50	30,000	3,200	71	2,800	3,400
	6-Feb-94		19.11	0.06	78.39	Sample Not Analyzed				
	2-May-94		18.11		79.33	5,700	630	13	660	400
	1-Jul-94		18.72		78.72	3,100	180	99	160	520
	20-Sep-94		21.41		76.03	6,100	540	6	750	730
	5-Dec-94		18.66		78.78	3,700	280	<10	430	350
	duplicate					3,900	310	<10	540	540
	10-Mar-95		15.72		81.72					
MW-8	23-Jun-93	97.61	17.64		79.97	350	43	9	35	67
	30-Sep-93		18.85		78.76	2,700	190	340	170	720
	6-Feb-94		18.91		78.70	<100	<1	1	1	2
	2-May-94		18.11		79.50	<100	<1	3	<1	7
	1-Jul-94		18.43		79.18	300	18	48	19	37
	20-Sep-94		21.43		76.18	<100	<1	<1	<1	<1
	5-Dec-94		18.72		78.89	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		18.69		78.92					
MW-9	23-Jun-93	95.41	15.94		79.47	45,000	14,000	1,200	2,800	12,000
	30-Sep-93		17.05		78.36	86,000	22,000	1,100	3,300	15,000
	6-Feb-94		17.07		78.34	43,000	10,000	460	2,100	7,500
	2-May-94		16.24		79.17	17,000	5,400	270	1,300	4,700
	1-Jul-94		16.59		78.82	10,000	2,100	120	450	1,300
	20-Sep-94		19.61		75.80	7,500	2,200	97	400	1,200
	5-Dec-94		16.85		78.56	10,000	2,700	130	530	1,600
	10-Mar-95		NR							

Table 3-2 Summary of Groundwater Elevation Data and Analytical Laboratory Results for Groundwater Samples Collected at Former E-Z Serve Station # 100877 525 West A Street, Hayward, California

Well I.D.	Date Sampled	Well Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (feet)	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-10	23-Jun-93	97.11	17.39		79.72	35,000	980	640	3,500	12,000
	30-Sep-93		18.58		78.53	4,000	230	12	100	680
	6-Feb-94		18.61		78.50	2,000	69	12	220	120
	2-May-94		17.83		79.28	710	16	6	85	62
	1-Jul-94		18.17		78.94	2,000	52	43	120	210
	20-Sep-94		21.15		75.96	2,800	34	16	270	560
	5-Dec-94		18.43		78.68	2,700	30	13	260	430
	10-Mar-95		15.37		81.74					
MW-11	10-Feb-95	92.68	25.00		67.68	7,000	140	22	600	1,000
	10-Mar-95		11.58		81.10					
MW-12	10-Feb-95	99.03	31.00		61.68	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		16.37		76.31					
MW-13	10-Feb-95	96.80	30.50		62.18	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		14.30		78.38					
MW-14	10-Feb-95	99.01	31.50		61.18	12,000	42	8	740	2,100
	duplicate					12,000	48	<10	800	2,300
	10-Mar-95		16.33		76.35					
QA/QC										
Field Blank	20-Sep-94					<100	<1	<1	<1	<1
Trip Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5

NR= not recorded



N

1"=120'

SCALE

EXPLANATION

- LOCATION OF PREVIOUSLY INSTALLLED MONITORING WELL
- LOCATION OF MONITORING WELLS INSTALLED DURING THIS PHASE OF INVESTIGATION
- HYDROPUNCH GROUNDWATER SAMPLE LOCATIONS
- A A' CROSS-SECTION LINE

SITE

EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE

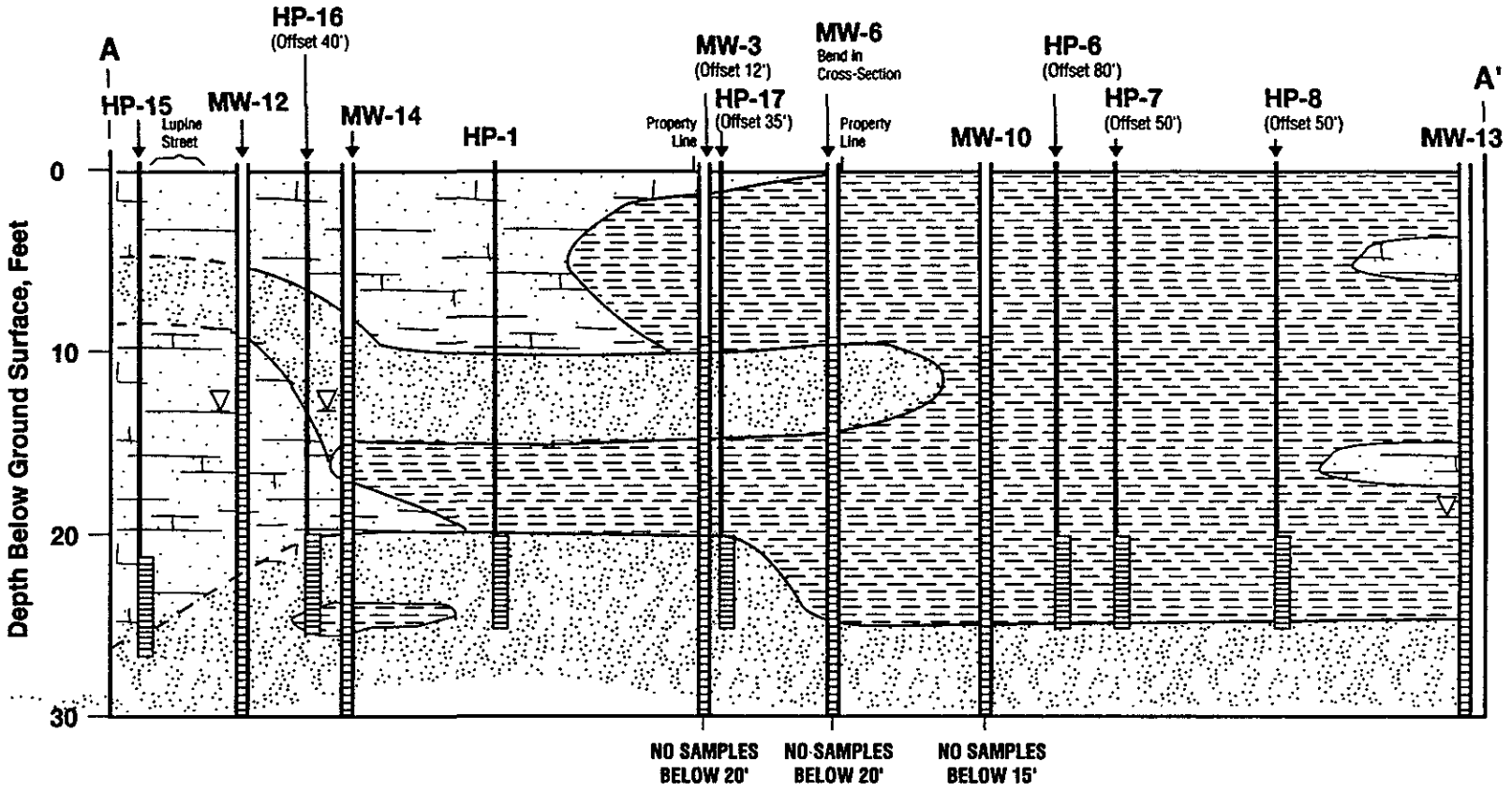
Locations of Geologic Cross-Sections

BROWN AND CALDWELL

DATE 2-22-95

PROJECT 1564-07

Figure 3-1



LEGEND

CL-ML Sandy Clay, Clay, Silt, Sandy Silt

SM-SP Silty Sand, Sand

SC Clayey Sand

▽ Water Encountered During Drilling

Note: Geologic contacts indicated are gradational and are estimated. Actual site conditions may vary considerable.

Dashed contacts are extrapolated where no lithologic data exist.

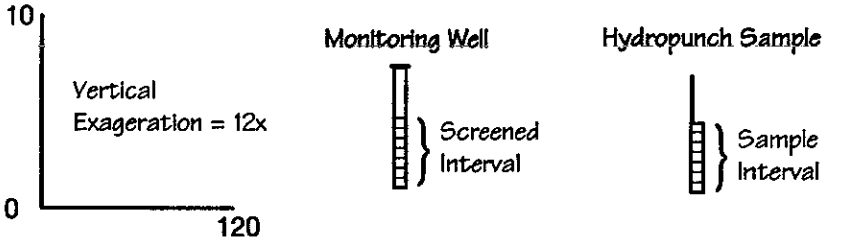
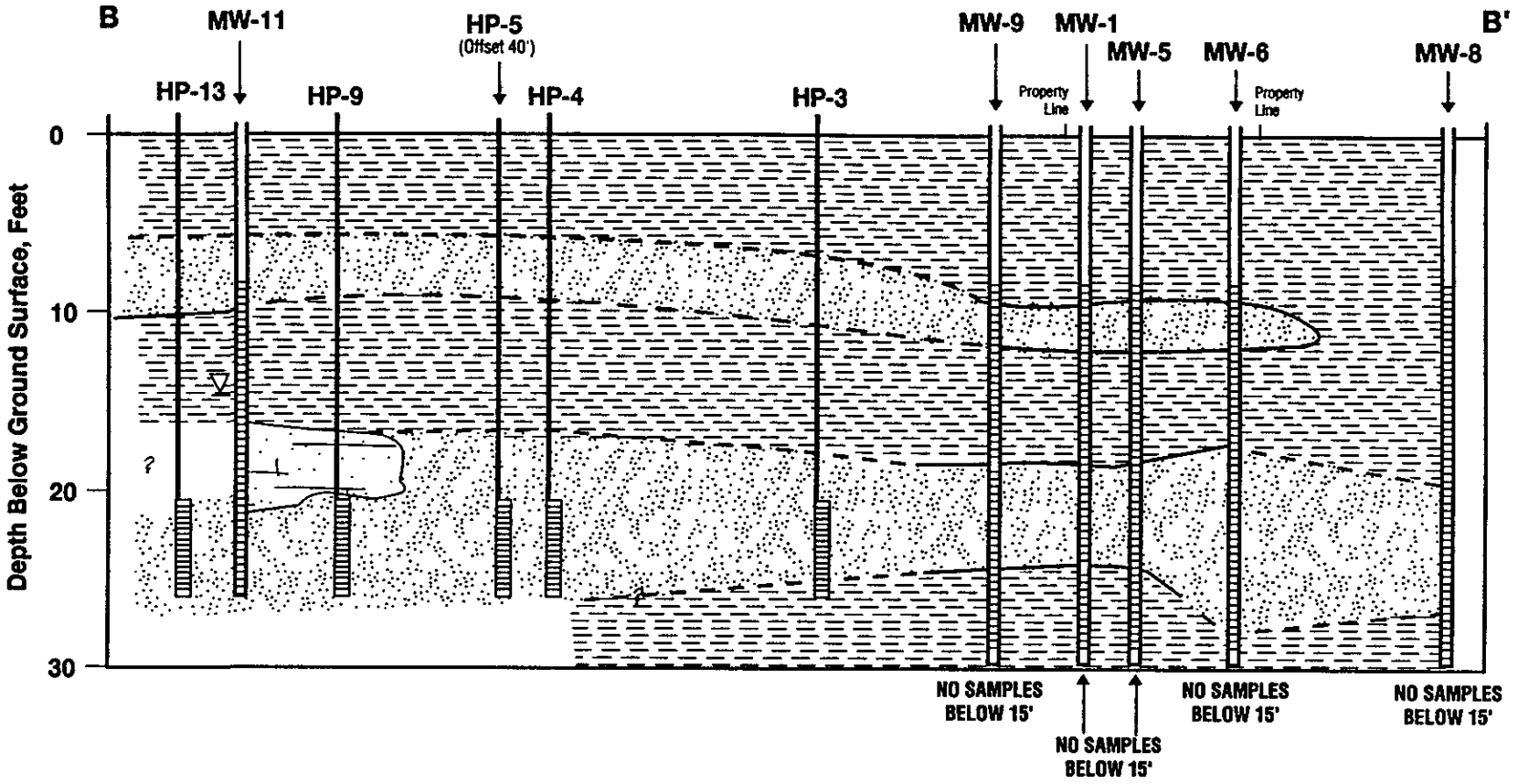


Figure 3.2 Cross Section A-A'

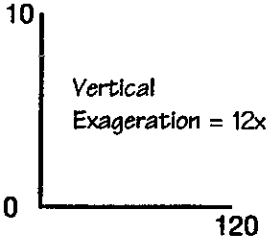


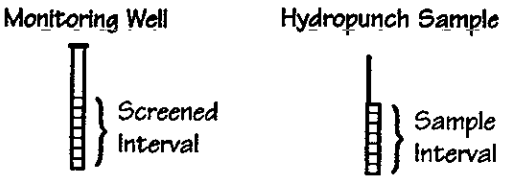
LEGEND

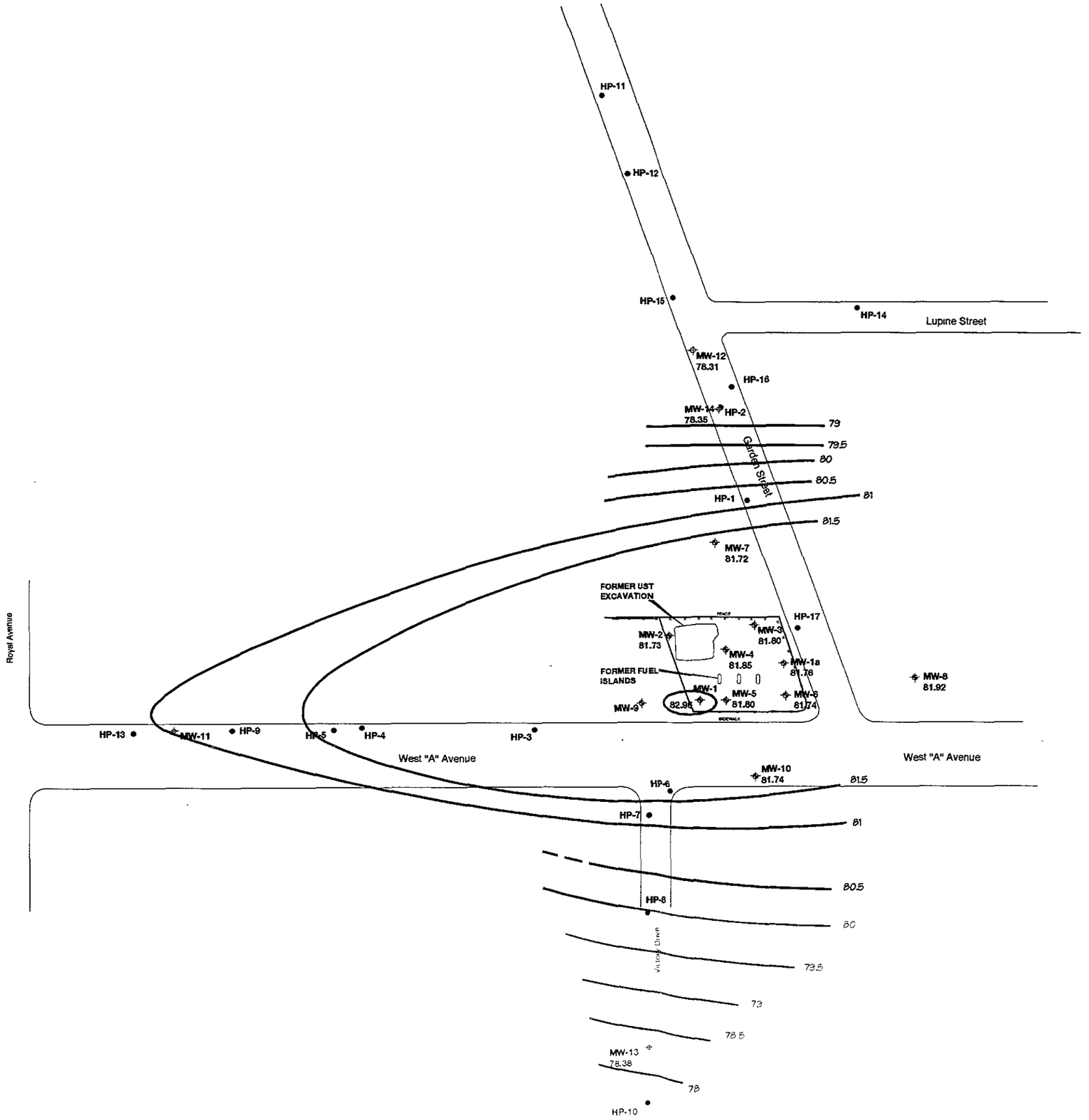
- CL-ML Sandy Clay, Clay, Silt, Sandy Silt
- SM-SP Silty Sand, Sand
- SC Clayey Sand
- ▽ Water Level Encountered During Drilling

Note: Geologic contacts indicated are gradational and are estimated. Actual site conditions may vary considerable.

Dashed contacts are extrapolated where no lithologic data exists.







N

1"=120'

SCALE

EXPLANATION

- LOCATION OF PREVIOUSLY INSTALLLED MONITORING WELL
- LOCATION OF MONITORING WELLS INSTALLED DURING THIS PHASE OF INVESTIGATION
- 82.96 GROUNDWATER SURFACE ELEVATION FEET, March 10,1995
- HYDROPUNCH GROUNDWATER SAMPLE LOCATIONS
- 81 GROUNDWATER SURFACE ELEVATION CONTOUR

SITE

EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE

Groundwater Surface Elelvation Contour Map
March 10, 1995

BROWN AND CALDWELL

DATE 3-17-95

PROJECT 1564-07

Figure 3-4

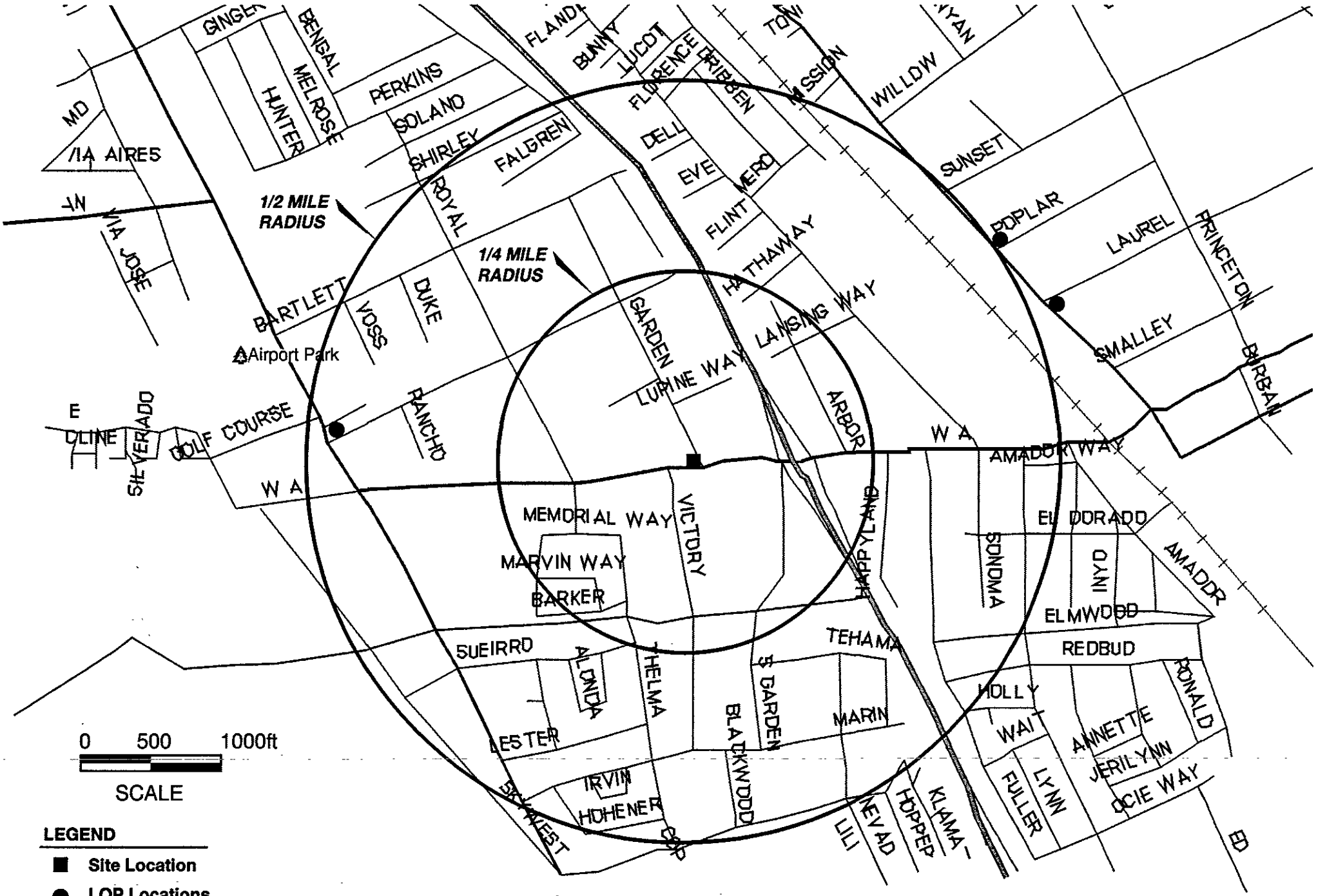
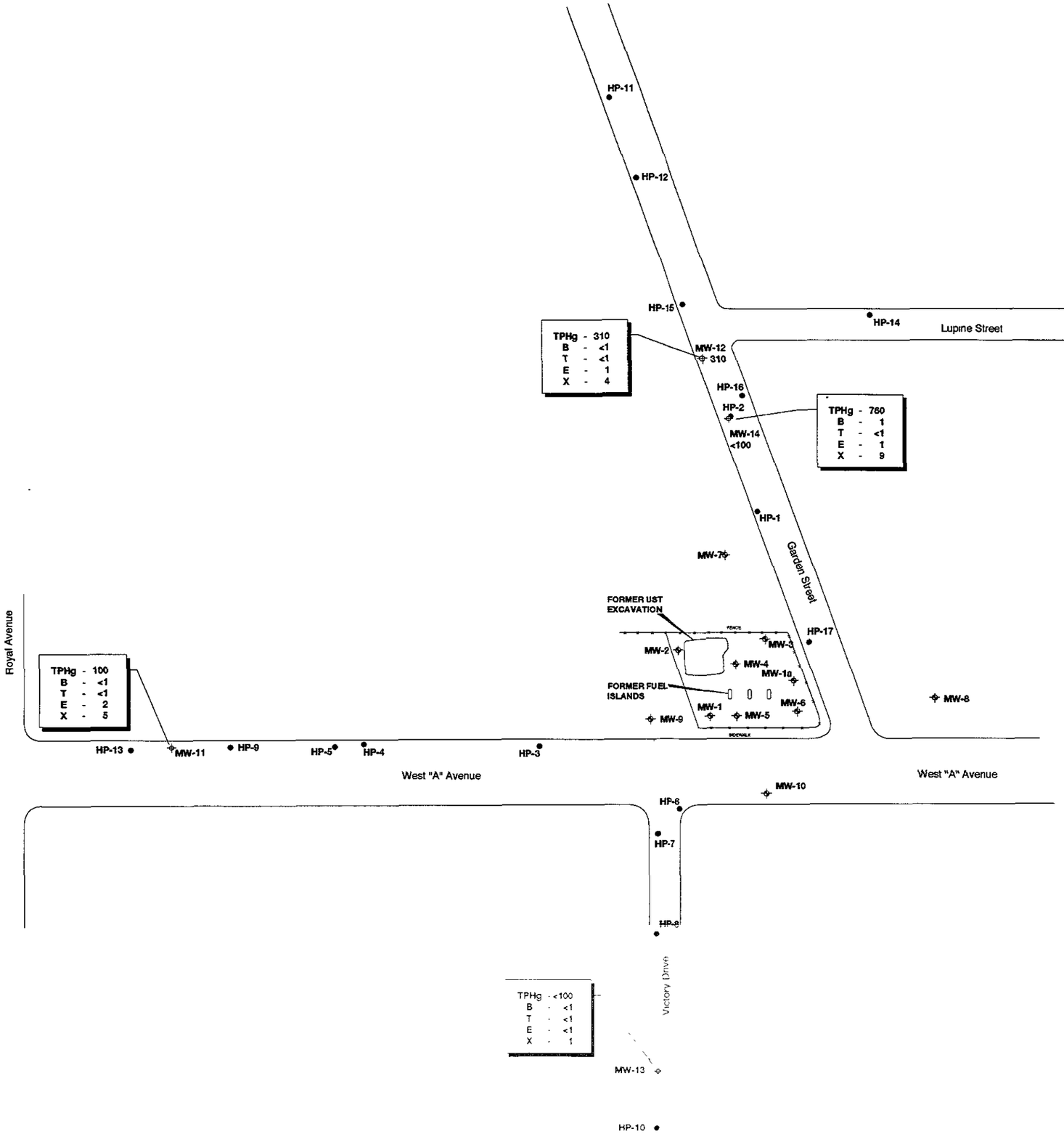


Figure 3-5 Location of County LOP Sites Within 1/2 Mile Radius of



N

1"=120'

SCALE

EXPLANATION

- LOCATION OF PREVIOUSLY INSTALLLED MONITORING WELL
- LOCATION OF MONITORING WELLS INSTALLED BY BROWN AND CALDWELL
- HYDROPUNCH GROUNDWATER SAMPLE LOCATIONS
- TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE - ug/L
- B BENZENE, ug/L
- T TOLUENE, ug/L
- E ETHYLBENZNE, ug/L
- X XYLENE ISOMERS, ug/L

SITE: EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

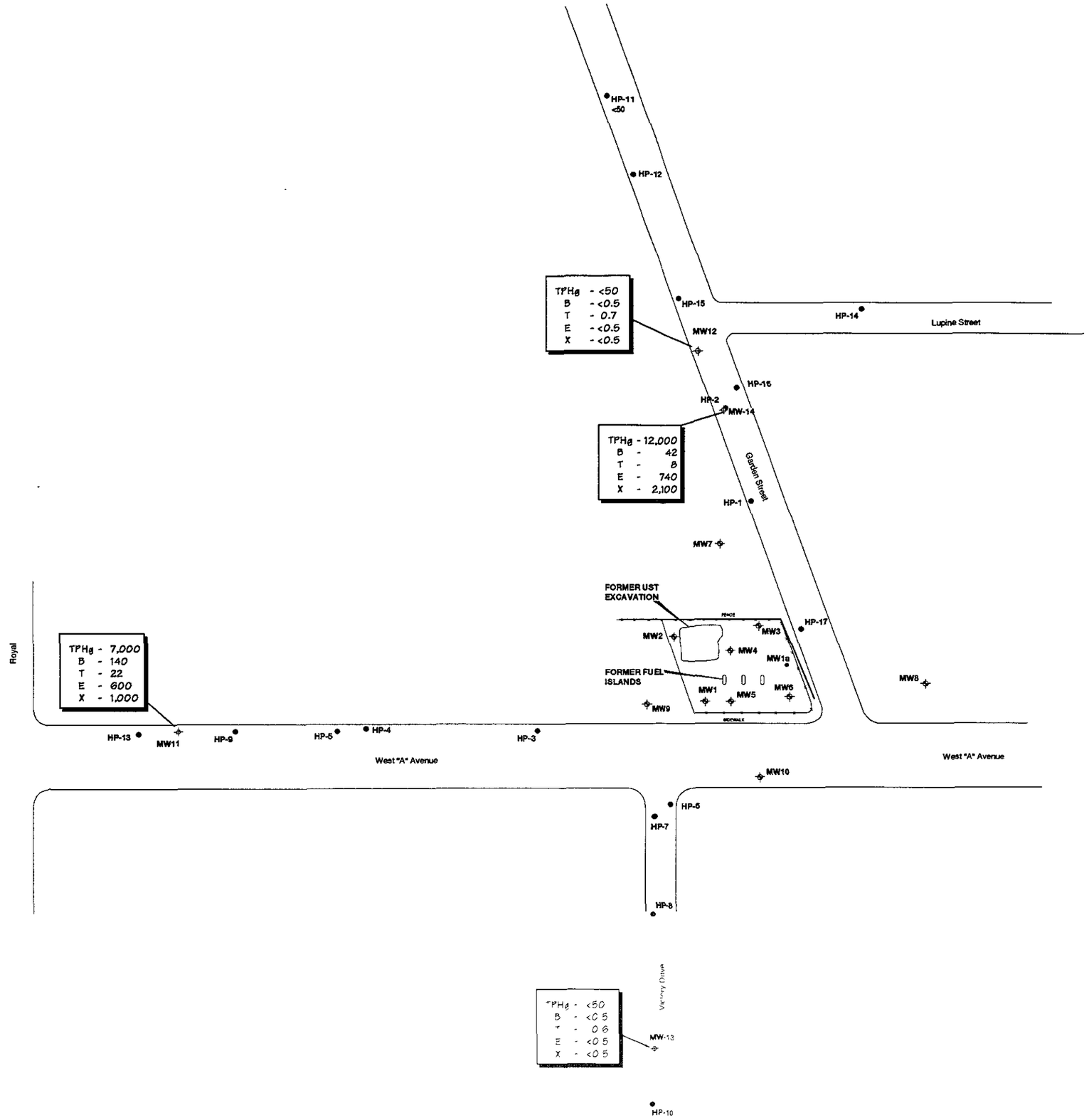
TITLE: Maximum Petroleum Hydrocarbon Constituent Concentrations Identified in Soil Samples

BROWN AND CALDWELL

DATE 2-22-95

PROJECT 1564-07

Figure 3-6



N

1"=120'

SCALE

EXPLANATION

- LOCATION OF PREVIOUSLY INSTALLLED MONITORING WELL
- LOCATION OF MONITORING WELLS INSTALLED BY BROWN AND CALDWELL
- HYDROPUNCH GROUNDWATER SAMPLE LOCATIONS
- TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, ug/L
- B BENZENE, ug/L
- T TOLUENE, ug/L
- E ETHYLBENZENE, ug/L
- X XYLENE ISOMERS, ug/L

SITE

EZ Serve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

TITLE

Petroleum Hydrocarbon Constituent Concentration Identified in Groundwater, February 13, 1995

BROWN AND CALDWELL

DATE 3-16-95

PROJECT 1564-07

Figure 3-7

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

Since the photoionization detector used during the off-site underground utility investigation did not identify volatile organic constituents at any of the locations samples, it is unlikely that the local underground utilities are acting as conduits for the propagation of the petroleum hydrocarbon constituents.

The results of this investigation show that the lateral extent of the petroleum hydrocarbon affected groundwater and soil is delineated to the north, east, and south. However, the extent to which groundwater has been affected to the west is still uncertain. The low concentration of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylene isomers (BTEX) identified in the soil samples collected from soil boring MW-11 suggest that the presence of TPHg and BTEX and that location has occurred through migration of dissolved constituents flowing with groundwater. The large variation in results between the in-situ groundwater sample collected from HP-9 and the sample collected from Well MW-11 (just east of HP-9) cannot be explained at this time. Results of the quarterly groundwater monitoring event scheduled for March 1995, may provide additional information about the concentration of TPHg and BTEX in the groundwater at this location.

The high concentrations of TPHg and BTEX identified in the in-situ groundwater sample collected from HP-2 do not appear to correlate with the lower concentrations identified in the sample collected from Well MW-14. This discrepancy may be resulting from local variations in lithology, however, future sample events should identify an increase or decrease in the dissolved constituent concentrations at Well MW-14.

Results of this investigation indicate that the lateral extent of the petroleum hydrocarbon plume extends under residential areas near the site. The additional risk to local residents from the presence of petroleum hydrocarbon constituents in the groundwater beneath their property is uncertain, however, it is expected to be low. Brown and Caldwell will estimate the additional risk to local residents by performing a screening level risk assessment. Brown and Caldwell will submit to the Alameda County Environmental Health Department (County) a work plan for completing this risk assessment by April 1, 1995. We will begin the screening level risk analysis upon receipt of the County's comments.

Due to the size of the plume and its location relative to residential areas, remediation of the petroleum hydrocarbon affected soil and groundwater beneath, and in the vicinity of, this site should be instituted as quickly as possible. Future groundwater samples collected from Monitoring Well MW-11 will confirm or deny the presence of petroleum hydrocarbon

constituents in the groundwater at this location. If necessary, an additional investigation to further delineate the extent of the petroleum hydrocarbon affected groundwater, to the west of Well MW-11, can be completed as groundwater and soil remediation commences. A recommendation for remediation of the soil and groundwater beneath and in the vicinity of, this site is expected to be submitted to the County for approval by May 31, 1995.

APPENDIX A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S AUGUST 26, 1994 LETTER

BROWN AND CALDWELL'S SEPTEMBER 29, 1994 WORK PLAN

ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL LETTER DATED DECEMBER 1, 1994

APPENDIX B

ALAMEDA COUNTY WELL CONSTRUCTION PERMIT

CITY OF HAYWARD ENCROACHMENT PERMIT

BROWN AND CALDWELL'S LETTER "RATIONALE FOR PLACEMENT OF GROUNDWATER MONITORING WELLS"

BOREHOLE LOGS AND WELL CONSTRUCTION DETAILS

WELL DEVELOPMENT INFORMATION

APPENDIX C

ANALYTICAL LABORATORY DATA SHEETS

CHAIN OF CUSTODY FORMS

Brown and Caldwell

3480 Buskirk Avenue
Pleasant Hill CA 94523-4342
P O Box 8045
Walnut Creek CA 94596-1220
(510) 937-9010
FAX (510) 937-9026

September 29, 1994

Ms. Madhulla Logan
Hazardous Materials Specialist
Alameda County Department of Environmental Health
1311 Harbor Bay Parkway, Second Floor
Alameda, California 94502

11-1564-07/1

Subject: Submittal of Technical Report for E-Z Serve Management Company
Site #100877, 525 West A Street, Hayward, California

Dear Ms. Logan:

Brown and Caldwell has been retained by the E-Z Serve Management Company (E-Z Serve) to prepare a Technical Report for E-Z Serve's Site #100877 located in Hayward at 525 West A Street (Site). This Technical Report directly responds to the California Regional Water Quality Control Board - San Francisco Bay Region's (RWQCB) letter "Legal Request for Submittal of a Technical Report Resulting from the Alameda County Department of Environmental Health's Enforcement Panel Meeting of June 21, 1994", dated August 26, 1994, included as Attachment A. The work proposed below will be performed in accordance with the Tri-Regional Board Staff Recommendations for the Preliminary Evaluation and Investigation of Underground Storage Tank Sites, dated August 10, 1990.

This document proposes additional field investigations to further delineate the vertical and horizontal limits of hydrocarbon-affected soil and groundwater in the vicinity of the Site. The results of this investigation will be used to assess the best available technology for remediation of the Site. Following evaluation of the remediation alternatives, interim remediation measures will be implemented.

Background

In 1986, a fuel system leak was discovered in one of the four underground storage tanks (UST) located on the Site. Subsequent Site assessments revealed that soil and groundwater had been impacted. In 1990, the USTs, dispenser islands, and associated piping were excavated and removed from the property. To date, eight monitoring wells have been installed on the Site and three wells off the Site. All wells have been completed to a depth of approximately 30 feet below ground surface (bgs), except well MW-1A which is 17.8 feet deep.

The Site is currently not in use. The only structures on the Site are the canopy over the former dispenser islands and some lights. The Site is surrounded by a chain link fence.

Soils beneath the site consist predominantly of silts and clays. Sand has been observed in some borings at an approximate depth of 10 to 15 feet bgs and again at approximately 25 to 30 feet bgs. The maximum depth explored to date is 30 feet bgs. Groundwater is at approximately 17.8 feet bgs (June 1993). The groundwater gradient was toward the west at 0.0014 in June 1993. The depth to groundwater has ranged from approximately 16 feet to 22 feet bgs.

The highest reported concentration of petroleum hydrocarbons in soil samples taken from the Site is 19 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) in the boring for well MW-4. The highest concentration of benzene reported in soil samples (at 2.7 ppm) is also from the boring for well MW-4. All other on-site borings contained reportable concentrations of TPHg and benzene. Concentrations of petroleum hydrocarbons in the June 1993 on-site groundwater samples ranged from 5,700 parts per billion (ppb) TPHg to 60,000 ppb TPHg. Concentrations of petroleum hydrocarbons in the June 1993 samples from off-site wells MW-7, MW-9, and MW-10 were similar. Petroleum hydrocarbons were reported in the sample from well MW-8 (upgradient) at a concentration of 350 ppb TPHg.

Quarterly groundwater sampling was conducted on September 20, 1994.

Proposed Scope of Work

The scope of work proposed below directly responds to the RWQCBs August 26, 1994 letter.

1) Brown and Caldwell proposes to conduct an off-site in situ groundwater investigation using the Hydropunch[tm] or BAT sampling systems. Samples will be collected at the approximate locations identified on Figure 1. Based on the results of the in-situ groundwater investigation, a maximum of four groundwater monitoring wells will be installed at appropriate off-site locations. Field procedures for conducting this work are included in Attachment B.

2) Based on the results of the in-situ groundwater investigation, and the September and December 1994, quarterly groundwater monitoring events, Brown and Caldwell will develop a Corrective Action Plan for the remediation of the petroleum hydrocarbon affected soil and groundwater in the vicinity of the Site. The Corrective Action Plan is discussed further below.

3) Brown and Caldwell will investigate the locations of on-site and nearby off-site underground utilities and assess the potential for local utilities to act as conduits for petroleum hydrocarbon vapor migration. The potential for utility conduits to act as migration pathways for vapor will be assessed by obtaining organic vapor measurements from at least two nearby access points for each utility. If necessary, a soil gas vapor survey will be used in proximity to the site to measure organic vapors in the backfill material surrounding the underground utilities. Results of the underground utility survey will be included in the Corrective Action Plan.

4) Brown and Caldwell will conduct a records search to identify the location of nearby domestic, irrigation, and industrial wells. County and State databases will be reviewed and wells determined to be within one-half mile of the site will be located on a regional site map. Results of the well survey will be included in the Corrective Action Plan.

5) Brown and Caldwell will prepare a risk screening assessment to assess the potential impact of the petroleum hydrocarbon constituents to off-site receptors. The results of the risk screening assessment will be presented to the local and state agencies in a report. Brown and Caldwell will convene with the representative agencies to discuss the results of the screening assessment and determine whether a full risk assessment is necessary.

6) The remediation of on-site soils, including soils used as backfill material will be specifically addressed during the design of the remediation system. Additionally, petroleum hydrocarbon concentrations remaining in the on-site soil will be identified prior to closure of the site.

7) Upon completion of the off-site investigation, Brown and Caldwell will prepare a Corrective Action Plan, in accordance with the Underground Storage Tank Clean-up Fund Guidelines, which will delineate the size of the petroleum hydrocarbon plume in soil and groundwater, assess the potential for remediation, discuss the applicable remedial options available, and recommend the most applicable option(s) (best available technology) for remediation of the site.

8) Brown and Caldwell proposes to complete the work outlined above on the following schedule:

Task	Completion date
Off-site in situ groundwater investigation	October 28, 1994
Domestic, Agricultural, Industrial Well Survey	December 30, 1994
Underground utility pathway investigation	October 28, 1994
Initial risk screening	November 15, 1994
Corrective Action Plan	December 30, 1994

If you have any questions or require additional information, please call me at your earliest convenience at (510) 210-2278.

Sincerely,

BROWN AND CALDWELL

Thomas K. Wheeler

for Todd Miller
Project Manager

TM:

E:\LRE\1564\1564WP1.WP5
HPLaserIIID

ATTACHMENT A

AUGUST 26, 1994 REGIONAL WATER QUALITY CONTROL BOARD LETTER

Post-it™ Fax Note	7671	Date 8/02/94	# of pages ▶ 3
To Tom Wheeler		From B. Cobb	
Co./Dept.		Co.	
Phone #		Phone #	
Fax #		Fax #	

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CON
SAN FRANCISCO BAY REGION
'01 WEBSTER STREET, SUITE 500
KLAND, CA 94612
(510) 286-1255

Aug. 26, 1994

E-Z Serve Mgmt. Co.
(Contact: Brian Cobb)
P.O. Box 922021
Houston, Texas 77292-2021

L.A. & Margaret Thompsen
P.O. Box 16290
Houston Texas 77222

RE: **Legal Request for Submittal of a Technical Report Resulting from the Alameda County Department of Environmental Health's Enforcement Panel Meeting of June 21, 1994.**

Dear Sirs:

It has been brought to my attention by Regional Board staff that a condition of soil and ground water pollution exists on your property from an underground storage tank release. The Alameda County Department of Environmental Health (ACHD) staff have requested technical reports from you to fulfill your obligations per California Code of Regulations, Title 23, Waters, Chapter 16, Underground Storage Tank Regulations, Article 11, Corrective Action Requirements. It is my understanding that ACHD staff were unsuccessful in eliciting your co-operation in resolving these issues through normal correspondence.

A Pre-Enforcement Review Panel was held at the ACHD Offices on June 21, 1994, attended by Kevin Graves, of my staff. Information submitted at that meeting, and follow up submittals received pursuant to that meeting, have established that you are Responsible Parties pursuant to Section 13304 of the California Water Code. Therefore, pursuant to the Regional Board's authority under Section 13267(b) of the California Water Code, you are hereby required to submit a technical report to address soil and ground water pollution by October 4, 1994. The information provided at the hearing, and in follow up submittals, is inconclusive as to the legal responsibilities of Powerine Oil Company and Autotronic Systems, Inc. as Responsible Parties as of this date. The inclusion of Powerine Oil Company and Autotronic Systems, Inc. as Responsible Parties is therefore deferred. This action is without prejudice and should be taken neither as a finding of nonresponsibility or responsibility.

The technical report should specifically address the following numbered items:

1) A proposal to delineate the vertical and lateral extent and severity of soil and ground water contamination resulting from the site. Delineation of the plume must incorporate the installation of additional permanent monitoring wells, although hydropunches/temporary wells may be used as a screening tool;

2) A proposal to contain **all** of the ground water contaminant plume, both on and off site, from further migration;

3) A proposal to conduct a survey on streets adjacent to the site to determine whether utility lines are acting as a conduit for plume migration;

4) A proposal to conduct a survey for any nearby domestic/ irrigation or industrial wells potentially impacted by the site or influencing the migration of the site's contaminant plume. Converse Environmental's June 30, 1988 report identified at least one domestic/irrigation well fairly close to the site (the exact location was not given);

5) A proposal to conduct a Risk Assessment to determine whether releases from the site are creating a potential human-health threat to neighboring sites. For example, the adjacent property to the north is occupied by residents of a trailer park. This office is concerned with potential vapor inhalation at the site, since the site is not paved.

6) There is information to indicate that contaminated excavated soil from the site was placed back into the excavation pits in 1990. The remediation of this soil must be addressed by the air sparging/vapor extraction remediation system, proposed and approved in March 1994. As stipulated in the County's March 25, 1994 letter, close attention shall be given to studying this remediation system, from the onset of its operation, to assure that the air sparging activity will not influence further plume migration off site. Quarterly status reports addressing the effectiveness of this remediation system shall be submitted to this office;

7) Following the delineation of soil and ground water contamination off site, a proposal to remediate the off-site contamination will be required. Additionally, if the proposed air sparging/ vapor extraction system does not effectively remediate soil and ground water contamination on site, another more effective remediation proposal will be required; and

8) A timetable for the above required work shall be included in the technical report.

All proposed work should adhere to the requirements articulated in The Tri-Regional Board Staff Recommendations for the Preliminary Evaluation and Investigation of Underground Storage Tank Sites - 8/10/90 and Article 11 of Title 23, Waters, California Code of Regulations.

I am hereby transmitting this request for a technical report to ACHD for service and continued case handling. You should be aware that failure on your part to submit the requested technical report, or a submittal received after the date specified in this request may result in fines up to $1,000 per day of delinquency. Your response to this technical report request should be sent to Juliet Shin, at ACHD. Please inform Juliet Shin at least three working days in advance of all field activities.

Please be advised that this is a formal request for technical reports pursuant to California Water Code Section 13267(b). Any extensions of the stated deadlines, or modifications of the required tasks, must be confirmed in writing by either this agency or the Alameda County Department of Environmental Health, Hazardous Materials Division.

If you have any questions regarding the contents of this letter, please contact Juliet Shin, of ACHD, at (510) 567-6763.

Sincerely,

Steven R. Ritchie
Executive Officer

cc: Gil Jensen, Alameda County District Attorney's Office, Consumer & Environmental Protection Division.
Juliet Shin, Hazardous Materials Specialist, ACHD.
Jon K. Wactor, Luce, Forward, Hamilton & Scripps 100 Bush St., 20th Flr., S.F., CA 94104
Gretchen R. Stroud, Cooley Godward, Five Palo Alto Square, 4th Flr., Palo Alto, CA 94306-2155
Jonathan Redding, Fitzgerald, Abbott & Beardsley, 1221 Broadway, 21st Flr., Oakland, CA 94612-1837
Coralie Kupfer, Rodi, Pollock, Pettker, Galbraith & Phillips 801 South Grand Ave., Ste 400, Los Angeles, CA 90017

ATTACHMENT B

FIELD PROCEDURES

IN SITU GROUNDWATER INVESTIGATION

The in situ groundwater investigation is conducted by a licensed drilling subcontractor, using a truck-mounted drilling rig or cone penetrometer testing rig. The drilling subcontractor, using 8-inch diameter hollow-stem augers, drills to approximately 3 feet above the depth of sampling then drives the in situ sampling device to the selected depth using an impact hammer. The cone penetrometer testing rig would push the sampling device to the appropriate depth using the hydraulic jack mounted on the rig. The sampling device is then opened to the water-bearing unit. Groundwater is allowed to fill the sampling device until the groundwater approaches equilibrium.

A groundwater sample is then collected and transferred to the appropriate laboratory supplied sampling bottles. Samples are immediately placed in a cooler contained crushed or cubed ice and stored until reaching the laboratory.

Sampling equipment is extracted from the borehole and the borehole is immediately backfilled from bottom to top with neat cement or bentonite chips.

To prevent cross contamination during the investigation, all downhole equipment is decontaminated prior to reuse. Decontamination procedures may include: 1) using a steam cleaner/pressure washer; or 2) rinsing with a non-phosphate detergent (i.e. alconox) and rinsing twice with tap water.

BOREHOLE DRILLING

Boreholes are drilled by a licensed drilling subcontractor, using a truck-mounted drilling rig equipped with nominal 6-inch-diameter hollow-stem augers. Boreholes are drilled by continuous coring to a predetermined depth below the ground surface, or to groundwater, whichever is encountered first. Borehole depths are based on site conditions, including but not limited to conditions such as depth to water, topography, and depth to bedrock. Borehole depths also may be governed by obtaining two readings on a photoionization detector, or equivalent instrument, which are less than 50 parts per million above the background reading, in which case the borehole is terminated.

At the end of the drilling and sampling operations, boreholes are immediately backfilled from bottom to top with a bentonite/cement slurry pumped through a tremie pipe.

To prevent cross contamination during drilling, all equipment is steam cleaned prior to and between use at each borehole.

Soil sampling and monitoring procedures during borehole drilling are described in a separate appendix.

SOIL SAMPLING DURING DRILLING

Soil samples will be collected during the drilling operations for three reasons: (1) for field identification of the borehole lithology, (2) for qualitative field screening for the presence of contaminants, and (3) for chemical analysis.

For purposes of collecting soil samples for lithologic identification and for field screening, each borehole will be continuously cored. The soil cores will be examined in the field and classified according the Unified Soil Classification system. In addition to evaluating the borehole lithology, the soil cores will be screened in the field with a photoionization detector (PID) or similar instrument, and the relative permeability of the soil will be qualitatively estimated. The lithology, PID reading, and estimated permeability of each sample will be recorded on the borehole log next to the depth interval from which the sample was obtained.

Soil samples for laboratory chemical analysis will be collected at 5-foot intervals, at a minimum, to the total depth of the boring. The samples will be obtained using a 2-inch-diameter by 18-inch-long split-spoon sampler lined with three 6-inch-long thin-walled brass tubes. The sampler will be driven its entire length into undisturbed soil, either hydraulically or by a 140-pound drop hammer.

When the sampler is extracted from the borehole, the brass tubes will be removed and the ends of the tubes will immediately be screened for the presence of hydrocarbons with a PID or equivalent instrument. One sample per 5-foot sampling interval will be selected for possible chemical analysis on the basis of the highest PID reading. The ends of the selected brass tube will be (1) covered with aluminum foil and plastic caps, which will then be taped with plastic tape to provide an air-tight seal; (2) labeled and placed into zip-lock plastic bags, and (3) stored in a cooled ice chest for delivery to the analytical laboratory. These procedures minimize the potential for cross contamination and volatilization of volatile organic compounds prior to chemical analysis.

To prevent cross contamination during sampling, all equipment will be washed with laboratory-grade detergent, rinsed with tap water, and rinsed with deionized water before and between collecting each sample.

GROUNDWATER MONITORING WELLS

Monitoring Well Drilling. Groundwater monitoring wells will be drilled by the method described in the section entitled Borehole Drilling, with the exception that they will be drilled to a depth of 15 or 20 feet below the water table or piezometric surface, depending upon known conditions and upon unanticipated conditions encountered during drilling. The borehole will then be completed as a monitoring well by the method described below.

Monitoring Well Completion. Groundwater monitoring wells will be completed with PVC screen and casing. On-site monitoring wells will be completed with 4-inch-diameter PVC screen and blank casing, while off-site wells will be completed with 2-inch-diameter PVC. A PVC cap will be installed at the bottom of each well.

The well screen typically will be 0.020-inch slotted flush-threaded PVC, extending from a depth of approximately 15 or 20 feet below the water table or piezometric surface to 5 to 10 feet above. The well design is intended to accommodate seasonal water-level fluctuations within the slotted interval. The well design may be modified in the field during the drilling operation, depending upon conditions encountered during drilling. In no case does the monitoring well penetrate clay zones greater than 5 feet thick, which might allow downward migration of contaminants into lower water-bearing zones. Blank casing extends from the top of the perforated section to the ground surface (or above, in the case of above-ground completion).

The annular space surrounding the well screen and casing will be packed with No. 1/20 (or equivalent) sand, from the bottom of the screen to approximately 2 feet above the top of the screen. The well will then be bailed or surged to settle the filter pack, and more sand will be added as necessary to return the level to a height of 2 feet above the top of the screen. A 2- to 3-foot-thick seal of bentonite pellets will be placed above the sand pack. The well will then be grouted with bentonite-cement slurry or neat cement, from the top of the bentonite seal to the surface. Groundwater monitoring wells commonly will be completed below grade and protected with a water-tight locking cover. A typical well construction is illustrated on Figure _____-1.

The top of casing (TOC) will be surveyed by a licensed surveyor, and all depths to water will be measured in relation to the surveyed mark on the TOC.

Monitoring Well Development. Groundwater monitoring wells will be developed by surging, bailing, or pumping until clean, sediment-free water is produced from the well. The length of development time varies, depending upon field conditions. Development water is contained in 55-gallon barrels, which will be stored temporarily on site until disposal.

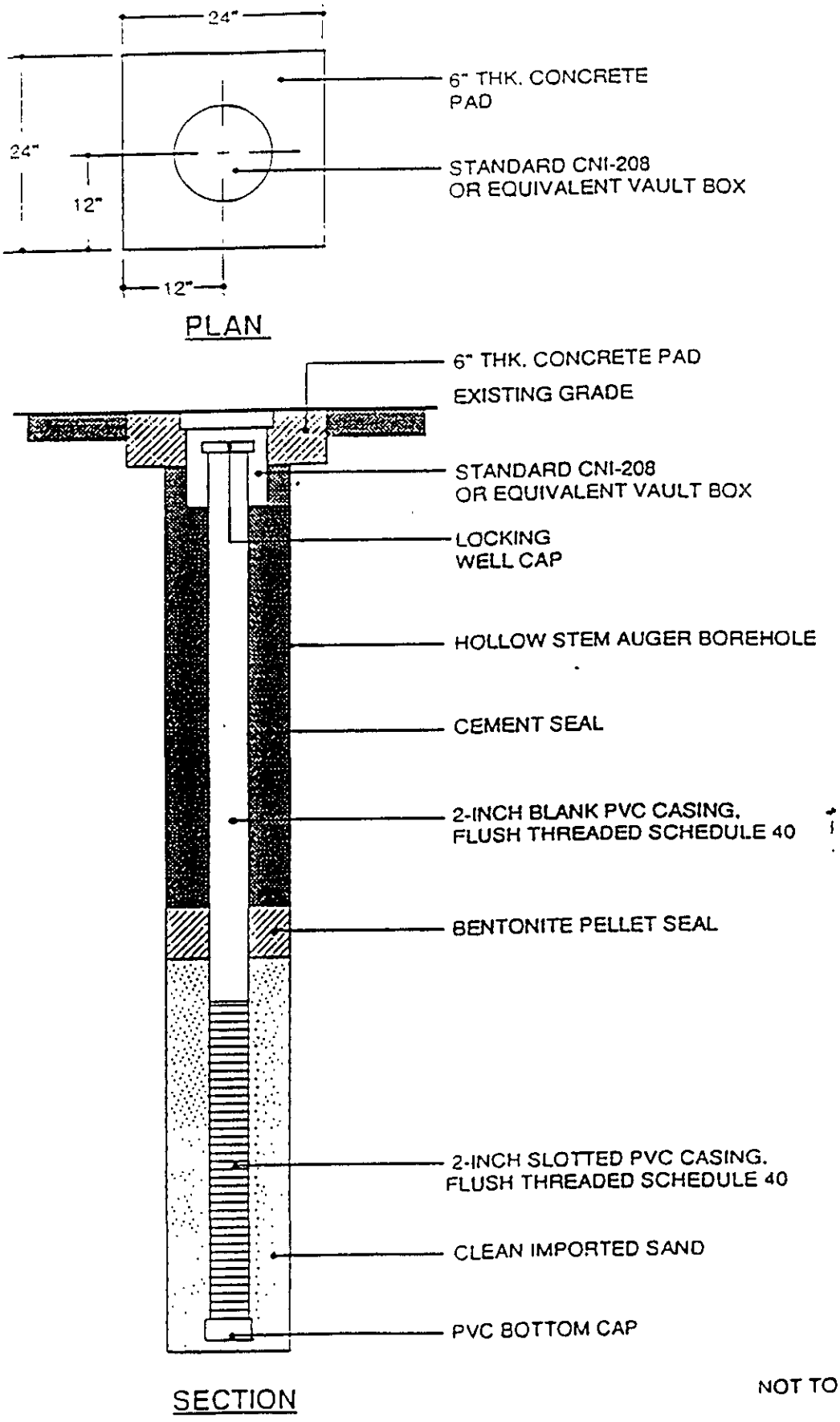


Figure A-1. Typical Monitoring Well Construction

GROUNDWATER SAMPLING

Prior to collecting a sample of groundwater from a well, the well will be purged by removing three or more well volumes of water, using either a pump or a bailer. A well volume is defined as the amount of groundwater in the well casing and the sand pack in the annular space surrounding the casing, assuming a sand porosity of 35 percent. The pH and electrical conductivity of the water will be measured periodically during the purging.

The groundwater sample will be obtained with a teflon bailer equipped with a bottom-emptying valve. To release water from the bailer with minimal aeration, the protrusion on the bottom-emptying device actuates the bottom check valve and regulates the flow into the sample bottle.

The sample bottle will be obtained precleaned from the analytical laboratory, and it will be specific with respect to size and material to the type of analysis to be performed. The bottle will be carefully filled to the very top, in order to create a meniscus, and sealed with a teflon-lined cap (septa). These precautions aid in eliminating air from the sample. The sample will be visually inspected to ensure that no air bubbles remain within.

Depending on the type of chemical analysis required, samples will be preserved with acid and/or they are cooled to 4 degrees Celsius. Samples then will be labeled, stored, and transported in cooled ice chests to the analytical laboratory within the permissible holding time.

SAMPLING FROM STOCKPILES AND EXCAVATIONS

Soil samples from stockpiles are composites, collected at a rate of one composite sample for every 100 cubic yards of soil. The composite sample consists of about three, and not more than four, individual soil samples of approximately equal volume. The individual soil samples will be collected using a decontaminated stainless steel trowel or an impact sampler. The soils will be packed into a 2-inch by 6-inch brass tube, and the ends of the tube will be covered with aluminum foil and plastic end caps. The end caps will be taped in place with duct or plastic electrical tape. The individual soil samples comprising the composite soil sample will be homogenized at the analytical laboratory.

Soil samples from excavations will be collected using a decontaminated stainless steel trowel or an impact sampler. They will be packed individually into 2-inch by 6-inch brass tubes. The ends of the tubes will be covered with aluminum foil and plastic end caps, and the end caps will be taped in place with duct or plastic electrical tape. For deep excavations that are not safe to enter, the soil samples will be collected from the bucket of a backhoe or other excavating machinery, which has scraped soil from the excavation wall or floor, as directed by the on-site geologist.

Soil samples from the product-piping trenches of underground storage tanks will be collected as described above, at a rate of one sample for every 20 feet of pipeline.

Water samples from excavations will be collected by lowering into the cavity a decontaminated glass jar or bottle at the end of a rope or rod. The water in the glass container will be slowly poured into 40-milliliter vials to a height that forms a meniscus at the rim of the vial. The vials will be capped with lids having teflon septa, and they will be inspected to ensure that no air bubbles remain within.

All samples will be labeled and handled as described in the Brown and Caldwell operating procedure entitled Sample Handling.

SAMPLE HANDLING

Samples are handled during collection and shipment in such a way as to ensure maximum sample quality and integrity. All samples will be collected by experienced Brown and Caldwell field personnel. The samples will be collected in containers that are appropriate to the sample material and the required analyses. All containers will have been precleaned by the analytical laboratory or the container manufacturer. All sampling equipment will be decontaminated prior to and between use by washing in laboratory-grade detergent, rinsing with tap water, and then rinsing with deionized water.

Each sample container will have a label affixed in the field that identifies the date and time of sample collection, name of sampler, job number, and a unique sample number. This information will be recorded on the boring log or in the field records. Samples are stored and shipped to the laboratory in a cooled chest. Only analytical laboratories certified by the California Department of Health Services will be used.

A chain-of-custody form will be used to record possession of samples from the time of collection to the time of arrival at the laboratory. The sample-control officer at the laboratory will verify sample integrity and confirm that they were collected in the proper containers, preserved correctly, and that there is an adequate volume for analysis. If these conditions are met, the samples will be assigned a unique log number for identification throughout analysis and reporting. The log number will be recorded on the chain-of-custody form and in the log book maintained at the analytical laboratory. The sample description, date received, client's name, and other relevant information will also be recorded.

QUALITY ASSURANCE PLAN

Proper collection and handling are essential to ensure the quality of samples. Proper documentation of sample collection and handling procedures is essential to verify the integrity of the data.

All samples will be collected by experienced Brown and Caldwell field personnel, and placed in containers appropriate to the required analysis. Brass tubes used to collect soil samples will be cleaned by washing in laboratory-grade detergent, rinsing with tap water, and rinsing again with deionized water. All glass containers will have been precleaned by the manufacturer or at the analytical laboratory according to guidelines established by the U.S. Environmental Protection Agency.

Following collection and inspection of soil samples, the ends of the brass tubes will be covered with aluminum foil and plastic caps and scaled with plastic tape. Groundwater samples will be collected in sampling bottles that have caps with Teflon septa. After filling, the bottles will be visually inspected to ensure that no air bubbles remain within. All samples will be labeled and then placed in zip-lock plastic bags. Samples will be stored and transported in a closed ice chest and protected from meltwater. Samples will be stored for analysis no longer than the maximum allowable holding time.

Sample identification and chain-of-custody procedures ensure sample integrity and document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis will have a label affixed to identify the project number, sampler, date of collection, sample location, the monitoring-well number (if appropriate), and a number unique to that sample. That information will be recorded on the borehole log or in the field records, along with a description of the sample, field measurements, sampling methodology, names of sampling personnel, and other pertinent field observations.

A standard Brown and Caldwell chain-of-custody form will be used to document possession of samples from time of collection to arrival at the laboratory. All samples will be submitted to an analytical laboratory that has been certified by the California Department of Health Services. The sample-control officer at the laboratory will verify sample integrity and confirm that samples were collected in the proper container, preserved correctly, and that there is an adequate volume for analysis. If these conditions are met, the sample will be assigned a unique log number by the laboratory for identification throughout analysis and reporting. The log number will be recorded on the chain-of-custody form and in the legally required log book maintained at the laboratory. The sample description, date received, client's name, and other relevant information will also be recorded.

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

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

December 1, 1994

Todd Miller
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, CA - 94523

Sub: 525 West A street, Hayward, CA

Dear Mr. Miller:

I am in receipt of a technical document dated September 29, 1994 documenting the scope of work to be done for the above referenced site. This document has been reviewed and is acceptable by this Department.

As this scope of work involves conducting a risk assessment, prior agreement should be made with this Department as to the exposure scenario's, assumptions, exposure parameters, and general methods/models that will be used in this risk assessment.

The work plan should be implemented within 60 days and this Department should be notified at least 3 days in advance of any field activities. If you have any questions, please call me at (510) 567-6764.

Sincerely,

Madhulla Logan

Madhulla Logan
Hazardous Material Specialist

APPENDIX B

ALAMEDA COUNTY WELL CONSTRUCTION PERMIT

CITY OF HAYWARD ENCROACHMENT PERMIT

BROWN AND CALDWELL'S LETTER "RATIONALE FOR PLACEMENT OF GROUNDWATER MONITORING WELLS"

BOREHOLE LOGS AND WELL CONSTRUCTION DETAILS

WELL DEVELOPMENT INFORMATION

Rick Rohrer 1-24

CITY OF HAYWARD
APPLICATION AND PERMIT

AREA CODE 415
PHONE 784-8675

PROPER APPROVAL HEREON CONSTITUTES PERMIT

Application No. PW 147

APPLICANT Brown & Caldwell - Todd Miller	PO Box 8045, Walnut Creek, CA 94596	210-2278
OWNER E-Z Serve		
CONTRACTOR Turner Explorations		

JOB LOCATION: 525 W. A St.

THE APPLICANT HEREBY APPLIES FOR PERMISSION TO: (Describe Fully)

Drill 10 bores for groundwater sampling (3 on Victory Dr., 11 on W A St.) and install 3 groundwater monitoring wells as shown on the attached figure 1. All work to be done in conformance with Exhibit "A" Standard Conditions for Monitoring Wells. Approval of this permit is subject to the following special conditions and is in addition to the work allowed under permit PW 14719.

APPROVAL OF THIS PERMIT IS SUBJECT TO THE FOLLOWING SPECIAL CONDITIONS:

1. Drilling along "A" Street requiring lane closure shall be done weekends only (Saturday and Sunday) between 7:00 a.m. and 12:00 noon.
2. Traffic control shall be as per City sketch (attached) (Typical traffic control).
3. The ground water monitoring well-box shall be installed within the future sidewalk are and shall be as per City Standard SD-116, and SD121.
4. In the event of sidewalk construction or road improvements, the owner, and subsequent shall be responsible for reinbursing the City of all costs to adjust or abandon the monitoring well.
5. The contractor shall provide an insurance policy naming the City of Hayward as co-insu
6. The contractor shall contact Rick Rohrer at 293-5288, 24 hours in advance, to schedule for inspection.

$	195	00	4815

24 HOUR PRIOR NOTICE REQUIRED.
FOR INSPECTION CALL 784-8675.

THIS PERMIT IS CANCELLED
90 DAYS FROM THE DATE
OF ISSUANCE.

APPROVED BY:

Public Works — Date 11/31/95

Plan/Zone — Date

Council/Mgr. — Date

Other — Date

THIS IS YOUR RECEIPT WHEN MACHINE VALIDATED.

APPLICANT AGREES TO COMPLY WITH ALL OF THE APPLICABLE SECTIONS OF THE CITY OF HAYWARD MUNICIPAL CODE AND STANDARD SPECIFICATIONS.

X Appl Signature PW 14719

In consideration of the granting of this permit and other good and valuable consideration therefor, the undersigned intending to be legally bound, does hereby for the undersigned and the executors, administrators and assigns of the undersigned agree to indemnify and hold harmless the City of Hayward, the members of the City Council and their agents, servants and empl and each of them, from and against liability for injury to or death of persons, and/or liability for damage to property arising from any and all work herein permitted or, incidental thereto or may arise from failure of permittee to perform the obligations of permittee under this permit, with respect to maintenance.

APPLICANT

Rick Rohrer 12/15/94

R. Rohrer

CITY OF HAYWARD
APPLICATION AND PERMIT

AREA CODE 415
PHONE 784-8675

PROPER APPROVAL HEREON CONSTITUTES PERMIT

Application No. PW 147

APPLICANT Brown & Caldwell - Todd Miller	PO Box 8045, Walnut Creek, CA 94596	210-2278
OWNER E-Z Serve		
CONTRACTOR Turner Explorations		

JOB LOCATION: 525 W. A St.

THE APPLICANT HEREBY APPLIES FOR PERMISSION TO: (Describe Fully)

Drill four bors for groundwater sampling (2 on Victory Dr., @ on W. A St.) and install one groundwater monitoring well on Victory Dr. as shown on the attached figure 1. All work to done in conformance with Exhibit "A" Standard Conditions for Monitoring Wells. Approval o this permit is subject to the following special condition:

SEE ALSO PW 14722

~~All work including periodic monitoring is to be done between the hours of 8 80 am and 8 80 pm Monday through Friday~~

APPROVAL OF THIS PERMIT IS SUBJECT TO THE FOLLOWING SPECIAL CONDITIONS:

1. Drilling along "A" Street shall be done **weekends only** (Saturday and Sunday) between **8:00 a.m. and 12:00 noon**
2. Traffic control shall be as per City sketch (attached) (Typical traffic control.)
3. The ground water monitoring well-box shall be installed within the future sidewalk area and shall be as per City Standard SD-116, and SD121.
4. In the event of sidewalk construction or road improvements, the owner, and subsequent owners, shall be responsible for reimbursing the City of all costs to adjust or abandon the monitoring well.
5. The contractor shall provide an insurance policy naming the City of Hayward as co-insured.
6. The contractor shall contact Rick Rohrer at 293-5288, 24 hours in advance, to schedule for inspection.

$		
65	00	4818

24 HOUR PRIOR NOTICE REQUIRED.
FOR INSPECTION CALL 784-8675.

THIS PERMIT IS CANCELLED 90 DAYS FROM THE DATE OF ISSUANCE.

APPROVED BY:

Public Works: [signature]	Date: 11/3/94
Plan/Zone	Date
Council/Mgr.	Date
Other	Date

THIS IS YOUR RECEIPT WHEN MACHINE VALIDATED.

APPLICANT AGREES TO COMPLY WITH ALL OF THE APPLICABLE SECTIONS OF THE CITY OF HAYWARD MUNICIPAL CODE AND STANDARD SPECIFICATIONS.

X [signature]

In consideration of the granting of this permit and other good and valuable consideration therefor, the undersigned intending to be legally bound, does hereby for the undersigned and the executors, administrators and assigns of the undersigned agree to indemnify and hold harmless the City of Hayward, the members of the City Council and their agents, servants and emplo and each of them, from and against liability for injury to or death of persons, and/or liability for damage to property arising from any and all work herein permitted or, incidental thereto or may arise from failure of permittee to perform the obligations of permittee under this permit, with respect to maintenance.

APPLICANT

EXHIBIT "A"

STANDARD CONDITIONS FOR MONITORING WELLS

1. THE WELLS ARE TO BE INSTALLED BETWEEN THE HOURS OF 9:00 A.M. AND 3:00 P.M., MONDAY THROUGH FRIDAY. NO EVENING, WEEKEND, OR HOLIDAY WORK. MONITORING TO TAKE PLACE DURING THE SAME PERIOD.

2. THE APPLICANT SHALL CONFORM TO THE STATE OF CALIFORNIA MANUAL OF TRAFFIC CONTROLS FOR ALL CONSTRUCTION AND MONITORING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

3. THE APPLICANT SHALL COMPLY WITH STATE OF CALIFORNIA MANUAL OF WARNING SIGNS, LIGHTS, AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAYS.

4. A 4'x4'x4" CONCRETE PAD SHALL BE PLACED AT ALL WELLS INSTALLED IN THE PLANTER AREAS. THE CONCRETE PAD SHALL MATCH THE EXISTING TOP OF CURB AND SIDEWALK. WHEN WELL IS INSTALLED IN THE SIDEWALK AREA, SAW-CUT A MINIMUM OF 4'x4' AND REPLACE WITH NEW CONCRETE TO MATCH THE EXISTING SIDEWALK.

5. THE APPLICANT SHALL NOTIFY THE RESIDENTS OF PROPERTIES AFFECTED BY INSTALLATION OF MONITORING WELL, TWO (2) WORKING DAYS IN ADVANCE OF SUCH WORK.

6. THE APPLICANT SHALL ASSUME THE DEFENSE OF AND SHALL PAY ON BEHALF OF AND HOLD HARMLESS THE CITY, ITS OFFICERS, EMPLOYEES, VOLUNTEERS, AND AGENTS FROM AND AGAINST ANY OR ALL LOSSES, LIABILITIES, EXPENSES, CLAIMS, COSTS, SUITS AND DAMAGES OF EVERY KIND, NATURE, AND DESCRIPTION DIRECTLY OR INDIRECTLY ARISING FROM THE PERFORMANCE AND ACTION OF THIS PERMIT.

7. THE APPLICANT ASSUMES ALL RESPONSIBILITIES FOR DAMAGE TO EXISTING UNDERGROUND UTILITIES.

8. THE APPLICANT SHALL CALL UNDERGROUND SERVICE ALERT TOLL-FREE AT 1-800-642-2444, 48 HOURS PRIOR TO ANY EXCAVATION.

9. THE APPLICANT SHALL SUBMIT A COPY OF AN APPROVED WELL PERMIT FROM ZONE 7 WATER AGENCY, THE COUNTY OF ALAMEDA.

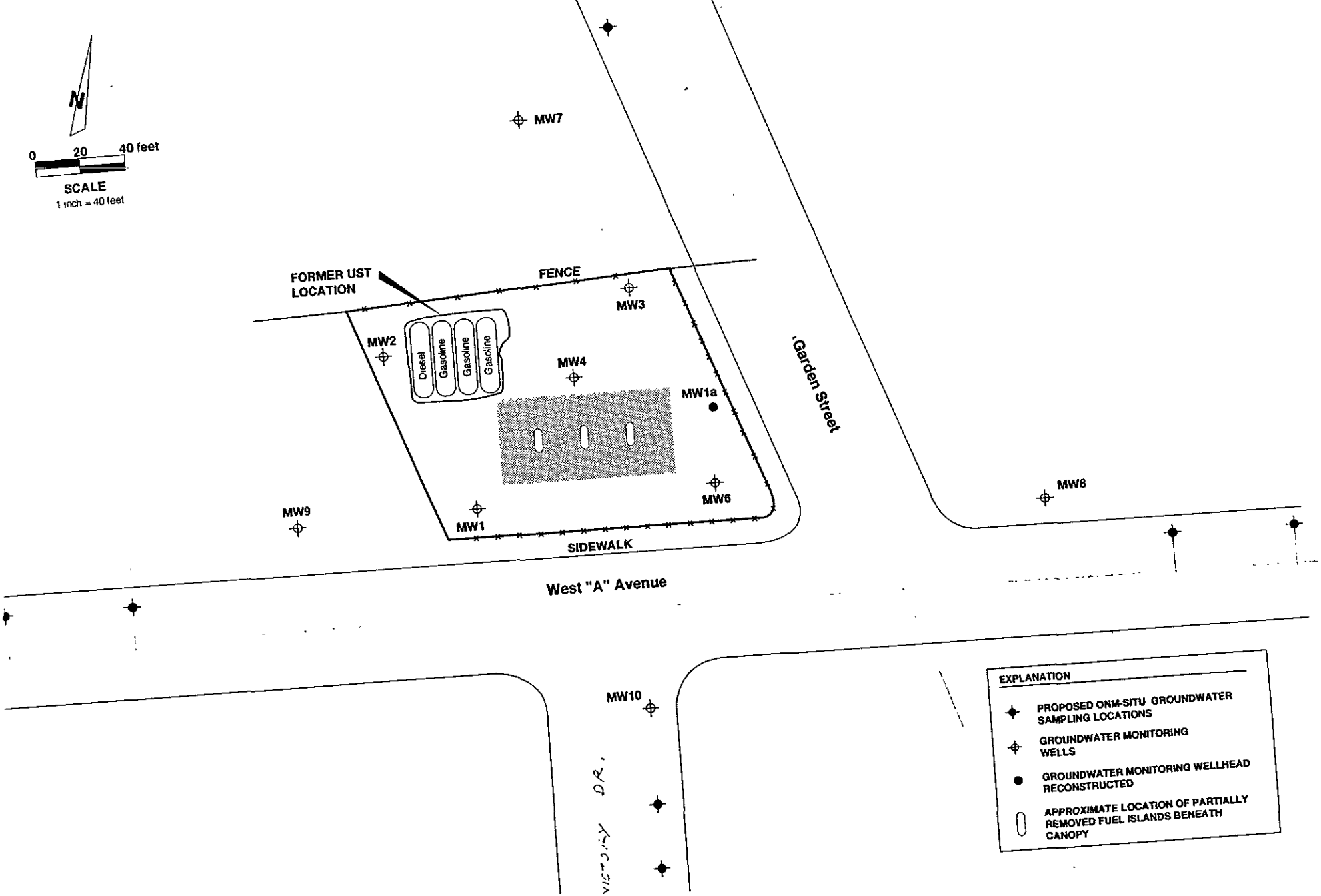


Figure 1 Proposed Sampling Locations

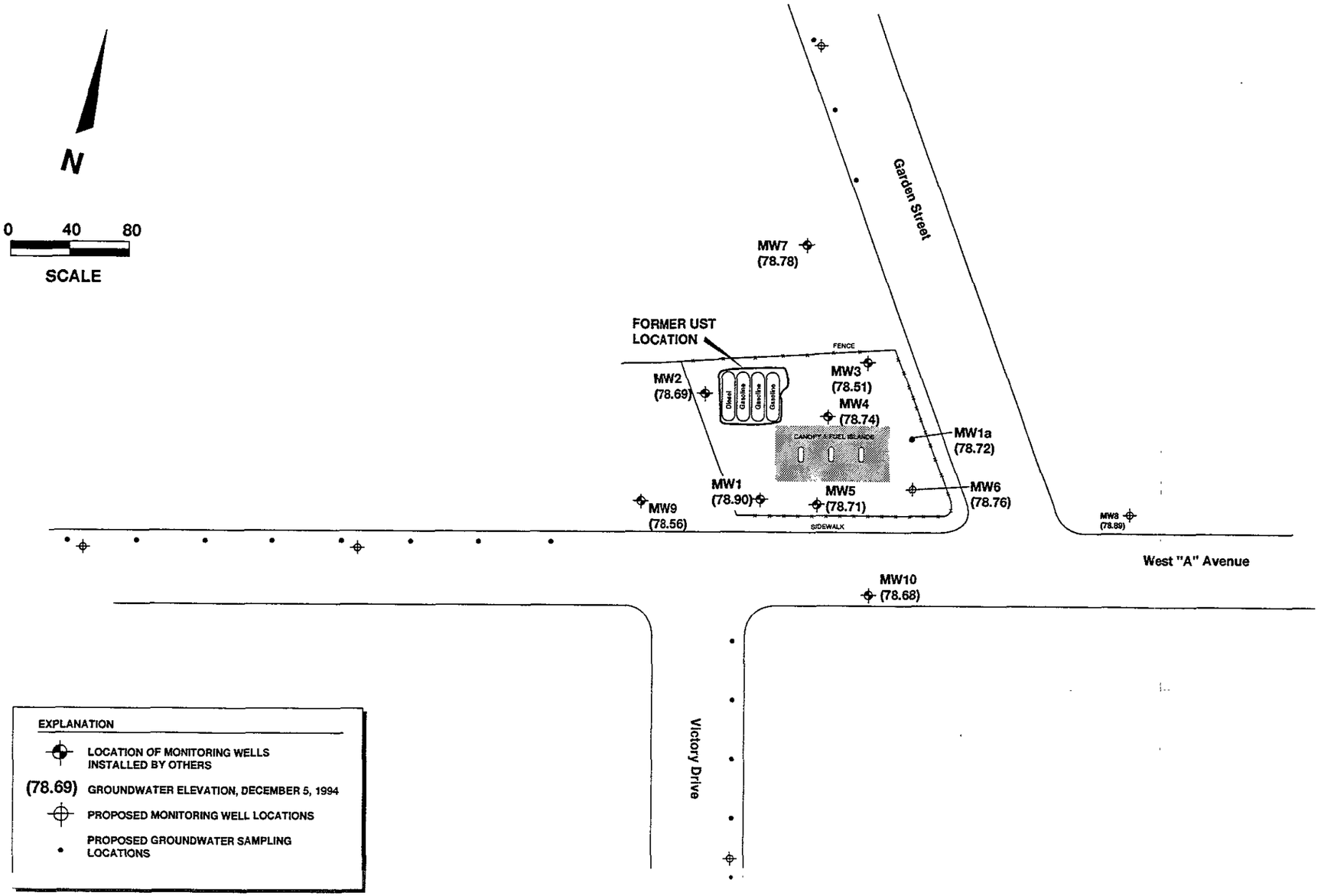


Figure 1 Former Proposed In-Situ Groundwater and Monitoring Well Locations

E-Z SERVE PROGRAM
TRAFFIC CONTROL PLAN FOR CONSTRUCTION ACTIVITIES IN CITY RIGHT-OF-WAYS

The following is a general traffic control plan for the E-Z Serve Management Company Underground Storage Tanks Program. Site specific details are included in the cover letter attached to this document and in the attached figure.

Purpose

Groundwater monitoring wells shall be installed at appropriate locations, identified by the Brown and Caldwell Project Manager, for the purpose of monitoring and/or remediating groundwater which has been affected by petroleum hydrocarbon constituents. This document describes the additional work necessary for construction of groundwater monitoring and/or extraction wells which are to be placed in the city right-of-way. For the purposes of this document the city right-of-way consists of all public right-of-ways controlled by the city and/or county including sidewalks and streets.

Traffic Control

Prior to beginning work the geologist/technician and/or subcontractor shall:

- Notify Underground Service Alert (USA) at 1-800-642-2444 of the nature of the work to be conducted and the start and stop dates. USA shall be notified a minimum of 48 hours prior to the beginning of construction work.
- Notify the appropriate office of the city or county at least 24 hours prior to beginning work.
- Place traffic control devices, including cones, "Men Working" signs and barriers, at the appropriate locations, in accordance with the site specific traffic control plan. Traffic control measures shall be in place a minimum of 30 minutes prior to beginning work.

While conducting the work, the staff geologist/technician and/or subcontractor shall:

- Conform to the city's noise abatement ordinances.
- Limit the work hours to those specified in the general permit conditions.

Housekeeping

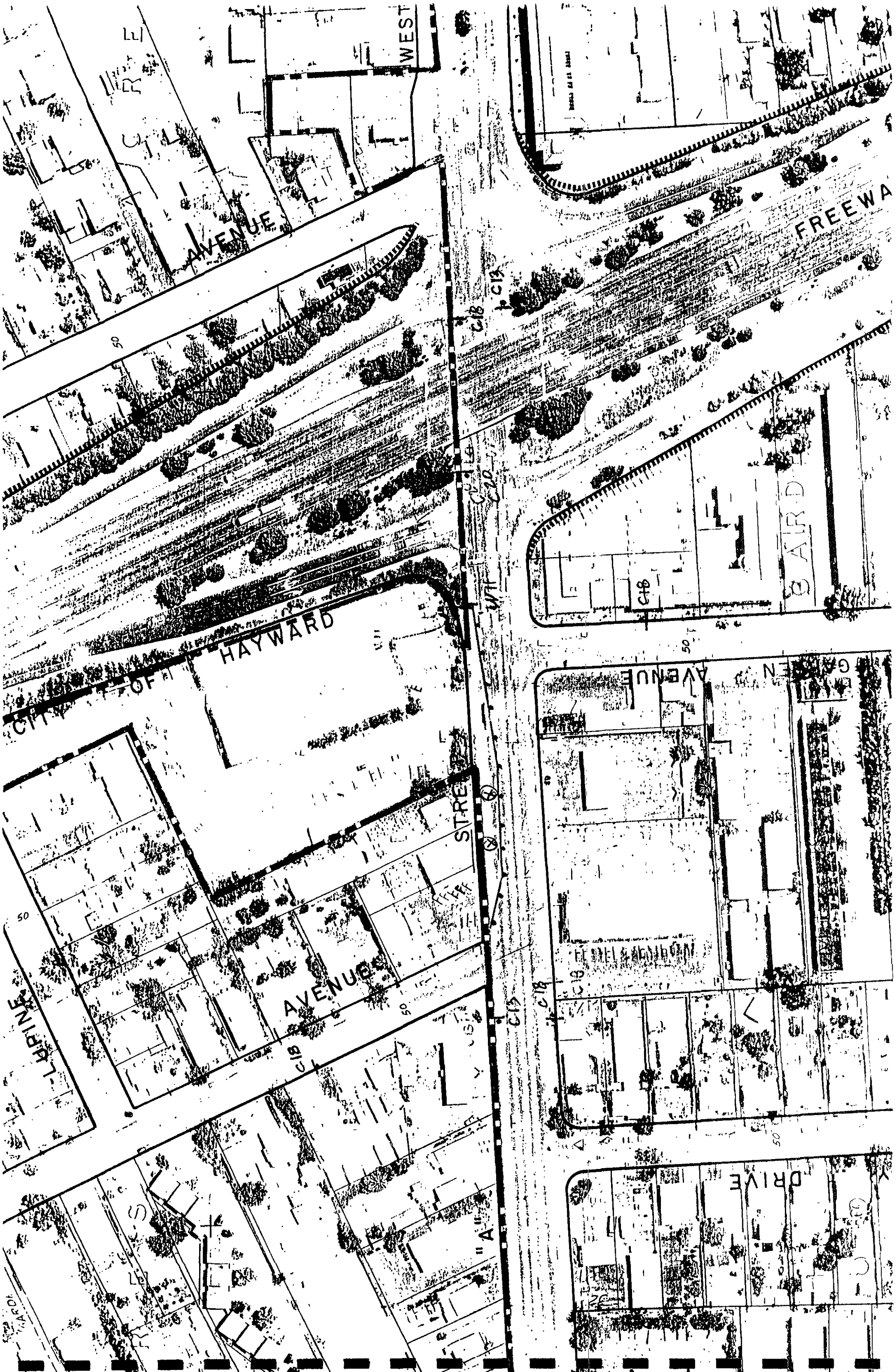
At the end of each work day, the geologist/technician will be responsible for the following items:

- All work areas shall be swept clean at the end of each work day.
- Any hazardous conditions left during non-working hours shall be barricaded and marked with flashers.
- Materials stockpiles, construction spoils, and/or equipment will be moved to the site prior to removing the traffic control devices.

Following the completion of the project, roadway and or sidewalks will be returned to their original condition. All installations will be completed flush with the existing grade and secured in-place using materials present in the existing surface (i.e. construction activities occurring in the street will be completed using the appropriate grade of asphalt concrete and construction activities occurring in the sidewalks will be completed using the appropriate grade of concrete)

Completion

Following the completion of the construction project Brown and Caldwell shall provide the City with appropriate as-built drawing illustrating the completion of any installation work and the location of the installation to scale.


WEST
AVENUE
FREEWA
HAYWARD
CITY OF
AVENUE
AVENUE
DRIVE
50

Todd

INCLUDE RATIONAL REPORT

BROWN AND CALDWELL

March 2, 1995

Ms. Madhulla Logan
Hazardous Materials Specialist
Alameda County Department of Health Services
1131 Harbor Bay Parkway
Alameda, California 94502

11-1564-07/2

Subject: Rational for Placement of Groundwater Monitoring Wells During Step 5 of the Phase II Site Investigation at E-Z Serve's Former Station #100877, 525 West A Street, Hayward, California

Dear Ms. Logan:

As you requested during our telephone conversation today, this letter summarizes the rational followed to determine the placement of three of the four off-site groundwater monitoring wells installed in the vicinity of the E-Z Serve Petroleum Marketing Company of California's Former Station #100877, 525 West A Street, Hayward, California (Site) on February 6 and 7, 1995.

As described in our work plan dated September 29, 1994, one of the objectives of the Step 5, Phase II investigation was to delineate the lateral extent of the petroleum hydrocarbon affected groundwater in the vicinity of the Site. To minimize the number of groundwater monitoring wells required to be installed an in-situ groundwater investigation was conducted. In-situ sampling locations were limited to area's owned by the City of Hayward to avoid delays in the work schedule that would have been associated with attempting to obtain access to numerous private properties. To speed up the investigation and collect real-time data, the in-situ groundwater samples were analyzed by BC Analytical's on-site mobile laboratory. Samples were analyzed for the presence of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylene isomers (BTEX) following EPA Methods 8015 modified and 8020. Sample analysis time was approximately one hour for each in-situ groundwater sample collected.

In-situ groundwater samples were collected from 17 different locations in the vicinity of the Site using a Hydropunch℠ sampling device. The in-situ groundwater investigation started at locations in close proximity to the site and moved away in steps as the analytical data became available (see attached figure). For example, to the west, the investigation began at sampling location HP-3 and moved progressively westward to locations HP-4 then HP-5. The

Environmental Engineering And Consulting • Analytical Services
P O Box 8045, Walnut Creek, CA 94596-1220
3480 Buskirk Avenue, Pleasant Hill, CA 94523-4342
(510) 937-9010 Fax (510) 937-9026

investigation then moved to a different area of interest while the groundwater samples were being analyzed. Analytical results identified TPHg and BTEX in the groundwater samples collected from these three locations, therefore, the investigation was continued to the west. An additional in-situ sample was collected from location HP-9. Analytical results again identified TPHg and BTEX in the in-situ groundwater sample collected from this location. The investigation was continue further to the west, at sampling location HP-13. Analytical results did not identify TPHg or BTEX at this location. Therefore, Well MW-11 was installed at a location, in the vicinity of sample location HP-13, which was accessible by the drilling rig.

Similar practices were followed for the installation of Wells MW-12 and MW-13. Analytical results did not identify TPHg or BTEX in the in-situ groundwater samples collected from sample locations HP-10 (south of the Site) and HP-11, HP-12, HP-14, and HP-15 (north of the site). Therefore, Wells MW-12 and MW-13 were installed at locations accessible by the drilling rig, in the vicinity of sample locations HP-15 and HP-10, respectively.

Well MW-14 was installed near in-situ groundwater sampling location HP-2 (an area identified as being affected by petroleum hydrocarbon constituents) because of the unexpectedly high concentrations of TPHg and BTEX identified at this sampling location. The information collected during the installation of Well MW-14 is expected to better define subsurface conditions existing in this area and help explain the presence of exceptionally high TPHg and BTEX concentrations identified in the in-situ groundwater sample collected from location HP-2. This well is also expected to assist in future remediation activities.

Results of the groundwater samples collected from these wells will be included in the site investigation report, which will be transmitted to you later this month. If you have any additional questions or concerns regarding the site investigation and/or results, please contact me at (510) 210-2278 at your earliest convenience.

Sincerely,

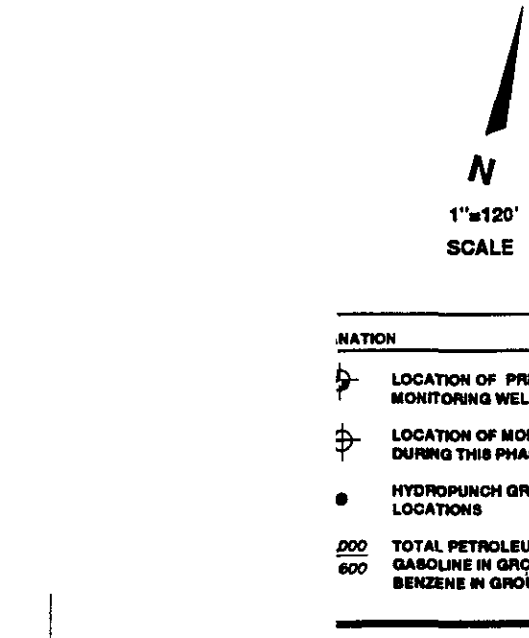
BROWN AND CALDWELL

Todd Miller
Project Manager

TM:evm

cc: Mr Brian Cobb, E-Z Serve Petroleum Marketing Company of California
Mr. Jon Wactor, Luce, Forward, Hamilton and Scripps

03/02/95\E:\LRE\1564\1564-07LTR-4.WP5
HPLaserIII



rve Petroleum Marketing Company of California
Former Station #100877
525 West A Street, Hayward, California

In-Situ Groundwater Sample Locations

R O W N AND
A L D W E L L

DATE 2-22-95

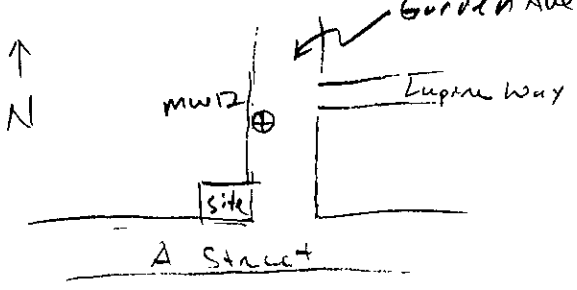
PROJECT 1564-07

Figure 2-2

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING



CLIENT EZ Serve - Hayward

LOCATION Garden / Lupine, Hayward JOB NO.

BORING NO. MW-12

SHEET 1 OF 2

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL	~ 13'			
TIME	~ 1:40			
DATE	2/6/95			

DRILLING START: TIME 1:10 pm DATE 2/6/95 FINI: TIME 1:50 DATE 2/6

DRILLING CONTRACTOR Towne

RIG TYPE Mobil B61

WELL CONSTR START: TIME 1:50 pm DATE 2/6/95 FINI: TIME 2:5 DATE 2/6

DRILLING METHOD, FLUID USED Hollow stem, 8" auger

SOIL SAMPLING METHOD split spoon, 2" x 6" brass liners

SURFACE ELEV.

MONITORING INSTRUMENT PID, microtip

SURFACE CONDITIONS asphalt

DRILLER R. Gustafson

DATE

CHECKED BY

DATE 2/6/95

LOGGED BY Glen VanderVeen

WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other
	0.5 ft	vault box					0							1225 begin breaking asphalt - posthole to clear utilities to 4'
		concrete												3" asphalt, ~6" Road base
							1			60	40		SC	Clayey, SAND, light brown, grey mottle, sl. moist, loose, sl. plastic
							2			50	50		CL-SC	Sandy CLAY, sl. moist, med stiff to stiff, dark grey, fine to med fine grained sand mixed with SC as above
							3							
							4							
							5		5	60	35		SC	Clayey, Sand, sl. moist, med. dense, fine to coarse sand, poorly sorted. Red-brown, some dark grey mottle, some gravel
	Grout	Test Pits	4 5 7			X	6	0		80	20		SP	SAND, sl. moist, med dense, Red-brown, fine gr mod. well sorted No odor
							7							
							8							
							9							
			4 4 7			X	10			15	85		SP	as above, moist
							11	0					SC	sandy CLAY, Red-brown, orange ox. bands, moist soft to med stiff, some veg. fragments
							12							
							13							
							14							Encs. gw 10-15' (?) - drill sampler in
							15							
			7 12 19			X	16	0		20	80		SC	sandy clay, sl. moist, light grey, Red-brown mottle, med. plastic, fine grained sand stiff to very stiff moist to wet
							17							
							18							
							19							
							20							

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING

MW12
P2/2

CLIENT				BORING NO.
LOCATION			JOB NO.	
	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL				
TIME				
DATE				

SHEET OF

DRILLING	START	FINIS
TIME		TIME
DATE		DATE

WELL CONSTR.	START	FINIS
TIME		TIME
DATE		DATE

DRILLING CONTRACTOR

RIG TYPE

DRILLING METHOD, FLUID USED

SOIL SAMPLING METHOD

SURFACE ELEV.

MONITORING INSTRUMENT

SURFACE CONDITIONS

DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other

DRILLER

DATE

CHECKED BY

DATE

LOGGED BY

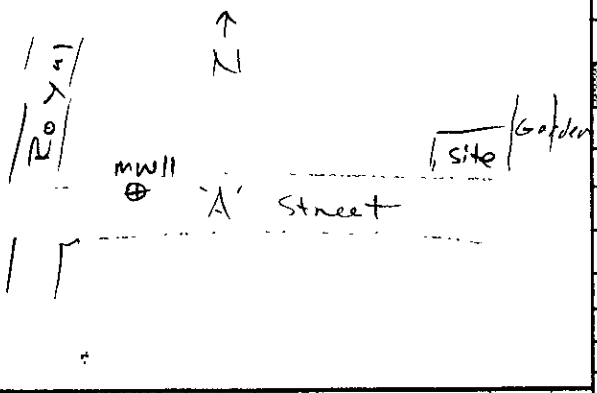
WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION
			11				20			30	70		SC	as above, Sl. increase in sand content
			10			X								No odor
			14					0						
							1							
							2							
							3							
							4							
		2/12 Sand												
							25							Driller observed change at 25'
			4							70	30		SM	Silty sand, wet, brown, med dense to dense
			5					0						fine to very fine grained, mod well sorted
			6				6							No odor
							7							
							8							
							9							
							30							
			7							60	40		SM	as above, Sl. increase SH content
			9					0					SC	Sandy Clay, moist to wet, med. stiff, Red-brown
							1							fine gr Sand, mod. plastic
							2							
														TD = 30'
							3							
														20' 2" 0.02" slot sch. 40 PVC
							4							10' 2" blank
							5							Drum #3 0-20'
														Drum #4 20-30' + clean up
							6							Drum #5 clean up (1/4 full)
														2/12 Sand Lonestar Lapis Lustre - 7 bags
							7							3/8" bent. chips - Baroid Holeplug - 2 bags
							8							flush mount EMCO Wheaton well box
														at surface
							9							
							0							

0.02" 5/8"

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING



CLIENT	EZ Serve
LOCATION	West 'A' St, Hayward
JOB NO.	
BORING NO.	MW-11
SHEET	1 OF 2

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL	13'			
TIME	9:40 (approx)			
DATE	2/6/95			

DRILLING CONTRACTOR	Touto
RIG TYPE	Mobil B61
DRILLING METHOD, FLUID USED	Hollow stem, 8" augers
SOIL SAMPLING METHOD	Split spoon, 2"x6" brass liners
MONITORING INSTRUMENT	PID, microTIP
SURFACE CONDITIONS	asphalt
SURFACE ELEV.	

DRILLING		WELL CONSTR	
START	FINI	START	FINI
TIME 0900	TIME 100	TIME 1000	TIME 117
DATE 2/6/95	DATE 2/6	DATE 2/6/95	DATE 2/6

DRILLER R. Gaustafson

DATE

CHECKED BY Blank →

DATE 2/6/95

LOGGED BY Glen VanderVeen

WELL CONST-RUCTION		SOIL SAMPLING							ESTIMATED PERCENT					
CASING	ANNULUS	SAMPLER TYPE	BLOWS/6" INTERVAL	INTERVAL SAMPLED	RECOVERY	ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	GRAVEL	SAND	FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other
							0							8:50 begin breaking asphalt
														post hole to clear no utilities to 4'
							1							~4" asphalt
										10	90		CL	6" roadbase (gravelly SAND, sl. moist, dry, dense)
							2							sandy CLAY, sl. moist, mod. stiff, fine to coarse sand
														Dark grey (915-930 stop for repairs)
							3							
							4							
			5				5	0		75	25		SM	Silty SAND, light reddish brown, moist, mod dense
			6											loose, fine gr. sand, moderately well sorted
			7				6							little/no gravel or coarse sand, brown
							7							
							8							
							9							
							10	0		75	25			as above, grey, Red Root casts
														increasing fines
							11			35	65			moderately
													ML	Sandy silt, moist, loose, some clay, plastic
							12							light grey
							13							Driller observ. - GW at 13'
							14							
							15							
			7				16	310		60	40		SC	Clayey sand, moist, Red brn, light grey mottle,
			10											dense to very dense, sl. plastic to mod. plast.
			16				17							Hydrocarbon odor (gasoline)
							18							
							19							
							20							

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING

mw11
p2/2

CLIENT		BORING NO.
LOCATION	JOB NO.	

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL				
TIME				
DATE				

SHEET OF

DRILLING START	DRILLING FINIS
TIME	TIME
DATE	DATE

DRILLING CONTRACTOR

RIG TYPE

DRILLING METHOD, FLUID USED

WELL CONSTR. START	WELL CONSTR. FINIS
TIME	TIME
DATE	DATE

SOIL SAMPLING METHOD

SURFACE ELEV.

MONITORING INSTRUMENT

SURFACE CONDITIONS

DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other

DRILLER

DATE

CHECKED BY

DATE

LOGGED BY

WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL
			3				20			60	40		SM
			4					1800					
			5				1						
							2						
		2/12 sand					3						
							4						
							25						
			4							85	15		SP
			7				6	1420					
			10				7						
							8						
							9						
							30						
							1						
							2						
							3						
							4						
							5						
							6						
							7						
							8						
							9						
							40						

sch. 40 PVC 2" ø slot .02"

Silty SAND, non plastic, wet, brown-grey, med dense to loose, fine-very fine grained, NE odor.

SAND, wet, med dense to loose, brown to grey brown, fine to med. grained (pred. fine) trace coarse sand, SL. HC odor.

1000 finish drilling, TD=25'

Drum #1 0-20
#2 20-25 + clean-up

Sch. 40 PVC
20' x .02" slot
10' blank - 5' cut off

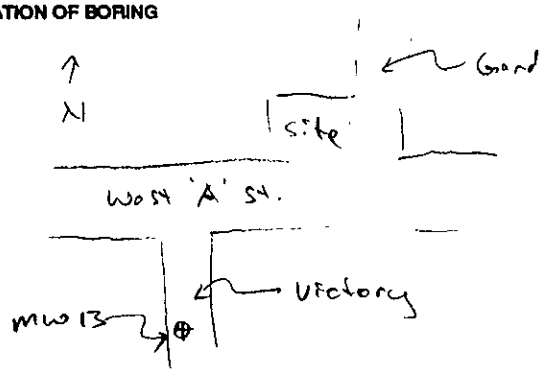
2/12 Longstar sand (Lapis Lustre) pour sand slowly (no 2" sand) - 7 bags

- 5/8" bentonite chips, Baroid Hole plug top bent 1.5'
- concrete to surface
flush mounted Emco Wheaton box at surface

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING



CLIENT	EZ Serve Hayward
LOCATION	Victory St, Hayward
JOB NO.	
BORING NO.	MW-13
SHEET	1 OF 2

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL	~17'			
TIME	0815			
DATE	2/7/95			

DRILLING	START	FINISH
TIME	7:40 am	8:3
DATE	2/7/95	2/7

WELL CONSTR	START	FINI
TIME	830	103
DATE	2/7/95	2/7

DRILLING CONTRACTOR Tonto

RIG TYPE Mobil B61

DRILLING METHOD, FLUID USED Hollow stem, 8" auger

SOIL SAMPLING METHOD split spoon, 2" x 6" brass liner

SURFACE ELEV.

MONITORING INSTRUMENT Nose

SURFACE CONDITIONS asphalt

DRILLER R. Gustafson

DATE

CHECKED BY

DATE 2/7/95

LOGGED BY Glen Voudoris Vroon

WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other
Blank	Bentonite	Well box					0							7:40 am - begin breaking asphalt
		Concrete												~4" asphalt, ~4" Road base - post hole to 4'
							1			10	90		CL	sandy CLAY, sl. moist, dark grey, med stiff to stiff very fine sand, no odor
							2							
							3							
							4							
			6				5			60	40		SC	Clayey sand, fine gr sand, sl. plast., sl. moist, dense, brown
			7			X				70	30		SM	grades to
			14				6							silty SAND, yell. brn, sl. moist, non-plast., med. dense, No odor, fine-gr.
							7							
							8							
							9							
			4				10			30	70		ML	sandy silt, light br-grey, sl. moist to moist, sl. plastic,
			5											med dense, fine-gr. sand, No odor
			7			X								some orange mottle (as oxid.)
							1							
							2							
							3							
							4							
			7				15			60	40		SC	clayey SAND, light grey with red-brown mottle,
			14											sl. plastic, dense to very dense, sl. moist, very fine
			19			Y	16							sand, No odor
							17							
							18							
							19							
							20							GW between 16.5-20

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING

MW13
P2/2

CLIENT

BORING NO.

LOCATION | JOB NO.

SHEET OF

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL				
TIME				
DATE				

DRILLING: START (TIME / DATE) | FINIS (TIME / DATE)

DRILLING CONTRACTOR

RIG TYPE

DRILLING METHOD, FLUID USED

WELL CONSTR.: START (TIME / DATE) | FINIS (TIME / DATE)

SOIL SAMPLING METHOD | SURFACE ELEV.

MONITORING INSTRUMENT

SURFACE CONDITIONS

DRILLER

DATE

CHECKED BY

LOGGED BY

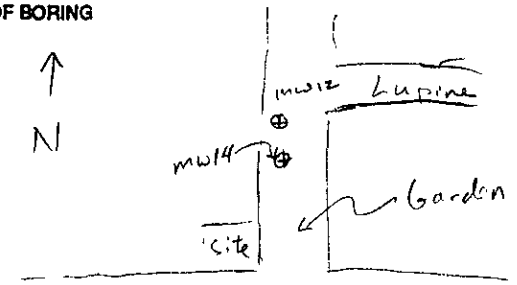
WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other
			5				20			40	60		ML	sandy SILT, wet, light grey w/ Red-brown mottle, med dense, No odor, fine-gr sand
			10											Slight to no plasticity
			10				1							
		2/12 sand					2							
							3							
							4							
			4				25			60	40		SM	silty SAND, wet, light grey, med dense, no odor
			5				6							fine sand, some Red-brn mottle
			11				7							
							8							
							9							
		Appear blow count	11							80	20		SP	SAND, wet, grey-brown, med dense, no odor
			11											fine grained, well sorted, some Red brown mottle
			12				30							
							1							8:30 finish drilling TD = 30 31'
							2							
							3							20' of 0.02" slot, 2" ϕ, sch 40 PVC
							4							10' blank
							5							8:40 pull casing out - sand in auger
							6							(pressure wash screen to clean off fines)
							7							- poured sand in auger w/ hammer - Drill out to 3
							8							- casing back in 8:50 - some sand still in auger
							9							water down hole
							0							9:20 begin pouring sand - 8 1/2 bags
														10:15 seal - 1, 3/8" bentonite chips 2 1/2 bags Bentonite
														chips to ~1' - cement, flush mount SMCO
														Drum #6 0-20 monitor well
														Drum #7 20-30' + clean up

2" ϕ .02" slot

Brown and Caldwell Consultants

BOREHOLE/WELL LO

LOCATION OF BORING



CLIENT	EZ Serve Hayward			BORING NO. mw-14
LOCATION	SE Lupine on Garden	JOB NO.		SHEET 1 OF
	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL	2/3'			
TIME	12 15			
DATE	2/7/95			

DRILLING: START TIME 1110 am, DATE 2/7/94; FINISH TIME 1225, DATE 2/7/94

DRILLING CONTRACTOR Tonto

RIG TYPE Mobil B61

DRILLING METHOD, FLUID USED Hollow stem, 8" auger

WELL CONSTR. START TIME / DATE; FINISH TIME / DATE

SOIL SAMPLING METHOD Split spoon, 2"x6" brass liners

SURFACE ELEV.

MONITORING INSTRUMENT PID, microtip

SURFACE CONDITIONS asphalt

DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other

DRILLER R. Grusta/Som

DATE

CHECKED BY

DATE 2/7/95

LOGGED BY Lalen Vander Veen

DEPTH IN FEET	WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION
0		Cement												4" asphalt, ~4" Road base, post hole to 4'
1										70	30		SC	Clayey SAND, dark grey, sl. moist, med dense to d fine to very fine sand, non-plastic to sl. plastic
2														
3														
4														
5		Grout	Shelby tube	11						75	25		SC	clayey Sand, red-brown, sl. moist,
6				15				0						med dense, non plastic, fine grained
7				20			X							
8														
9														
10				3						60	40		SM	silty SAND, moist, brown, red-brown mottle,
11				6				0						med dense, fine grained
12				5			X							
13														
14														
15				4						60	40		SM	silty SAND, moist to wet, grey, med dense, non plastic
16				5										
17				6			X	0		15	85		CL	Clay, moist to wet grey, med stiff, mod. plastic
18														some sand, fine grained
19														
20														

Brown and Caldwell Consultants

BOREHOLE/WELL L

LOCATION OF BORING

CLIENT

BORING NO.

LOCATION | JOB NO.

	AT TIME OF DRILLING	SECOND	THIRD	FOURTH
WATER LEVEL				
TIME				
DATE				

SHEET OF

DRILLING START TIME DATE | FINIS TIME DATE

DRILLING CONTRACTOR

RIG TYPE

DRILLING METHOD, FLUID USED

WELL CONSTR. START TIME DATE | FINIS TIME DATE

SOIL SAMPLING METHOD | SURFACE ELEV.

MONITORING INSTRUMENT

SURFACE CONDITIONS

DESCRIPTION: Group Name, Moisture, Color, Consistency, Density, Other

DRILLER | DATE | CHECKED BY | DATE | LOGGED BY

WELL CONSTRUCTION: CASING	WELL CONSTRUCTION: ANNULUS	SOIL SAMPLING: SAMPLER TYPE	SOIL SAMPLING: BLOWS/6" INTERVAL	SOIL SAMPLING: INTERVAL SAMPLED	SOIL SAMPLING: RECOVERY	SOIL SAMPLING: ANALYTICAL SAMPLE	DEPTH IN FEET	INSTRUMENT READING (ppm)	ESTIMATED PERCENT: GRAVEL	SAND	FINES	MUNSELL COLOR NO.	USCS GROUP SYMBOL	DESCRIPTION
							20			65	35		SC	Clayey SAND, moist, Red-brown, dense to very dense fine gr. sand, moderate HC (gas) odor
			14											
			17					2000						
			22				1			70	30		SM	silty SAND, wet, grey, med dense, fine gr sand, mod. to strong odor
							2							
2" ϕ .02"		2/12 sand					3							
							4							
			6				25			20	80		CL	sandy CLAY, wet, grey, med stiff sl. HC odor
			6					200						
			12				6			60	40		SC	clayey SAND, Red-brn, moist to wet, dense
							7							
							8							
							9							
							30							
			5							70	30		SM	silty SAND, Red-brn, wet, med dense sl. HC odor, grey mottle, fine sand
			7				1	165						
			10											20' .02" slot, 2" ϕ, sch 40 PVC
							2							10' blank
														2/12 sand - top 8'
							3							12 55 seal in, 3/8" bentonite top at 5'
							4							
							5							
							6							
							7							
							8							
							9							
							0							

Brown and Caldwell

BROWN & CALDWELL
WELL INFORMATION DATA

DATE: 2-10-95

JOB NAME: EZ SERVE HAYWARD

JOB #: 1564.02

B&C PERSONNEL: STWAR

LOCK TYPE: DOLPHIN

WEATHER: OVERCAST 60°

LID TYPE: CHRISTY

INSTRUMENT: SOLNST

WELL ID	SWL	TD	DIA	TIME	COMMENTS
MW-11	11.80	25.0'	2"	0922	
MW-12	16.30	31.0'	2"	0912	
MW-13	14.45	30.5'	2"	0929	
MW-14	16.28	31.5'	2"	0916	
					* ALL WELLS HAVE BEEN MARKED
					AND LOCKING CAPS HAVE BEEN INSTALLED.
					NO Dolphin locks AT THIS TIME

MONITORING WELL DEVELOPMENT RECORD

DATE: 2-13-95 WELL I.D.: MW-4

PROJECT NAME: EZ Serve Hayward LOCATION: A Street Hayward

PROJECT NUMBER: 1564-02 DEVELOPER: Stinar

☐ INITIAL DEVELOPMENT DATE: _____ ☐ REDEVELOPMENT DATE: _____ ADDITIONAL DEVELOPMENT DATE: _____

WELL DATA

Well Diameter	2"
Total Well Depth	25'
Depth to Top of Screen	5'
Depth to Bottom of Screen	25'
Depth to Static Water Level	11.80

Water Column 13.2'

Geology at Screened Interval	
Likely Contaminants	
Purge Water and Sediment Disposal Method	55 gallon Drum

DEVELOPMENT METHOD	PURGING METHOD	PERMEABILITY TEST RESULTS
2" Swab	13.2' x .163 = 2.15 gal/casing	Initial Depth 22.0'
Bail Loose Sediments	Sand Pack 13.2 x 2.45 x .35 = 11.3 gal	
Remove 5 vol's or less	11.3 gal + 2.15 gal = 13.4 gal	
Than 100 NTU's.	Per vol.	
	13.4 x 5 = 67.3 gal = 5 Vol.	

ACCEPTANCE CRITERIA

SWL	Vol.	Time	Temp.	pH	S.C.	Turb.	Remarks
21.10	10	1023	20.1	6.60	1030	+100	Sediments, Silts, Brownish
	12	1025	20.1	6.61	1,030	+100	Well dries out.
	21	1100	20.0	6.78	942	+100	Clearing. Total Depth has dropped 2"
	30	1110	20.1	6.77	945	+100	Dries out Re-Swab
	55	1150	20.1	6.73	840	+100	
	75	1200	20.0	6.78	835		Well will now Pump Thru
	95	1210	20.1	6.74	837		But turbidity is still above 100
12.90	110	1220	20.1	6.72	840		
Sample		1230	20.0	6.75	850	Just over 100 NTU	* Purge water has fuel odor.

MONITORING WELL DEVELOPMENT RECORD

DATE: 2·10·95 WELL I.D.: 100877 MW-12

PROJECT NAME: EZ. SERVE HAYWARD LOCATION: GARDEN + LUPINE NORTH

PROJECT NUMBER: 1564·02 DEVELOPER: STINAR

☑ INITIAL DEVELOPMENT DATE: 2·10·95 ☐ REDEVELOPMENT DATE: _____ ADDITIONAL DEVELOPMENT DATE: _____

WELL DATA

Well Diameter	2"	Geology at Screened Interval	
Total Well Depth	31'		
Depth to Top of Screen	10'	Likely Contaminants	
Depth to Bottom of Screen	30'		
Depth to Static Water Level	16.30'	Purge Water and Sediment Disposal Method	55 gal Drum

WATER Column = 14.7'

DEVELOPMENT METHOD	PURGING METHOD	PERMEABILITY TEST RESULTS
2" SWAB & BAIL LOOSE	14.7 x .163 x = 2.3 gal	
SEDIMENTS	SAND PACK 14.7 x 2.45 x .35 = 12.6	
	12.6 + 2.3 = 14.9 gal./vol	
	14.9 x 5 = 74.5 gals	
PURGE WELL UNTIL		
TURBIDITY IS BELOW 100 NTU		

ACCEPTANCE CRITERIA

SWL	Vol.	Time	Temp.	pH	S.C.	Turb.	Remarks
	15	1320	19.9	7.19	979	+100	BROWNISH CLAYEY SILT
	30	345	20.1	6.84	919	+100	SAME
	45	1400	20.0	6.85	921	+100	SURGING WELL 3 gpm
	90	1415	20.1	6.81	905	+100	CLEARING
	110	1423	20.0	6.84	986	92.5	"
	125	1430	20.1	6.79	979	85.0	"
Sample		1440	20.0	6.81	983	78.1	

MONITORING WELL DEVELOPMENT RECORD

DATE: 2.13.95 WELL I.D.: 100877 MW-13

PROJECT NAME: EZ SERVE HAYWARD LOCATION: 21997 VICTORY

PROJECT NUMBER: 1564.02 DEVELOPER: STINAR

☑ INITIAL DEVELOPMENT DATE: 2.13.95 ☐ REDEVELOPMENT DATE: _____ ADDITIONAL DEVELOPMENT DATE: _____

WELL DATA

Well Diameter	2"	Geology at Screened Interval	
Total Well Depth	30.5'		
Depth to Top of Screen	10.'	Likely Contaminants	
Depth to Bottom of Screen	30.0'		
Depth to Static Water Level	14.45	Purge Water and Sediment Disposal Method	55 gal Drum

Water Column 16.05

DEVELOPMENT METHOD	PURGING METHOD	PERMEABILITY TEST RESULTS
2" SWAB	16.05 x .165 = 2.6 gal	
BAIL SEDIMENTS	SAND FILTER PACK 16.05 x 2.45 x .35	
	= 13.7 gal + 2.6 gal = 16.3 gal	
	16.3 gal x 5 = 81.8 gal	
	= 5 Vol.	

ACCEPTANCE CRITERIA

SWL	Vol.	Time	Temp.	pH	S.C.	Turb.	Remarks
	10	1350	22.5	7.19	1,145	>100	HEAVY SEDIMENTS
	14	1355	22.1	7.14	1,128	>100	DRIES OUT
	30	1410	22.0	7.09	1,010	>100	CLEARING
	33	1415	20.1	7.01	975	>100	DRIES OUT
	45	1430	20.1	6.99	970	>100	
	55	1445	20.1	6.97	967	>100	
	65	1500	20.0	6.96	973	95.3	
	75	1515	20.1	6.95	975	90.2	CLEARING
	85	1530	20.1	6.95	968	88.5	
Sample		1540	20.2	6.94	971	97.6	PUMP RATE 1 gpm

Brown and Caldwell

MONITORING WELL DEVELOPMENT RECORD

DATE: 2.10.95 WELL I.D.: MW-14

PROJECT NAME: 62-SERVE HAYWARD LOCATION: HAYWARD A STREET & SOUTH L

PROJECT NUMBER: 1564.02 DEVELOPER: STINAR

☑ INITIAL DEVELOPMENT DATE: 2.10.95 ☐ REDEVELOPMENT DATE: _____ ADDITIONAL DEVELOPMENT DATE: _____

WELL DATA

Well Diameter	2"	Geology at Screened Interval	
Total Well Depth	31.5'		
Depth to Top of Screen	10'	Likely Contaminants	
Depth to Bottom of Screen	30'		
Depth to Static Water Level	16.28	Purge Water and Sediment Disposal Method	55 gal. Drum

Water Column: 15.22 x .163 = 2.4 gal

DEVELOPMENT METHOD	PURGING METHOD	PERMEABILITY TEST RESULTS
SWA,3 + BAIL	2.4 gal x 2.45 x 15.22' x .35	
	~~= 31.3 gal per Casing~~	
2" BAILER	13.0 gal (SAND PACK) + 2.4 gal	
	15.4 gal per Volume	
	~~77.1 gal~~ = 5 vol	

ACCEPTANCE CRITERIA

SWL	Vol.	Time	Temp.	pH	S.C.	Turb.	Remarks
	15	1115	20.1	7.14	915	+100	BROWNISH SILTS
	30	1130	20.0	7.07	900	+100	CLEARING SOMEWHAT
	45	1145	20.0	6.84	894	+100	
	60	1200	20.1	6.94	895	96.2	CLEARING
	75	1215	20.0	6.86	887	15.0	
SAMPLE		1225	20.1	6.88	890	14.0	

APPENDIX C

ANALYTICAL LABORATORY DATA SHEETS

CHAIN OF CUSTODY FORMS

B C Analytical

1200 Gene Autry Way
Anaheim, CA 92805
714/978-0113
Fax: 714/978-9284

ANALYTICAL REPORT

LOG NO: A95-02-003

Received: 06 FEB 95
Mailed : 13 FEB 95

Mr. Todd Miller
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, Ca. 94523

Project: 1564-02

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-003-1	HP-1	02 FEB 95
02-003-2	HP-2	02 FEB 95
02-003-3	HP-3	02 FEB 95
02-003-4	HP-4	02 FEB 95
02-003-5	HP-5	02 FEB 95

PARAMETER	02-003-1	02-003-2	02-003-3	02-003-4	02-003-5
EPA Modified 8015/8020					
Date Analyzed	02/02/95	02/02/95	02/02/95	02/02/95	02/02/95
Date Extracted	02/02/95	02/02/95	02/02/95	02/02/95	02/02/95
Dilution Factor, Times	1	250	10	1	1
Benzene, ug/L	15	600	78	<0.5	<0.5
Toluene, ug/L	3.4	180	<5	<0.5	<0.5
Ethylbenzene, ug/L	8.1	3800	73	3.2	1.3
Total Xylene Isomers, ug/L	3.9	13000	180	12	5.1
TPH-Volatile Hydrocarbons, ug/L	1100	170000	2800	240	230
Carbon Range, .	C6-C12	C6-C12	C6-C12	C6-C12	C6-C12
Other EPA Modified 8015/8020	---	---	---	---	---

BCA

B C Analytical

1200 Gene Autry Way
Anaheim, CA 92805
714/978-0113
Fax: 714/978-9284

LOG NO: A95-02-003

Received: 06 FEB 95
Mailed : 13 FEB 95

Mr. Todd Miller
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, Ca. 94523

Project: 1564-02

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-003-6	HP-6	02 FEB 95
02-003-7	HP-7	02 FEB 95
02-003-8	HP-8	02 FEB 95
02-003-9	HP-9	02 FEB 95
02-003-10	HP-10	03 FEB 95

PARAMETER	02-003-6	02-003-7	02-003-8	02-003-9	02-003-10
EPA Modified 8015/8020					
Date Analyzed	02/02/95	02/02/95	02/02/95	02/02/95	02/03/95
Date Extracted	02/02/95	02/02/95	02/02/95	02/02/95	02/03/95
Dilution Factor, Times	10	10	1	1	1
Benzene, ug/L	1000	1000	4.6	<0.5	<0.5
Toluene, ug/L	40	32	2.2	<0.5	<0.5
Ethylbenzene, ug/L	1500	490	2.1	1.3	<0.5
Total Xylene Isomers, ug/L	1500	340	5.0	4.0	<0.5
TPH-Volatile Hydrocarbons, ug/L	22000	11000	780	100	<50
Carbon Range, .	C6-C12	C6-C12	C6-C12	C8-C12	---
Other EPA Modified 8015/8020	---	---	---	---	---

BCA

B C Analytical

1200 Gene Autry Way
Anaheim, CA 92805
714/978-0113
Fax: 714/978-9284

LOG NO: A95-02-003

Received: 06 FEB 95
Mailed : 13 FEB 95

Mr. Todd Miller
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, Ca. 94523

Project: 1564-02

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-003-11	HP-11	03 FEB 95
02-003-12	HP-12	03 FEB 95
02-003-13	HP-13	03 FEB 95
02-003-14	HP-14	03 FEB 95
02-003-15	HP-15	03 FEB 95

PARAMETER	02-003-11	02-003-12	02-003-13	02-003-14	02-003-15
EPA Modified 8015/8020					
Date Analyzed	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95
Date Extracted	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95
Dilution Factor, Times	1	1	1	1	1
Benzene, ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene, ug/L	0.84	<0.5	<0.5	<0.5	<0.5
Ethylbenzene, ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylene Isomers, ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
TPH-Volatile Hydrocarbons, ug/L	<50	<50	<50	<50	<50
Other EPA Modified 8015/8020	---	---	---	---	---

BCA

B C Analytical

1200 Gene Autry Way
Anaheim, CA 92805
714/978-0113
Fax: 714/978-9284

LOG NO: A95-02-003

Received: 06 FEB 95
Mailed : 13 FEB 95

Mr. Todd Miller
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, Ca. 94523

Project: 1564-02

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-003-16	HP-16	03 FEB 95
02-003-17	HP-17	03 FEB 95

PARAMETER	02-003-16	02-003-17
EPA Modified 8015/8020		
Date Analyzed	02/03/95	02/03/95
Date Extracted	02/03/95	02/03/95
Dilution Factor, Times	1	1
Benzene, ug/L	4.2	3.8
Toluene, ug/L	<0.5	<0.5
Ethylbenzene, ug/L	11	5.8
Total Xylene Isomers, ug/L	26	15
TPH-Volatile Hydrocarbons, ug/L	310	110
Carbon Range, .	C6-C12	C6-C12
Other EPA Modified 8015/8020	---	---

Frederick W. Haley, Laboratory Manager

BCA

CHAIN OF CUSTODY RECORD

→ Bill & send report to:

BCA Log Number 495-02-003

Client name: BC Pleasant Hill

Project or PO#: 1564-02

Address:

Phone #:

City, State, Zip:

Report attention: Todd Miller

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8020	8015 - GAS					Hazardous sample Special handling required	Remarks
						Analyses required							
1	2/2/95		GW	HP-1	2	X	X						
2	2/2/95		GW	HP-2	2	X	X						
3	2/2/95		GW	HP-3	2	X	X						
4	2/2/95		GW	HP-4	2	X	X						
5	2/2/95		GW	HP-5	2	X	X						
6	2/2/95		GW	HP-6	2	X	X						
7	2/2/95		GW	HP-7	2	X	X						
8	2/2/95		GW	HP-8	2	X	X						
9	2/2/95		GW	HP-9	2	X	X						
10	2/3/95	8:15 AM	GW	HP-10	2	X	X						
11	2/3/95	9:00 AM	GW	HP-11	2	X	X						
12	2/3/95	9:55 AM	GW	HP-12	2	X	X						

	Signature	Print Name	Company	Date	Time
Relinquished by		Glen Vander Veen	BC	2/3/95	1015
Received by		FRED HALEY	BCA	2/3/95	1015
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number A95-02-003

Client name	Project or PO#
Address	Phone #
City, State, Zip	Report attention

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8015-GAS	8020	Hazardous sample Special handling required	Remarks
13	2/3/95	11:30am	GW	HP-13		X	X		
14	2/3/95	11:00am	GW	HP-14		X	X		
15	2/3/95	3:50pm	GW	HP-15		X	X		
16	2/3/95	2:05pm	GW	HP-16		X	X		
17	2/3/95	2:55pm	GW	HP-17		X	X		
				HP					

	Signature	Print Name	Company	Date	Time
Relinquished by		Glen VanderVeen	BC	2/3/95	1600
Received by		FED Hartley	BCA	2/3/95	1605
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL
1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

HOUSTON LABORA
8880 INTERCHA
HOUSTON, TEXAS
PHONE (713) 660

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95-02-307

Approved for release by:

Date: 2/28/95

Brent Barron, Project Manager

Date: 3/1/95

S. Sample, Laboratory Director

CASE NARRATIVE

QUALITY CONTROL RESULTS SUMMARY

WORK ORDER NO(S).: 95-02-307

Southern Petroleum Laboratories (SPL) is pleased to present the results of laboratory analyses to Brown and Caldwell regarding the EZ Serve site #100877. The nineteen soil samples were received at our laboratory on February 8, 1995 intact at a temperature of 4 degrees Celsius. The following is a brief narrative of the laboratory analyses.

Thirteen of these samples were analyzed for BTEX and TPH-gasoline. The remaining samples were put on hold. There were no deviations from the required methodology.

Sample "MW 11-15'" (SPL # 9502307-03) was randomly chosen for SPL's Quality Assurance program. The Matrix Spike (MS) was outside of the advisory quality control limits for our normal methodology for the analysis of BTEX. The Laboratory Control sample for this batch was well within SPL's Quality Control guidelines. Therefore data quality is not affected.

If you have any comments or suggestions please feel free to contact me.

Brent Barron
Project Manager

****SUMMARY REPORT*****

02/21/95

Company: EZ Serve Inc.
Site: 825 West AST, Hayward, CA
Project No: 1564.02
Project: EZ Serve #100877

ANALYTICAL DATA
NOTE: ND - Not Detected

SPL ID MATRIX	CLIENT ID DATE SAMPLED	BENZENE PQL	TOLUENE PQL	ETHYLBENZ. PQL	XYLENE PQL	TPH-G PQL	TPH-D	LEAD	MTBE
9502307-02 SOIL	MW 11-10' 02/06/95	ND 1µg/Kg	ND 1µg/Kg	2 1µg/Kg	5 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-03 SOIL	MW 11-15' 02/06/95	ND 1µg/Kg	ND 1µg/Kg	2 1µg/Kg	5 1µg/Kg	0.10 0.1mg/Kg		ND 10mg/Kg	
9502307-04 SOIL	Drum 2 02/06/95	12 1µg/Kg	ND 1µg/Kg	90 1µg/Kg	200 1µg/Kg	6.0 0.1mg/Kg		ND 10mg/Kg	
9502307-06 SOIL	MW 12-10' 02/06/95	ND 1µg/Kg	ND 1µg/Kg	1 1µg/Kg	4 1µg/Kg	0.31 0.1mg/Kg		ND 10mg/Kg	
9502307-07 SOIL	MW 12-15' 02/06/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	1 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-09 SOIL	Drum 4 02/06/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	2 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-10 SOIL	Drum 5 02/06/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	1 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-12 SOIL	MW 13-10' 02/07/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-13 SOIL	MW 13-15' 02/07/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	1 1µg/Kg	ND 0.1mg/Kg		10 10mg/Kg	
9502307-14 SOIL	Drum 7 02/07/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	
9502307-16 SOIL	MW 14-10' 02/07/95	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 1µg/Kg	ND 0.1mg/Kg		ND 10mg/Kg	

BTEX - METHOD 8020***
TPH-G - Modified 8015 - Gasoline
LEAD - METHOD 6010 ***

****SUMMARY REPORT*****

02/21/95

Company: EZ Serve Inc.
Site: 825 West AST, Hayward, CA
Project No: 1564.02
Project: EZ Serve #100877

ANALYTICAL DATA
NOTE: ND - Not Detected

SPL ID MATRIX	CLIENT ID DATE SAMPLED	BENZENE PQL	TOLUENE PQL	ETHYLBENZ. PQL	XYLENE PQL	TPH-G PQL	TPH-D	LEAD	MTBE
9502307-17 SOIL	MW 14-15' 02/07/95	1 1µg/Kg	ND 1µg/Kg	1 1µg/Kg	9 1µg/Kg	0.76 0.1mg/Kg		ND 10mg/Kg	
9502307-19 SOIL	Drum 9 02/07/95	28 1µg/Kg	ND 1µg/Kg	160 1µg/Kg	530 1µg/Kg	14 0.1mg/Kg		ND 10mg/Kg	

BTEX - METHOD 8020***
TPH-G - Modified 8015 - Gasoline
LEAD - METHOD 6010 ***

Certificate of Analysis No. H9-9502307-02

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/2

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 11-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT		UI
BENZENE	ND	1	P	µg
TOLUENE	ND	1	P	µg
ETHYLBENZENE	2	1	P	µg
TOTAL XYLENE	5	1	P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	7			µg
Surrogate	**% Recovery**			
1,4-Difluorobenzene	106			
4-Bromofluorobenzene	80			
METHOD 8020***				
Analyzed by: SB				
Date: 02/09/95				
Petroleum Hydrocarbons - Gasoline	ND	0.1	P	mg
Surrogate	**% Recovery**			
1,4-Difluorobenzene	132			
4-Bromofluorobenzene	73			
Modified 8015 - Gasoline				
Analyzed by: SB				
Date: 02/09/95				
Moisture, E.P.A.	22	1		wt
METHOD CLP SOW				
Analyzed by: CA				
Date: 02/17/95				

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

SPL®

Certificate of Analysis No. H9-9502307-02

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 11-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-03

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/2

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 11-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	U
BENZENE	ND	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	2	1 P	µg
TOTAL XYLENE	5	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	7		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	68		
METHOD 8020***			
Analyzed by: SB			
Date: 02/10/95			
Petroleum Hydrocarbons - Gasoline	0.10	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	131		
4-Bromofluorobenzene	68		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/10/95			
Moisture, E.P.A.	20	1	wt
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
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SPL California License # 1903

SPL, Inc., - Project Manager

SPL®

Certificate of Analysis No. H9-9502307-03

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 11-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-04

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 03/0

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 2

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UI
BENZENE	12	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	90	1 P	µg
TOTAL XYLENE	200	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	302		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	112		
4-Bromofluorobenzene	91		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	6.0	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	127		
4-Bromofluorobenzene	CI		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			

(P) - Practical Quantitation Limit ND - Not detected.
CI - Coeluting interference.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-04

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 03/0

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 2

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UI
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 02/17/95	23	1	wt
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-06

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/2

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 12-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	U
BENZENE	ND	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	1	1 P	µg
TOTAL XYLENE	4	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	5		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	78		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	0.31	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	126		
4-Bromofluorobenzene	72		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	25	1	wt
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-06

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 12-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-07

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/2

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 12-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UI
BENZENE	ND	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	ND	1 P	µg
TOTAL XYLENE	1	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	1		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	77		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	126		
4-Bromofluorobenzene	65		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	19	1	wt
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., Project Manager

Certificate of Analysis No. H9-9502307-07

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 12-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-09

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 4

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
BENZENE	ND	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	ND	1 P	µg
TOTAL XYLENE	2	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	2		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	76		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	126		
4-Bromofluorobenzene	67		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	22	1	wt
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-09

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 4

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UI
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total *METHOD 6010* *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-10

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/2

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 5

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	U
BENZENE	ND	1 P	µ
TOLUENE	ND	1 P	µ
ETHYLBENZENE	ND	1 P	µ
TOTAL XYLENE	1	1 P	µ
TOTAL VOLATILE AROMATIC HYDROCARBONS	1		µ
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	74		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	m
Surrogate	**% Recovery**		
1,4-Difluorobenzene	132		
4-Bromofluorobenzene	69		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	20	1	w
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-10

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 5

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/06/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-12

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 13-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UN
BENZENE	ND	1 P	µg
TOLUENE	ND	1 P	µg
ETHYLBENZENE	ND	1 P	µg
TOTAL XYLENE	ND	1 P	µg
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	73		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	122		
4-Bromofluorobenzene	57		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	23	1	wt
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-12

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 13-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg/Kg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-13

Z Serve Inc.
2550 North Loop West, #600
ouston, TX 77292
TTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
ITE: 825 West AST, Hayward, CA
AMPLED BY: Brown & Caldwell
SAMPLE ID: MW 13-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/Kg
TOLUENE	ND	1 P	µg/Kg
ETHYLBENZENE	ND	1 P	µg/Kg
TOTAL XYLENE	1	1 P	µg/Kg
TOTAL VOLATILE AROMATIC HYDROCARBONS	1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	102		
4-Bromofluorobenzene	70		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	128		
4-Bromofluorobenzene	59		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	20	1	wt. %
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
UALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-13

Z Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 13-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	10	10	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-14

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 7

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/Kg
TOLUENE	ND	1 P	µg/Kg
ETHYLBENZENE	ND	1 P	µg/Kg
TOTAL XYLENE	ND	1 P	µg/Kg
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	69		
METHOD 8020***			
Analyzed by: SB			
Date: 02/09/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	126		
4-Bromofluorobenzene	56		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/09/95			
Moisture, E.P.A.	18	1	wt. %
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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Certificate of Analysis No. H9-9502307-14

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 7

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg/Kg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-16

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 14-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/Kg
TOLUENE	ND	1 P	µg/Kg
ETHYLBENZENE	ND	1 P	µg/Kg
TOTAL XYLENE	ND	1 P	µg/Kg
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	72		
METHOD 8020***			
Analyzed by: SB			
Date: 02/10/95			
Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	124		
4-Bromofluorobenzene	60		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/10/95			
Moisture, E.P.A.	22	1	wt. %
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-16

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 14-10'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg/Kg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-17

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 14-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1	1 P	µg/Kg
TOLUENE	ND	1 P	µg/Kg
ETHYLBENZENE	1	1 P	µg/Kg
TOTAL XYLENE	9	1 P	µg/Kg
TOTAL VOLATILE AROMATIC HYDROCARBONS	11		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	77		
METHOD 8020***			
Analyzed by: SB			
Date: 02/10/95			
Petroleum Hydrocarbons - Gasoline	0.76	0.1 P	mg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	138		
4-Bromofluorobenzene	102		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/10/95			
Moisture, E.P.A.	20	1	wt. %
METHOD CLP SOW			
Analyzed by: CA			
Date: 02/17/95			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
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SPL, Inc., - Project Manager

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Certificate of Analysis No. H9-9502307-17

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/21/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: MW 14-15'

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg/Kg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-19

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 03/01/95

PROJECT: EZ Serve #100877 **PROJECT NO:** 1564.02
SITE: 825 West AST, Hayward, CA **MATRIX:** SOIL
SAMPLED BY: Brown & Caldwell **DATE SAMPLED:** 02/07/95
SAMPLE ID: Drum 9 **DATE RECEIVED:** 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	28	1 P	µg/Kg
TOLUENE	ND	1 P	µg/Kg
ETHYLBENZENE	160	1 P	µg/Kg
TOTAL XYLENE	530	1 P	µg/Kg
TOTAL VOLATILE AROMATIC HYDROCARBONS	718		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	114		
4-Bromofluorobenzene	103		
METHOD 8020***			
Analyzed by: SB			
Date: 02/10/95			
Petroleum Hydrocarbons - Gasoline	14	0.1 P	mg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	CI		
Modified 8015 - Gasoline			
Analyzed by: SB			
Date: 02/10/95			

(P) - Practical Quantitation Limit ND - Not detected.
CI - Coeluting interference.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502307-19

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 03/01/95

PROJECT: EZ Serve #100877
SITE: 825 West AST, Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Drum 9

PROJECT NO: 1564.02
MATRIX: SOIL
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/08/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 02/17/95	21	1	wt. %
Acid Digestion-Solid, ICP METHOD 3050 Analyzed by: MM Date: 02/17/95	02/17/95		
Lead, Total METHOD 6010 *** Analyzed by: JM Date: 02/20/95	ND	10	mg/Kg

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

QUALITY CONTROL DOCUMENTATION

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARD950209022400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	40	80.0	51 - 125
Toluene	ND	50	40	80.0	52 - 126
EthylBenzene	ND	50	43	86.0	53 - 125
O Xylene	ND	50	44	88.0	32 - 160
M & P Xylene	ND	100	100	100	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Benzene	ND	20	20	100	15	75.0	28.6	33	47 - 143
Toluene	ND	20	20	100	15	75.0	28.6	35	46 - 148
EthylBenzene	ND	20	20	100	15	75.0	28.6	40	32 - 151
O Xylene	ND	20	20	100	15	75.0	28.6 *	24	18 - 144
M & P Xylene	2	40	42	100	31	72.5	31.9 *	23	25 - 139

Analyst: SB
Sequence Date: 02/09/95
SPL ID of sample spiked: 9502251-02A
Sample File ID: D___050.TX0
Method Blank File ID:
Blank Spike File ID: D___045.TX0
Matrix Spike File ID: D___048.TX0
Matrix Spike Duplicate File ID: D___049.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502307-14A 9502307-13A 9502307-12A 9502307-11A
9502307-10A 9502307-09A 9502307-07A 9502307-06A
9502307-04A 9502307-02A 9502251-20A 9502251-19A
9502251-18A 9502251-17A 9502251-16A 9502251-15A
9502251-14A 9502251-13A 9502251-12A 9502251-02A

Idelis Williams, QC Officer

Matrix: Soil
Units: µg/Kg
Batch Id: VARD950210010300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	41	82.0	51 - 125
Toluene	ND	50	42	84.0	52 - 126
EthylBenzene	ND	50	44	88.0	53 - 125
O Xylene	ND	50	43	86.0	32 - 160
M & P Xylene	ND	100	100	100	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Benzene	ND	20	18	90.0	18	90.0	0	33	47 - 143
Toluene	ND	20	16	80.0	15	75.0	6.45	35	46 - 148
EthylBenzene	2	20	35	165 *	31	145	12.9	40	32 - 151
O Xylene	2	20	21	95.0	20	90.0	5.41	24	18 - 144
M & P Xylene	3	40	61	145 *	57	135	7.14	23	25 - 139

Analyst: SB
Sequence Date: 02/10/95
SPL ID of sample spiked: 9502307-03A
Sample File ID: D___091.TX0
Method Blank File ID:
Blank Spike File ID: D___081.TX0
Matrix Spike File ID: D___087.TX0
Matrix Spike Duplicate File ID: D___088.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502362-01A 9502315-09A 9502315-11A 9502315-12A
9502315-08A 9502315-07A 9502315-06A 9502315-10A
9502315-10A 9502315-05A 9502315-03A 9502315-10A
9502315-04A 9502315-02A 9502315-01A 9502307-19A
9502307-17A 9502307-16A 9502307-03A

Idelis Williams, QC Officer

** SPL BATCH QUALITY CONTROL REPORT **

Modified 8015 - Gasoline

Matrix: Soil
Units: mg/Kg

Batch Id: VARD950209161300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons	ND	1.0	0.88	88.0	46 - 158

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Petroleum Hydrocarbons	ND	0.9	0.97	108	0.99	110	1.83	16	34 - 150

Analyst: SB
Sequence Date: 02/09/95
SPL ID of sample spiked: 9502307-02A
Sample File ID: DD__070.TX0
Method Blank File ID:
Blank Spike File ID: DD__066.TX0
Matrix Spike File ID: DD__068.TX0
Matrix Spike Duplicate File ID: DD__069.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID): 9502307-19A 9502307-17A 9502307-16A 9502307-03A 9502307-14A 9502307-13A 9502307-12A 9502307-11A 9502307-10A 9502307-09A 9502307-07A 9502307-06A 9502307-04A 9502307-02A

Idelis Williams, QC Officer

HOUSTON ENVIRONMENTAL
ICP SPECTROSCOPY
QUALITY ASSURANCE AND CONTROL REPORT

ICPQAQC.RC REV.4/94

e of Analysis: 2/20/95 Time: 9:54 Analyst: JM Units: mg/L
☐ Thermo-Jarrell Ash 61E File #: 0220A Method: ☐ 200.7 ☑ 6010 Matrix: ☑ Soil
☐ Perkin Elmer Plasma 40 Digest: P3050P TCLP: ☐ Water ☐ Soil ☐ Water
☐ Other ☐ Oil ☐ Leachate

Sa ple #'s In Batch:

9502307-2B-4B, 6B,	7B, 9B, 10B, 12B,	13B, 14B, 16B, 17B, 19B	

QA/QC Sample ID: #1 9502307-10B #2 _____ #3 _____

Blank and Check Standard			QA/QC	Matrix Spike and Spike Duplicate Data					
n. Method Blank	LCS Theoret.	LCS Rec. (±20%)	Sample Conc.	Spik Added	Spike Conc.	Spk. Dup. Conc.	Spike % Rec.	Spk. Dup. % Rec.	MS-MSD % RPD
ND	2.08	81.5	ND	1.00	0.958	0.966	95.8	96.6	1

gs ☐ MS or MSD Out of QA Limits (±25%)
☐ Spike RPD Out of QA Limits (±20%)
☐ See Case Narrative
☑ Within Soil LCS Limits

Supervisor Approval _____ Date 2-20-95

QA/QC Approval _____ Date 2-20-95
Idelis Williams, QC Officer

Analyst Joann Marroquin

WETDUPQA.RC Rev. 4/94

Wet Chemistry QA/QC Validation Report

Test Name: Moisture

M Test Code: Moisep Date: 2/17/95 Analyst: CA/ST

thod CLP SOW Time: 11:00Am Matrix ☐ Liquid ☒ Soil ☐ Other

f Samples in Batch: 19 Reporting Units: % weight

Sample #'s in Batch:

502307-2B, 3B, 4B, 10B, 7B, 9B	9502594-1B	
02307-10B, 12B, 13B, 14B, 16B		
02307-17B, 19B		
02592-1A → 5A		

Standards	Actual Concentration	Theoretical Concentration	Percent Recovery	QC Limits (**) (Mandatory) Upper Limit	Lower Limit
nk					
eck Standard 1					
eck Standard 2					
eck Standard 3					
S (Outside Source)					

PLICATES

A/QC Duplicate SP Sample ID	Sample Result <1>	Sample Result <2>	Relative Percent Difference	QC LIMITS (**) (Advisory) Relative Percent Difference Max.
02307-4B	23	23	0	23.7
02594-1A	3	3	0	↓
02592-3A	12	11	8.70	

ive rcent Difference (RPD) Calculation:

$$RPD = \left| \frac{<1> - <2>}{(<1> + <2>) \times 0.5} \right| \times 100$$

(**) = Source: SPL Houston Historical Data

* = Indicates Value Outside QA/QC Range

ew d By: _____ Date: 2/20/95

Approved By: _____ Date: 2/20/95

Idelis Williams, QC Officer

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

CHAIN OF CUSTODY RECORD

4502307

BCA Log Number

Client name: EZ Serve - Hayward	Project or PO#: 1564-02
Address: SITE #100577 825 WEST A ST	Phone #: (510) 2102278
City, State, Zip: HAYWARD CA	Report attention: Todd Mitchell, TSC-PH

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by: G. VanderVeen / Sample description	Number of containers	TPH gas + BTEX 8015/8020	TPH diesel	Hazardous sample Special handling required	Remarks
	2/6/95		SO	MW11-5'	1		X		HOLD
				MW11-10'	1	X			
				MW11-15'	1	X			
				Drum 2	1	X			
				MW12-5'	1		X		HOLD
				~~G&W~~ MW12-10'	1	X			
				MW12-15'	1	X			
				MW12-20'	1	~~X~~	X		HOLD
				Drum 4	1	X			
	↓			Drum 5	1	X			
	2/7/95			MW13-5'	1		X		HOLD
	↓		↓	MW13-10'	1	X			

	Signature	Print Name	Company	Date	Time
Relinquished by		Glen VanderVeen	BC	2/7/95	1600
Received by					
Relinquished by					
Received by					
Relinquished by			Mitchell		
Received by Laboratory	M Taylor	M TAYLOR	SPL	2/8/95	10:00

NAUTICAL
1085 Shary Circle, Concord, CA 94518 (510) 825-3894

Hazardous samples will be returned to client or disposed of at client's expense,

GW—Groundwater SO—Soil PE—Petroleum

CHAIN OF CUSTODY RECORD

9502307

BCA Log Number _____

Client name: EZ Serve Hayward	Project or PO#: 1564-02
Address: SITE # 100577 825 West A ST.	Phone #: (510) 2102278
City, State, Zip: HAYWARD CA	Report attention: Todd Miller

Sampled by: G. VanderVeen

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	TPH-G/BTEX 8015/8020	Hazardous sample Special handling required	Remarks
	2/7/95		SO	MW 13 - 15'	1	X		
				Drum 7	1	X		
				MW 14 - 5'	1			HOLD
				MW 14 - 10'	1	X		
				MW 14 - 15'	1	X		
				MW 14 - 20'	1			HOLD
				Drum 9	1	X		

	Signature	Print Name	Company	Date	Time
Relinquished by		Glen VanderVeen	BC	2/7/95	1600
Received by					
Relinquished by					
Received by					
Relinquished by			Intact 4°C		
Received by Laboratory	M Taylor	M TAYLOR	SPL	2/8/95	10:00

[redacted] ANALYTICAL [redacted]
1085 Shary Circle, Concord, CA 94518 (510) 825-3894

[redacted]e: Sa[redacted]re dis[redacted] 30 da[redacted] resul[redacted]eporte[redacted]s othe[redacted]geme[redacted]made[redacted]

Hazardous samples will be returned to client or disposed of at client's expense

*KE[redacted]–Aqu[redacted]NA—N[redacted]eous [redacted]ludge[redacted]

GW—Groundwater SO—Soil PE—Petroleum

FedEx
Federal Express

USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO AND ALL NON U.S. LOCATIONS.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

4 22 AM 3447882535 3447882535

RECIPIENT'S COPY

Date 2/11

From (Your Name) Please Print: JOHN MILLER
Your Phone Number (Very Important): (510) 210 2278
Company: BROWN & CALDWELL
Department/Floor No.:
Street Address: 3480 BUSKIRK
City: PLEASANT HILL
State: CA
ZIP Required: 94523-4342

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.)
HENV

2 To (Recipient's Name) Please Print: SAMPLE RECEIVING
Recipient's Phone Number (Very Important): (713) 460-0901
Company: SOUTHERN PETROLEUM LAB
Department/Floor No.:
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 8460 INTERCHANGE
City: HOUSTON
State: TX
ZIP Required: 77054

3 PAYMENT 1 ☐ Bill Sender 2 ☒ Bill Recipient's FedEx Acct. No. 3 ☐ Bill 3rd Party FedEx Acct. No 4 ☐ Bill Credit Card 5 ☐ Cash/Check

H IF HOLD AT FEDEX LOCATION, Print FEDEX Address Here
Street Address: 4702 TRAVIS
City: HOUSTON,
State: TX
ZIP Required: 77002

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
11 ☐ OTHER PACKAGING
16 ☐ FEDEX LETTER*
12 ☐ FEDEX PAK*
13 ☐ FEDEX BOX
14 ☐ FEDEX TUBE

Standard Overnight (Delivery by next business afternoon, or Saturday delivery†)
51 ☒ OTHER PACKAGING
56 ☐ FEDEX LETTER*
52 ☐ FEDEX PAK*
53 ☐ FEDEX BOX
54 ☐ FEDEX TUBE

Economy Two-Day (Delivery by second business day †)
30 ☐ ECONOMY**
** Economy Letter Rate not available. Minimum charge: One pound Economy rate.

Government Overnight (Restricted for authorized users only)
46 ☐ GOVT LETTER
41 ☐ GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
70 ☐ OVERNIGHT FREIGHT** (22" Head reservation required)
80 ☐ TWO-DAY FREIGHT**
† Delivery commitment may be later in some areas.
** Declared Value Limit $500. Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)

Weekday Service
1 ☒ HOLD AT FEDEX LOCATION WEEKDAY (Fill in Section H)
2 ☐ DELIVER WEEKDAY

Saturday Service
31 ☐ HOLD AT FEDEX LOCATION SATURDAY (Fill in Section H)
3 ☐ DELIVER SATURDAY (Extra charge) (Not available to all locations)
9 ☐ SATURDAY PICK-UP (Extra charge)

Special Handling
4 ☐ DANGEROUS GOODS (Extra charge)
6 ☐ DRY ICE Dangerous Goods Shipper's Declaration not required
Dry Ice, 9, UN 1845 ____ x ____ kg, 904 III
☐ DESCRIPTION
12 ☐ HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total	Total

DIM SHIPMENT (Chargeable Weight) ☐ ____ lbs.
L x W x H
Received At
1 ☑ Regular Stop 3 ☐ Drop Box
2 ☐ On-Call Stop 4 ☐ B.S.C. 5 ☐ Station

7 Release Signature:

Emp. No. | Date
☐ Cash Received
☐ Return Shipment
☐ Third Party ☐ Chg. To Del. ☐ Chg. To Hold
Street Address
City State Zip
Received By: X
Date/Time Received FedEx Employee Number

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 4/94
PART #145412 FXEM 10/94
FORMAT #180
160

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE: 2/8/95 TIME: 10:00 CLIENT NO. _____
LOT NO. _____ CONTRACT NO. _____

CLIENT SAMPLE NOS. _____

SPL SAMPLE NOS.: 9502307

		YES	NO
1.	Is a Chain-of-Custody form present?	/	
2.	Is the COC properly completed?	/	
	If no, describe what is incomplete:		
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
3.	Is airbill/packing list/bill of lading with shipment? If yes, ID#: fedex: 344788 2535	/	
4.	Is a USEPA Traffic Report present?		/
5.	Is a USEPA SAS Packing List present?		/
6.	Are custody seals present on the package?	/	
	If yes, were they intact upon receipt?	/	
7.	Are all samples tagged or labeled?	/	
	Do the sample tags/labels match the COC?	/	
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
8.	Do all shipping documents agree?	/	
	If no, describe what is in nonconformity:		
9.	Condition/temperature of shipping container:	Intact 4°C	
10.	Condition/temperature of sample bottles:	Good	
11.	Sample Disposal?: SPL disposal X Return to client ____		

NOTES (reference item number if applicable): _____

ATTEST: M Taylor DATE: 2/8/95
DELIVERED FOR RESOLUTION: REC'D _____ DATE: _____
RESOLVED: _____ DATE: _____

HOUSTON LABORATORY
8880 INTERCHANGE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95-02-546

Approved for release by:

Date: 2/27/95

Brent Barron, Project Manager

Date: 2/27/95

S. Sample, Laboratory Director

Certificate of Analysis No. H9-9502546-01

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve #100877
SITE: Pleasant Hill, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: 100877-MW-11

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/13/95 12:30:00
DATE RECEIVED: 02/15/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	140	2.5 P	µg/L
TOLUENE	22	2.5 P	µg/L
ETHYLBENZENE	600	2.5 P	µg/L
TOTAL XYLENE	1000	2.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1762		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	94		
4-Bromofluorobenzene	115		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/18/95			
Petroleum Hydrocarbons - Gasoline	7000	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	84		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/18/95			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

SPL®

Certificate of Analysis No. H9-9502546-02

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve #100877
SITE: Pleasant Hill, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: 100877-MW-13

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/13/95 15:40:00
DATE RECEIVED: 02/15/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.5 P	µg/L
TOLUENE	0.6	0.5 P	µg/L
ETHYLBENZENE	ND	0.5 P	µg/L
TOTAL XYLENE	ND	0.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	98		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/18/95			
Petroleum Hydrocarbons - Gasoline	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	101		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/18/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502546-03

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve #100877
SITE: Pleasant Hill, CA
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/02/95
DATE RECEIVED: 02/15/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.5 P	µg/L
TOLUENE	ND	0.5 P	µg/L
ETHYLBENZENE	ND	0.5 P	µg/L
TOTAL XYLENE	ND	0.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	98		
4-Bromofluorobenzene	99		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/17/95			
Petroleum Hydrocarbons - Gasoline	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	98		
4-Bromofluorobenzene	104		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., Project Manager

QUALITY CONTROL DOCUMENTATION

** SPL BATCH QUALITY CONTROL REPORT ** PAGE 1
METHOD 8020/602

Matrix: Aqueous Batch Id: HP_S950217173500
Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	56 - 135
Benzene	ND	50	49	98.0	61 - 123
Toluene	ND	50	50	100	62 - 122
Ethyl Benzene	ND	50	51	102	56 - 119
O Xylene	ND	50	52	104	32 - 160
M & P Xylene	ND	100	113	113	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	54	20	69	75.0	70	80.0	6.45	20	39 - 150
Benzene	60	20	75	75.0	75	75.0	0	33	39 - 150
Toluene	8	20	26	90.0	26	90.0	0	35	56 - 134
Ethyl Benzene	53	20	69	80.0	68	75.0	6.45	40	61 - 128
O Xylene	18	20	38	100	38	100	0	29	40 - 130
M & P Xylene	140	40	170	75.0	170	75.0	0	20	43 - 152

Analyst: JZL
Sequence Date: 02/17/95
SPL ID of sample spiked: 9502452-01A
Sample File ID: SS__599.TXO
Method Blank File ID:
Blank Spike File ID: SS__584.TXO
Matrix Spike File ID: SS__587.TXO
Matrix Spike Duplicate File ID: SS__588.TXO

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502604-07A	9502604-06A	9502608-01A	9502608-02A
9502604-05A	9502604-08A	9502604-03A	9502604-02A
9502604-01A	9502604-04A	9502444-02A	9502546-01A
9502444-01A	9502452-01A	9502546-02A	9502444-04A
9502548-02A	9502444-03A	9502546-03A	9502444-05A

Idelis Williams, QC Officer

Modified 8015 - Gasoline

Matrix: Aqueous Batch Id: HP_S950217170800

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons	ND	1.0	0.75	75.0	56 - 139

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Petroleum Hydrocarbons	0.12	0.9	0.56	48.9	0.58	51.1	4.40	18	40 - 158

Analyst: JZL

Sequence Date: 02/17/95

SPL ID of sample spiked: 9502548-01A

Sample File ID: S___578.TX0

Method Blank File ID:

Blank Spike File ID: S___563.TX0

Matrix Spike File ID: S___573.TX0

Matrix Spike Duplicate File ID: S___574.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL-Houston Historical Data

(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502444-02A	9502546-01A	9502444-01A	9502452-01A
9502546-02A	9502444-04A	9502548-02A	9502444-03A
9502546-03A	9502444-05A	9502511-02A	9502511-01A
9502515-02A	9502515-01A	9502548-01A	9502515-03A

Idelis Williams, QC Officer

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

CHAIN OF CUSTODY RECORD

4502546 BS

BCA Log Number _____

Client name	Project or PO#
BROWN & CALDWELL	1564.02
Address 3480 BUSKIRK	**Phone #** 510.937.9010
City, State, Z.. PLEASANT HILL CA	**Report attention** TODD MILLER

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by M. STINAR / Sample description	Number of containers	TPH.G BTEX						Hazardous sample Special handling required	Remarks
	2.13.95	1230	GW	100677 MW-11	3	X							
	2.13.95	1540	GW	100677 MW-13	3	X							
			BW	TRIP BLANK	2	X							

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stinar	Michael Stinar	BC-PH	2.13.95	1700
Received by	Steve Hinman	Steve Hinman	BC-PH	2/13/95	1700
Relinquished by	Steve Hinman	Steve Hinman	BC-PH	2/14/95	0900
Received by					
Relinquished by					
Received by Laboratory	M. Taylor	M. TAYLOR	SPL	2/15/95	13:30

[redacted]ANA[redacted]CAL[redacted] [redacted] [redacted]

[redacted]te: Sa[redacted]are dis[redacted] 30 da[redacted] resu[redacted]eporte[redacted]s oth[redacted]geme[redacted]made[redacted] *KE[redacted]-Aqu[redacted]NA—M[redacted]eous [redacted]iudge[redacted]

Hazardous samples will be returned to client or disposed of at client's expense

GW—Groundwater SO—Soil PE—Petroleum

☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE: 2/15/95 TIME: 13:30 CLIENT NO.
LOT NO. CONTRACT NO.

CLIENT SAMPLE NOS.

SPL SAMPLE NOS.: 9502546

		YES	NO
1.	Is a Chain-of-Custody form present?	/	
2.	Is the COC properly completed?	/	
	If no, describe what is incomplete:		
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
3.	Is airbill/packing list/bill of lading with shipment?	/	
	If yes, ID#: fedex: 385561602370		
4.	Is a USEPA Traffic Report present?		/
5.	Is a USEPA SAS Packing List present?		/
6.	Are custody seals present on the package?	/	
	If yes, were they intact upon receipt?	/	
7.	Are all samples tagged or labeled?	/	
	Do the sample tags/labels match the COC?	/	
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
8.	Do all shipping documents agree?	/	
	If no, describe what is in nonconformity:		

9. Condition/temperature of shipping container: intact 4°C
10. Condition/temperature of sample bottles: good
11. Sample Disposal?: SPL disposal X Return to client

NOTES (reference item number if applicable):

ATTEST: M Taylor DATE: 2/15/95
DELIVERED FOR RESOLUTION: REC'D DATE:
RESOLVED: DATE:

HOUSTON LABORATORY
8880 INTERCHANGE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95-02-444

Approved for release by:

Date: 2/27/95

Brent Barron, Project Manager

Date: 2/27/95

S. Sample, Laboratory Director

Certificate of Analysis No. H9-9502444-01

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve # 100877
SITE: 825 West A St. Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: 100877-MW-14

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/10/95 12:25:00
DATE RECEIVED: 02/11/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	42	5 P	µg/L
TOLUENE	8	5 P	µg/L
ETHYLBENZENE	740	5 P	µg/L
TOTAL XYLENE	2100	5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	2890		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	95		
4-Bromofluorobenzene	124		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/18/95			
Petroleum Hydrocarbons - Gasoline	12000	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	82		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/18/95			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

SPL®

Certificate of Analysis No. H9-9502444-02

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve # 100877
SITE: 825 West A St. Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: 100877-MW-14D

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/10/95 12:30:00
DATE RECEIVED: 02/11/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	48	5 P	µg/L
TOLUENE	8	5 P	µg/L
ETHYLBENZENE	800	5 P	µg/L
TOTAL XYLENE	2300	5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	3156		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	113		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/18/95			
Petroleum Hydrocarbons - Gasoline	12000	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	81		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/18/95			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502444-03

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve # 100877
SITE: 825 West A St. Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: Field Blank

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/10/95 12:35:00
DATE RECEIVED: 02/11/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.5 P	µg/L
TOLUENE	ND	0.5 P	µg/L
ETHYLBENZENE	ND	0.5 P	µg/L
TOTAL XYLENE	ND	0.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	98		
4-Bromofluorobenzene	97		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/17/95			
Petroleum Hydrocarbons - Gasoline	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	101		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9502444-04

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve # 100877
SITE: 825 West A St. Hayward, CA
SAMPLED BY: Brown & Caldwell
SAMPLE ID: 100877-MW-12

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/10/95 14:40:00
DATE RECEIVED: 02/11/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.5 P	µg/L
TOLUENE	0.7	0.5 P	µg/L
ETHYLBENZENE	ND	0.5 P	µg/L
TOTAL XYLENE	ND	0.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	98		
4-Bromofluorobenzene	99		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/17/95			
Petroleum Hydrocarbons - Gasoline	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	98		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

SPL®

Certificate of Analysis No. H9-9502444-05

EZ Serve Inc.
2550 North Loop West, #600
Houston, TX 77292
ATTN: Brian Cobb

DATE: 02/25/95

PROJECT: EZ Serve # 100877
SITE: 825 West A St. Hayward, CA
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank

PROJECT NO: 1564.02
MATRIX: WATER
DATE SAMPLED: 02/07/95
DATE RECEIVED: 02/11/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.5 P	µg/L
TOLUENE	ND	0.5 P	µg/L
ETHYLBENZENE	ND	0.5 P	µg/L
TOTAL XYLENE	ND	0.5 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	97		
METHOD 8020***			
Analyzed by: JZL			
Date: 02/17/95			
Petroleum Hydrocarbons - Gasoline	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	99		
4-Bromofluorobenzene	101		
Modified 8015 - Gasoline			
Analyzed by: JZL			
Date: 02/17/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

SPL, Inc., - Project Manager

QUALITY CONTROL DOCUMENTATION

Matrix: Aqueous
Units: µg/L
Batch Id: HP_S950217173500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	56 - 135
Benzene	ND	50	49	98.0	61 - 123
Toluene	ND	50	50	100	62 - 122
Ethyl Benzene	ND	50	51	102	56 - 119
O Xylene	ND	50	52	104	32 - 160
M & P Xylene	ND	100	113	113	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	54	20	69	75.0	70	80.0	6.45	20	39 - 150
Benzene	60	20	75	75.0	75	75.0	0	33	39 - 150
Toluene	8	20	26	90.0	26	90.0	0	35	56 - 134
Ethyl Benzene	53	20	69	80.0	68	75.0	6.45	40	61 - 128
O Xylene	18	20	38	100	38	100	0	29	40 - 130
M & P Xylene	140	40	170	75.0	170	75.0	0	20	43 - 152

Analyst: JZL
Sequence Date: 02/17/95
SPL ID of sample spiked: 9502452-01A
Sample File ID: SS__599.TX0
Method Blank File ID:
Blank Spike File ID: SS__584.TX0
Matrix Spike File ID: SS__587.TX0
Matrix Spike Duplicate File ID: SS__588.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502604-07A	9502604-06A	9502608-01A	9502608-02A
9502604-05A	9502604-08A	9502604-03A	9502604-02A
9502604-01A	9502604-04A	9502444-02A	9502546-01A
9502444-01A	9502452-01A	9502546-02A	9502444-04A
9502548-02A	9502444-03A	9502546-03A	9502444-05A

Idelis Williams, QC Officer

Modified 8015 - Gasoline

Matrix: Aqueous
Units: mg/L

Batch Id: HP_S950217170800

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons	ND	1.0	0.75	75.0	56 - 139

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Petroleum Hydrocarbons	0.12	0.9	0.56	48.9	0.58	51.1	4.40	18	40 - 158

Analyst: JZL
Sequence Date: 02/17/95
SPL ID of sample spiked: 9502548-01A
Sample File ID: S___578.TX0
Method Blank File ID:
Blank Spike File ID: S___563.TX0
Matrix Spike File ID: S___573.TX0
Matrix Spike Duplicate File ID: S___574.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9502444-02A 9502546-01A 9502444-01A 9502452-01A
9502546-02A 9502444-04A 9502548-02A 9502444-03A
9502546-03A 9502444-05A 9502511-02A 9502511-01A
9502515-02A 9502515-01A 9502548-01A 9502515-03A
9502511-03A

Idelis Williams, QC Officer

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

F-2-

CHAIN OF CUSTODY RECORD

BCA Log Number 95024464

Client name: Brown & Caldwell	Project or PO#: 1564.02
Address: 3480 Buskirk	Phone #: 510 937.9010
City, State, Zip: Pleasant Hill, CA	Report attention: Todd Miller

Sampled by: M. Stimar

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	TPH.G BTEX						Hazardous sample Special handling required		Remarks
	2.10.95	1225	GW	100877-MW-14	3	X								
		1230		100877-MW-14D	3	X								
		1235		FIELD BLANK	2	X								
		1440		100877-MW-12	3	X								
			BW	TRIP BLANK	2	X								

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stimar	Michael Stimar	BC-PH	2/10/95	3:45
Received by	Steve Hinman	Steve Hinman	BC-PH	2/10/95	3:45
Relinquished by	Steve Hinman	Steve Hinman	BC-PH		
Received by					
Relinquished by					
Received by Laboratory		Ruth Tinsale	SPL	2/11	1100

[redacted]ANA[redacted]CAL[redacted]

☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894

[redacted]e: Sa[redacted].re di[redacted]; 30 da[redacted]r resu[redacted]epor[redacted]s oth[redacted]gem[redacted]made[redacted]

Hazardous samples will be returned to client or disposed of at client's expense

*KE[redacted]–Aqu[redacted]VA–[redacted]eous [redacted]ludge[redacted]

GW—Groundwater SO—Soil PE—Petroleum

FedEx
Federal Express

USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO AND ALL NON U.S. LOCATIONS.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER
3447883460

3447883460

RECIPIENT'S COPY

1 Date 4/10/95

From (Your Name) Please Print: Steve Hinman
Your Phone Number (Very Important): (510) 937-9010

2 To (Recipient's Name) Please Print: SAMPLE RECEIVING
Recipient's Phone Number (Very Important): (713) 260-5901

Company: Brown & Caldwell
Department/Floor No.:

Company: SOUTHERN PETROLEUM LAB
Department/Floor No.:

Street Address: ~~1008~~ 3480 Buskirk Ave

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes): 8880 INTERCHANGE

City: Pleasant Hill
State: CA
ZIP Required: 94523

City: HOUSTON
State: TX
ZIP Required: 7 7 0 5 4

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.)
HENV

H IF HOLD AT FEDEX LOCATION, Print FEDEX Address Here
Street Address: 4702 TRAVIS
City: HOUSTON,
State: TX
ZIP Required: 77002

3 PAYMENT 1 ☐ Bill Sender 2 ☒ Bill Recipient's FedEx Acct. No. 3 ☐ Bill 3rd Party FedEx Acct. No. 4 ☐ Bill Credit Card
5 ☐ Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
14 ☒ OTHER PACKAGING
6 ☐ FEDEX LETTER*
12 ☐ FEDEX PAK*
13 ☐ FEDEX BOX
14 ☐ FEDEX TUBE

Standard Overnight (Delivery by next business afternoon† No Saturday delivery†)
51 ☐ OTHER PACKAGING
56 ☐ FEDEX LETTER*
52 ☐ FEDEX PAK*
53 ☐ FEDEX BOX
54 ☐ FEDEX TUBE

Economy Two-Day (Delivery by second business day †)
30 ☐ ECONOMY*
* Economy Letter Rate not available. Minimum charge: One pound Economy rate.

Government Overnight (Restricted for authorized users only)
46 ☐ GOVT LETTER
41 ☐ GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
70 ☐ OVERNIGHT FREIGHT** (Confirmed reservation required)
80 ☐ TWO-DAY FREIGHT**
† Delivery commitment may be later in some areas.
*Declared Value Limit $500.
**Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)

Weekday Service
1 ☐ HOLD AT FEDEX LOCATION WEEKDAY (Fill in Section H)
2 ☐ DELIVER WEEKDAY

Saturday Service
21 ☒ HOLD AT FEDEX LOCATION SATURDAY (Fill in Section H)
3 ☐ DELIVER SATURDAY (Extra charge) (Not available to all locations)
9 ☐ SATURDAY PICK-UP (Extra charge)

Special Handling
4 ☐ DANGEROUS GOODS (Extra charge)
6 ☐ DRY ICE Dangerous Goods Shipper's Declaration not required
Dry Ice, 9, UN 1845, _____ X _____ kg, 904 III
☐ DESCRIPTION
12 ☐ HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
1	12	
Total 1	Total 12	Total

DIM SHIPMENT (Chargeable Weight)
☐ _____ lbs.
L x W x H

Received At
1 ☐ Regular Stop 3 ☐ Drop Box
2 ☐ On-Call Stop 4 ☐ B.S.C. 5 ☐ Station

7 Release Signature:

Emp. No. | Date
☐ Cash Received
☐ Return Shipment
☐ Third Party ☐ Chg. To Del. ☐ Chg. To Hold
Street Address
City State Zip
Received By:
X
Date/Time Received FedEx Employee Number

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 4/94
PART #145412 FXEM 10/94
FORMAT #160
160

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE: 2/11 TIME: _____ CLIENT NO. _____
LOT NO. _____ CONTRACT NO. _____

CLIENT SAMPLE NOS. _____

SPL SAMPLE NOS.: 9502444

		YES	NO
1.	Is a Chain-of-Custody form present?	✓	
2.	Is the COC properly completed?		
	If no, describe what is incomplete:		
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
3.	Is airbill/packing list/bill of lading with shipment? If yes, ID#: FEDEX	✓	
4.	Is a USEPA Traffic Report present?		✓
5.	Is a USEPA SAS Packing List present?		✓
6.	Are custody seals present on the package?	✓	
	If yes, were they intact upon receipt?	✓	
7.	Are all samples tagged or labeled?	✓	
	Do the sample tags/labels match the COC?	✓	
	If no, has the client been contacted about it? (Attach subsequent documentation from client about the situation)		
8.	Do all shipping documents agree?	✓	
	If no, describe what is in nonconformity:		

9. Condition/temperature of shipping container: 3°C WET ICE
10. Condition/temperature of sample bottles: _____
11. Sample Disposal?: SPL disposal ✓ Return to client _____

NOTES (reference item number if applicable): _____

ATTEST: [signature] DATE: 2/11
DELIVERED FOR RESOLUTION: REC'D _____ DATE: _____
RESOLVED: _____ DATE: _____