aqua science engineers inc.

November 30, 1998

Report Regarding The Presence and Source Of Chlorinated Solvents in Groundwater Beneath the Oliver Rubber Company Property 1200 65th Street Oakland, California

Prepared for:
Ms. Susan Hugo
The Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Second Floor
Alameda California

Prepared by:
Aqua Science Engineers, Inc.
208 West El Pintado Road
Danville, California 94526

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SLIC 1330

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	HISTORICAL AND RECENT ON-SITE CONDITIONS	1
	2.1 Historical Data	1
	2.2 Recent Data	2
	2.3 Historical Groundwater Flow Direction	3
3.0	NON-SPECIFIC OFF-SITE CONDITIONS	4
4.0	SPECIFIC OFF-SITE CONDITIONS	
	4.1 Historical Data	5
	4.2 Subsurface Assessment Data	5
	4.3 Remedial Action Plan and Implementation	7
5.0	CONCLUSIONS	8
	5.1 On-Site	8
	5.2 Off-Site	8
	5.3 Future Environmental Activities	9

APPENDICES

APPENDIX A	OLIVER RUBBER LETTER, DATED NOVEMBER 9, 1998 TO MS. SUSAN HUGO OF THE ACHCSA
APPENDIX B	SAN JOAQUIN REFINING COMPANY LETTER DATED NOVEMBER 24, 1998 TO MR. DAVID KUHRE OF OLIVER RUBBER COMPANY
APPENDIX C	PREVIOUS OLIVER RUBBER COMPANY GROUNDWATER GRADIENTR MAPS, 1992 AND 1993
APPENDIX D	EBMUD WATER PIPE MAP and CITY OF OAKLAND PUBLIC WORKS DEPARTMENT SANITARY SEWER AND STORM SEWER PIPE MAP
APPENDIX E	PORTIONS OF SELECTED REPORTS CONTAINED IN THE DTCS'S FILE OF MYER'S CONTAINER CORPORATION SITE, 6549 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

1.0 INTRODUCTION

On behalf of our client, the Oliver Rubber Company (Oliver), Aqua Science Engineers, Inc. (ASE) has prepared this document and associated attachments to provide data to support the belief that the chlorinated solvents, identified in the groundwater beneath a very small portion of the Oliver rear yard area is not the result of a recent or historic on-site source. Since the data within this document will show no historical usage of chlorinated solvents by Oliver on-site, and since no chlorinated solvents were detected in the on-site soil samples, then it appears that the chlorinated solvents in groundwater on-site must be related to an off-site source.

As you are aware, the area surrounding the Oliver property has been predominantly heavy industrial and commercial for many years (Figure 1). Review of historical aerial photographs dating back to the 1930's has verified this fact. Therefore, it is reasonable to assume that the businesses within the general area surrounding the Oliver site, including Oliver, could be the possible source of chlorinated solvent contamination in groundwater. ASE believes, however, that upon review of the following data within this document and attachments, it will become evident that Oliver operations are not the source of the minor concentrations of chlorinated solvents found in the groundwater beneath their property.

The following ASE reports support the data to be discussed in later sections of this document:

- Report of Soil and Groundwater Assessment, dated April 30, 1998
- Report of Soil and Groundwater Assessment, dated September 8, 1998
- Report of Soil and Groundwater Assessment, dated September 30, 1998

2.0 HISTORICAL AND RECENT ON-SITE CONDITIONS

2.1 Historical Data

On November 9, 1998, Mr. David Kuhre, Oliver's Oakland Division Manager, prepared a letter to Ms. Susan Hugo of the Alameda County Health Care Services Agency (ACHCSA) discussing the historical usage of chemicals at the subject site, See Appendix A. The letter states that a

review of material safety data sheets (MSDSs) of chemicals used in the manufacturing of rubber and for the maintenance of the facility found no materials containing chlorinated solvents. The letter also details the results of interviews of several Oliver key employees, each insisting they have no knowledge of chlorinated solvent usage at the property.

Attached in Appendix B is a letter from a research chemist from San Joaquin Refining Company (SJRC), dated November 24, 1998. SJRC is the former supplier of Raffex 120 to the Oliver site. Raffex 120, one of the primary components in the production of rubber tire treads, is a heavy petroleum hydrocarbon that is thick, black and tar-like at room temperature. Raffex 120 was stored on-site in three (3) 5,000 gallon tanks within a subsurface concrete vault on the southwest corner of the rear yard. The letter states that SJRC does not use chlorinated solvents of any kind in the refining or extraction process to produce Raffex 120.

2.2 Recent Data

As detailed in the previous ASE reports that have been sent to Ms. Hugo of the ACHCSA, the following items are known to be true:

- ASE inspected the floor and vaults that housed the equipment within the on-site building after the site was completely decommissioned and cleaned. Inspection resulted in several areas of potential integrity failure. Soil borings drilled adjacent to these potential integrity failures and subsequent sampling and analyses resulted in no significant concentrations of compounds tested.

- Twenty-seven (27) soil borings were drilled at the site both inside and outside the building and in the railroad spur, see Figure 2. Seventeen (17) of the twenty-seven borings were drilled into groundwater.

- None of the soil samples collected on-site contained detectable concentrations of chlorinated solvents.

- The only chlorinated solvent identified in a soil sample was 0.0076 parts per million (ppm) 1,1,-DCE found in the 15.5-foot soil sample collected from soil boring BH-14. However, borehole BH-14 is located off-site in the railroad spur west of the subject site.

- ASE believes that there may exist preferred flow pathways at the site which may have allowed VOCs to pass between the upgradient borings in the rear yard (boreholes BH-22 and BH-24) at higher concentrations than the concentrations detected in the upgradient borings. Take for example the case as detailed in the ASE Report dated September 30, 1998, regarding soil borings BH-20 and BH-27 (the borings with the highest concentrations of chlorinated solvents in groundwater). ASE discovered that sediments east of soil borings BH-20 and BH-27 are of higher permeability than those at or west of boreholes BH-20 and BH-27. This differing permeability may be related to preferential pathways in groundwater.

2.3 Historical Groundwater Flow Direction

Three groundwater monitoring wells were installed at the subject site by ASE in October 1992. As detailed on the maps enclosed in Appendix C, these wells were installed south of the subject site building in the sidewalk of 65th Street and in the driveway of the parking lot across 65th Street.

- The groundwater flow direction within these monitoring wells was consistently toward the southwest.

- The case, for which these monitoring wells were installed, was closed by the ACHCSA in June 1995.

- As far as recent groundwater flow direction data, ASE can only look toward the grab groundwater data collected from the recent 1998 assessments. In a quantitative rather than qualitative sense, one could extrapolate a westerly groundwater flow direction by comparing the concentration of Raffex in groundwater on the eastern and western side of the former Raffex tank vault. Raffex in groundwater was much more prevalent in the grab groundwater samples collected west of the vault in the railroad spur than on the eastern side of the vault in the rear yard area.

3.0 NON-SPECIFIC OFF-SITE CONDITIONS

Due to the current and historical heavy influence of industrial and commercial facilities in the immediate area of the site, ASE looked to off-site and upgradient (easterly) properties that could potentially be the source of chlorinated solvents in the on-site groundwater.

- Review of historical aerial photographs dating back to the 1930's has verified the abundance of industrial facilities surrounding the Oliver property. ASE is aware of at least one property to the east that has known chlorinated solvent contamination in the soil and groundwater

- As detailed on the maps attached in Appendix D, there are multiple underground utilities that run in the middle of 66th Street and Vallejo Street. Figure D - 1 shows two highlighted underground lines governed by the City of Oakland Public Works Department. One of the lines is a 5-foot diameter, concrete storm-drain pipe which runs down the middle of 66th Street and is pitched to the west. The bottom of this pipe lies at 10-feet 11-inches below street elevation. Therefore, this pipe and the backfill material surrounding the pipe are at or below the typical groundwater depth. The second line on Figure D – 1 is an 8-inch diameter, clay sanitary sewer pipe which runs down the middle of 66th Street and is also pitched to the west. The bottom of this pipe lies at 4-feet 4-inches below street elevation. The highlighted line on Figure D – 2 is a 6-inch and 8-inch steel water line governed by EBMUD. ASE was told that this pipe is most likely 36 to 42-inches below the street elevation.

It is ASEs opinion that it is possible that the backfill material surrounding these underground lines, or the lines themselves, may be acting as a conduit for contaminated groundwater to travel from an off-site source onto the subject property.

4.0 SPECIFIC OFF-SITE CONDITIONS

In a review of the current and historical businesses upgradient of the Oliver property, ASE determined that the Myer's Container Corporation formerly operated a facility due east across Vallejo Street (Figure 3). A cursory review of local regulatory agency files identified the Myer's Drum site as a property being overseen by California Environmental Protection Agency (CAL EPA) Department of Toxic Substances Control (DTSC), Region 2. A review of the DTSC's file regarding the Myer's Drum site revealed the following information.

4.1 Historical Data

The Myer's Drum facility was located at 6549 San Pablo Avenue, Oakland, CA. The facility had been used as a wooden barrel cooperage from approximately 1917 through the 1930's. Steel drum reconditioning began in 1939 and continued until 1991.

- In April 1988, the CAL EPA DTSC performed an inspection of the Myer's Drum site as part of a routine nationwide drum recycling facility audit. As the Inspection Report attached in Appendix E details, the inspectors identified gross negligence on the part of Myer's and its employees. Photographs within the file detailed stained soil, leaking drums, pooled liquids and hundreds if not thousands of drums on the property in various stages of reconditioning.

4.2 Subsurface Assessment Data

- Subsequent subsurface soil and groundwater assessments at the site revealed elevated concentrations of many chemicals. In general, chemical compounds identified include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and heavy metals. Specifically, the chlorinated solvents that were identified include vinyl chloride, 1,1-DCA, 1,2-DCE, 1,2-DCA, TCE, and 1,1,1-TCA. Media affected by these chemicals includes the upper 5-feet to 7-feet of alluvial fill materials and the shallow groundwater beneath the site (ranging from 4.75 to 18-feet bgs).

- There are thirteen (13) groundwater monitoring wells installed on and off-site for groundwater contamination definition related to the Myer's site. Appendix E contains a copy of the Semiannual Groundwater Monitoring Report prepared for the site by TRC, dated February 1998. Within this report exists historic tabulated groundwater elevation data, chemical concentration data, and gradient maps. Depending on the time of year, the groundwater depth and flow appears to fluctuate. As shown on TRC's Figure 3 within the afore-mentioned report, groundwater flowed toward the northwest. However, in review of Figures 6 and 7 of the same report, the flow also has a due west component, pointing toward the Oliver property.

- One should note that the concentrations of chlorinated solvents in Myer's monitoring well W-2 (on-site) do not appear at similar concentrations in Myer's monitoring well W-10 (off-site) which is only approximately 70-feet away and quite often directly downgradient of W-2. ASE believes that a possible reason for this could be the presence of the underground utilities within 66th Street described in an earlier section. It is possible that the contaminated groundwater is leaving the Myer's site toward the northwest, heading toward 66th Street. However, due to the presence of the 5-foot diameter storm sewer pipe and its backfill material of higher permeability than that of native soil, the groundwater no longer flows northwestward into monitoring well W-10; it begins to flow in the path of least resistance, westward. It is therefore possible that the contaminated groundwater identified in well W-2 is headed westward, toward the Oliver site, by-passing the remaining Myer's wells.

- One should also note that within TRC's Final Report, Soil and Groundwater Investigation for Myers Container Corporation, dated January 11, 1991, it is explained that monitoring well W-5 monitors a perched zone. They base this explanation on the fact that the groundwater within W-5 is 4-feet higher than the other on-site wells. Monitoring well W-5 is the only well between the Myers site and the Oliver site that depicts groundwater conditions due west of the former Myer's drum storage area. Because it is monitoring a perched groundwater source, the data from monitoring well W-5 may not be truly representative of the groundwater downgadient of the vast area formerly used for drum storage. In fact, the soil in that former drum storage area has been or is currently being removed to a depth of

approximately 2-feet bgs. Obviously this soil is being removed due to its contamination by chemicals formerly used on site.

- As requested by Ms. Hugo, various boring logs and cross sections from the Myer's site are attached in Appendix E.

4.3 Remedial Action Plan and Implementation

Under the guidance of the CAL EPA DTSC, TRC has prepared a Final Remedial Action Plan for the Myer's facility, dated May 1996. The Introduction and Executive Summary of that document is attached in Appendix E.

- In general, the remedial action is twofold. Contaminated soil at the site will be excavated and hauled away to a pre-determined landfill facility. Confirmation soil samples collected after the excavation activities are completed will contain contaminant concentrations below the residential clean-up goal prescribed within a TRC risk assessment. Contaminated groundwater will be remediated on-site using pump and treat technology. Myers plans to reduce the chemical concentrations in the shallow groundwater to maximum contaminant levels (MCLs).

- TRC has prepared a Phase I Remedial Design and Implementation Plan for the Myer's site, dated June 1998, Appendix E. This plan contains drawings of the work to be performed, cleanup goals, and a timeline for completion.

- Based on a recent "fence-line" viewing of the Myer's site, it appears that the remediation activities are well under way. All of the buildings have been demolished and the debris has been removed. Foundations and floors of the former buildings are currently being removed. Several excavations of contaminated soil have been completed, and a large volume of import backfill material has been stockpiled on the western edge of the property for future use. As previously noted, the remediation activities being performed at the Myer's site are being conducted in a manner consistent with the needs for the future re-use of the property as some form of a residential scenario.

5.0 CONCLUSIONS

5.1 On-Site

- ASE and Oliver Rubber feel confident that the historical chemical usage, employee interview data, and the Raffex 120 supplier information stand alone in providing the necessary data to remove Oliver as an on-site source of the chlorinated solvents found in the groundwater in the rear yard area of the site.

- The recent soil boring analytical data within the ASE soil and groundwater assessment reports provides further evidence that an on-site source of chlorinated solvents does not exist.

Considering that all of the information detailed in Section 5.1 above is factual and representative of site conditions, it is therefore ASE's and Oliver's contention that if the source of the chlorinated solvents identified in the groundwater in the rear yard area is not the result of an on-site source, then it must be the result of an off-site source.

5.2 Off-Site

- A known chlorinated solvent plume in soil and groundwater exists at the Myer's Drum site located east of the Oliver site across Vallejo Street. Groundwater flow direction data from Myer's wells and from previous Oliver wells show groundwater basically flowing in a westerly direction; sometimes to the northwest and sometimes to the southwest.

- Chlorinated solvents such as 1,1-DCA, 1,1,1-TCA and TCE have been identified in the groundwater beneath the Myer's site at much higher concentrations than the same compounds identified at the Oliver site.

Plausable explanations of the connection between the two sites are (a) the groundwater flow direction being generally westward, (b) the abundance of underground utilities along 66th Street and Vallejo Street, and (c) the differing soil permeability identified in recent ASE soil borings which leads to the theory of preferential pathways.

5.3 Future Environmental Activities

Although it is our contention that the chlorinated solvents identified in the groundwater beneath the subject site are the result of an upgradient off-site source, a risk assessment is planned for the site. The purpose of this proposed risk assessment is to provide information regarding the potential for human exposure and potential incremental cancer risks and non-cancer health affects associated with the direct and indirect contact with residual chemicals in subsurface soil and groundwater. The technical approach to be used for the risk assessment will be consistent with guidance in the USEPA's *Risk Assessment Guidance for Superfund* (USEPA, 1989), *Exposure Factors Handbook* (USEPA, 1996a), *Guidelines for Exposure Assessment* (USEPA, 1992a), and *Supplemental Guidance to RAGS: Calculating the Concentration Term* (USEPA, 1992b).

On behalf of our client, the Oliver Rubber Company, ASE requests the preparation of a "Comfort Letter," prepared by the Regional Water Quality Control Board in conjunction with the Alameda County Health Care Services Agency, that agrees with the content and opinions within this document, regarding the on-site chlorinated solvents in groundwater being the result of an upgradient, off-site source.

Should you have any questions or comments, please feel free to give us a call at (925) 820-9391.

Respectfully submitted,

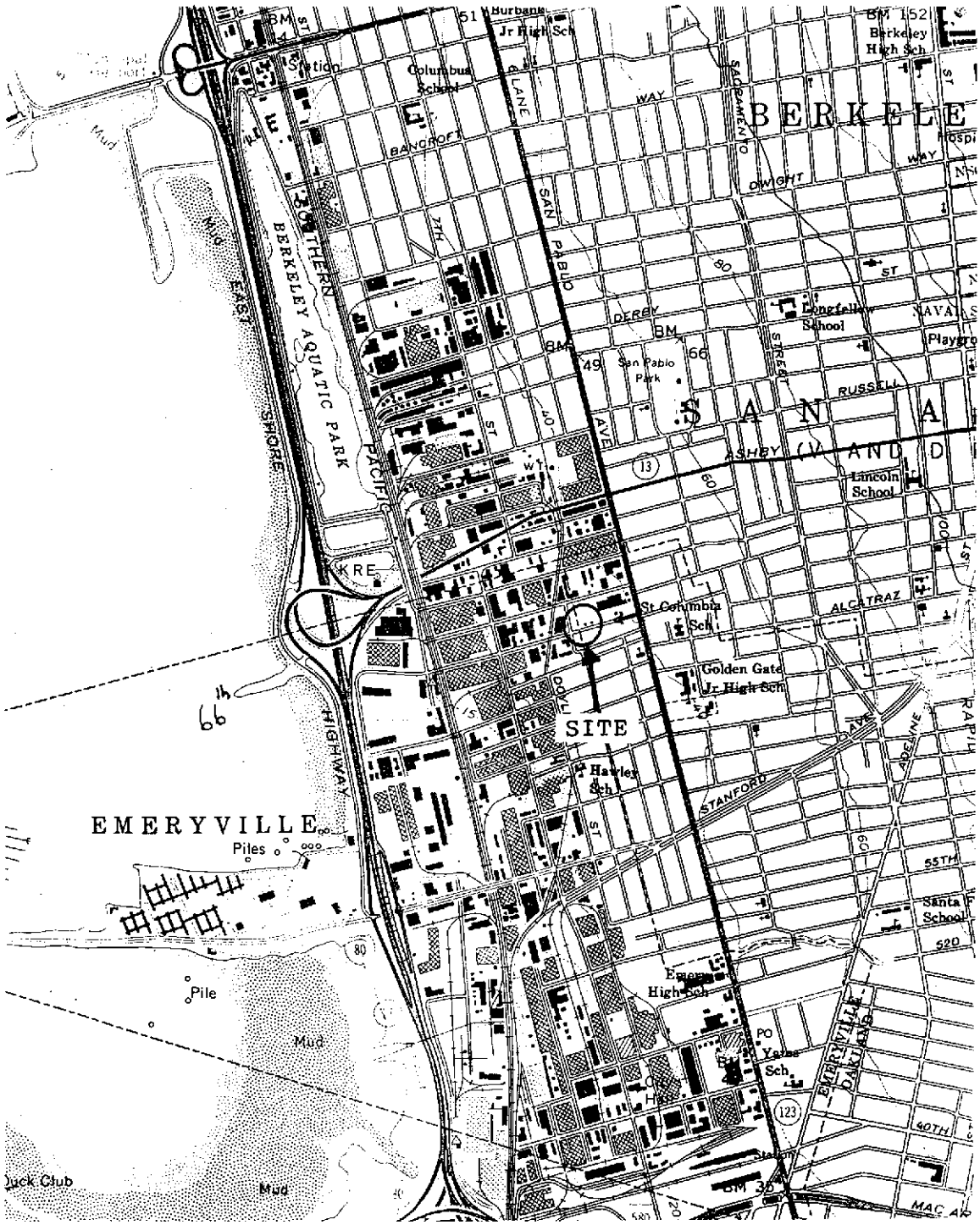
AQUA SCIENCE ENGINEERS, INC.

David Allen, R.E.A.
Senior Project Manager

Robert E. Kitay, R.G., R.E.A.
Senior Geologist

Cc: Mr. David Kuhre, The Oliver Rubber Company
Mr. Tom Palmer, The Standard Products Company

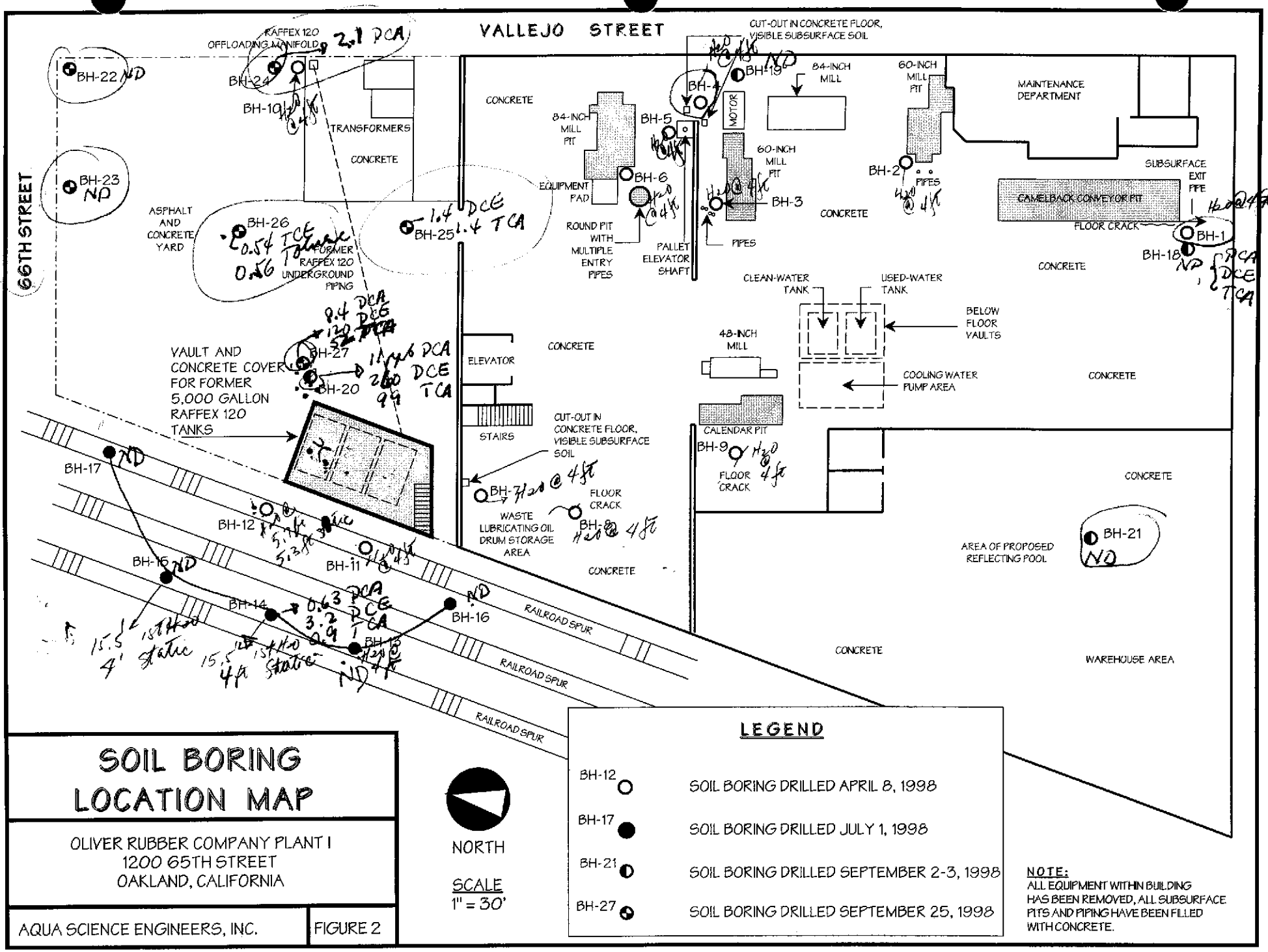
FIGURES



SITE LOCATION MAP

OLIVER RUBBER COMPANY PLANT I
1200 65TH STREET
OAKLAND, CALIFORNIA

Aqua Science Engineers | Figure 1



SOIL BORING LOCATION MAP

OLIVER RUBBER COMPANY PLANT I
1200 65TH STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 2

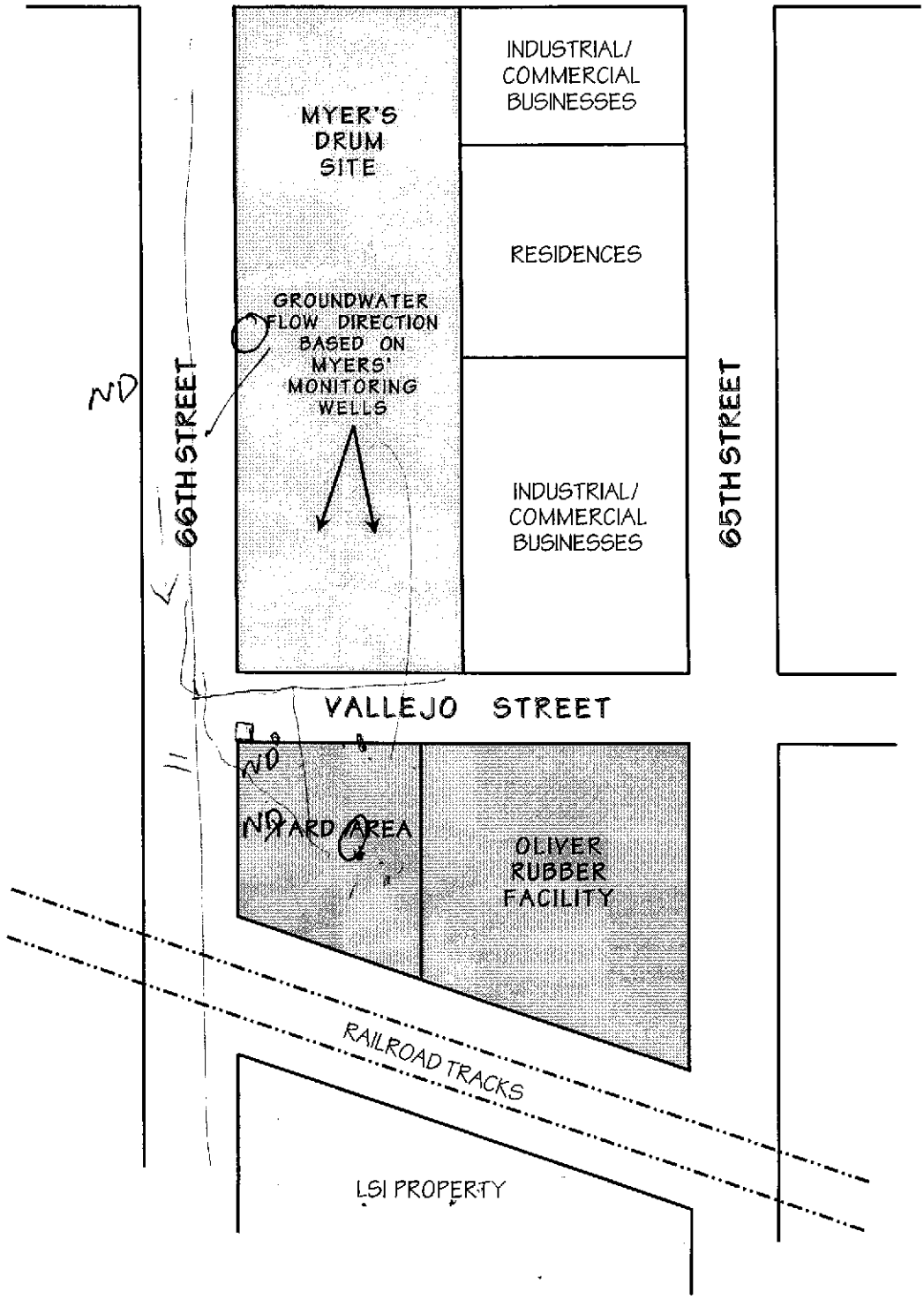
NORTH

SCALE
1" = 30'

LEGEND

- BH-12 ○ SOIL BORING DRILLED APRIL 8, 1998
- BH-17 ● SOIL BORING DRILLED JULY 1, 1998
- BH-21 ◐ SOIL BORING DRILLED SEPTEMBER 2-3, 1998
- BH-27 ⊕ SOIL BORING DRILLED SEPTEMBER 25, 1998

NOTE:
ALL EQUIPMENT WITHIN BUILDING HAS BEEN REMOVED, ALL SUBSURFACE PITS AND PIPING HAVE BEEN FILLED WITH CONCRETE.



NORTH
NOT TO SCALE

EXPANDED SITE PLAN

OLIVER RUBBER COMPANY PLANT 1
1200 65TH STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure 3

APPENDIX A

Oliver Rubber Letter
Dated November 9, 1998
To Ms. Susan Hugo of the ACHCSA

Oliver

November 9, 1998

Ms. Susan Hugo
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Subject: Oliver Rubber Company: Chlorinated Solvents - Verification of Non-Use at Site

Dear Ms. Hugo:

This letter is being written to provide an assurance to the Alameda County Health Care Services Agency and the San Francisco Bay Regional Water Quality Control Board that chlorinated solvents are not known to have been used at the Oliver Rubber Company site - 1200 65th Street, Emeryville, CA. This has been established using three methods: 1) Review of the list of materials (and Material Safety Data Sheets - MSDS) used at this location, 2) Interviews of long-term employees who worked in a capacity to have knowledge of materials used, and 3) Recent on-site (within building walls or fences) soil boring analyses.

1) List of Materials Used On-Site
A binder with MSDSs of all materials used in the manufacture of rubber and the maintenance of the facility was compiled by the Laboratory Manager. The binder includes MSDSs for materials recently used and historically used at the site. No materials containing chlorinated solvents were found in my review of this data.

2) Interviews of Long-Term Employees
I interviewed Henry Torrez, who had worked at this location from 1953 until his retirement in 1995. Mr. Torrez began work as a Lab Technician and held the positions of Plant Supervisor and Tire Testing Manager, all of which qualify him to comment on the use of chlorinated solvents. He firmly stated that no materials of this nature were used in the facility. He did say that the (non-chlorinated) solvents hexane, heptane and toluene were used in the manufacture of rubber cement. He also stated that hexane and kerosene were used to clean equipment and tools. Used in very small quantities were benzene, methyl ethyl ketone, acetone, and xylene by laboratory personnel for testing and experimentation. Mr. Torrez stated that the rear yard (where chlorinated solvents were found in groundwater) had always been asphalt surfaced and that only rubber, carbon black and oil were stored on this area.

I interviewed Gregory Stewart, who began with Oliver in 1972 and is still with the Company. Mr. Stewart was the Plant Superintendent until manufacturing operations ceased and the facility was decommissioned in 1998. He stated that only hexane solvent and soap were used to clean equipment and tools and no chlorinated solvents were used either in the manufacture of rubber or for parts cleaning.

I spoke next with Edward Falkard, Chief Chemist from 1983 until 1998 and he stated that chlorinated solvents were never used in this plant. He also stated that benzene, toluene, and acetone were used in the laboratory.

I myself have been employed by Oliver since 1987 and functioned as the Division Manager. I can also state that no chlorinated solvents were used in this facility. I can add that our maintenance group used Safety Kleen, a non-chlorinated petroleum naphtha solvent, until I instituted the use of d-limonene, a non-chlorinated terpene hydrocarbon solvent, for parts and tools cleaning. The entire site (except for a small planting strip along 65th Street) has been covered at all times during Oliver's ownership; with an asphalt or concrete surface providing an impervious barrier for soils below.

3) Soil Boring Analytical Results

Aqua Science Engineers (ASE), of Danville, completed on-site soil borings on April 8, September 2 & 3, and September 25, 1998. (Reference ASE "Reports of Soil and Groundwater Assessment" dated April 30, September 8 and September 30). ASE is also preparing a comprehensive discussion of the report findings and the hydrogeology of this site. Of 17 on-site borings, 14 had no detectable concentrations of VOCs. 3 boring soil samples did have detectable concentrations of VOCs (1 was a SVOC); however, all concentrations were at least several orders of magnitude less than the US EPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil. It should also be noted that none of the 3 detected VOCs were chlorinated solvents.

Conclusion

The review of approximately 150 materials used on-site as described in method #1 and the interview of long-term employees as described in method #2 provides reasonable supportive evidence that chlorinated solvents were never used at this site. Additionally, the soil boring and analyses described in method #3 found no chlorinated solvents in soil within the Oliver Rubber property. For these reasons, it is logical to conclude that the Oliver Rubber Company is not a source for the chlorinated solvents found in local groundwater and that this contamination must be a result of the migration of similar pollutants through the groundwater from an off-site source.

If you have any questions, I may be contacted at (510) 654-7716.

Very truly yours,

OLIVER RUBBER COMPANY

David Kuhre

David Kuhre
Oakland Division Manager

APPENDIX B

San Joaquin Refining Company Letter
Dated November 24, 1998
To Mr. David Kuhre of Oliver Rubber Company

SJr SAN JOAQUIN REFINING CO., INC.

November 24, 1998

Mr. David Kuhre, Division Manager
Oliver Rubber Co.
1200 65th Street
Oakland, CA 94608

Dear Mr. Kuhre:

This letter is to follow-up on our telephone conversation regarding the product Raffex 120. Raffex 120 is a refined rubber process and extender oil product which is ultimately produced from Kern River field virgin crude oil, after vacuum distillation and an extraction refining process.

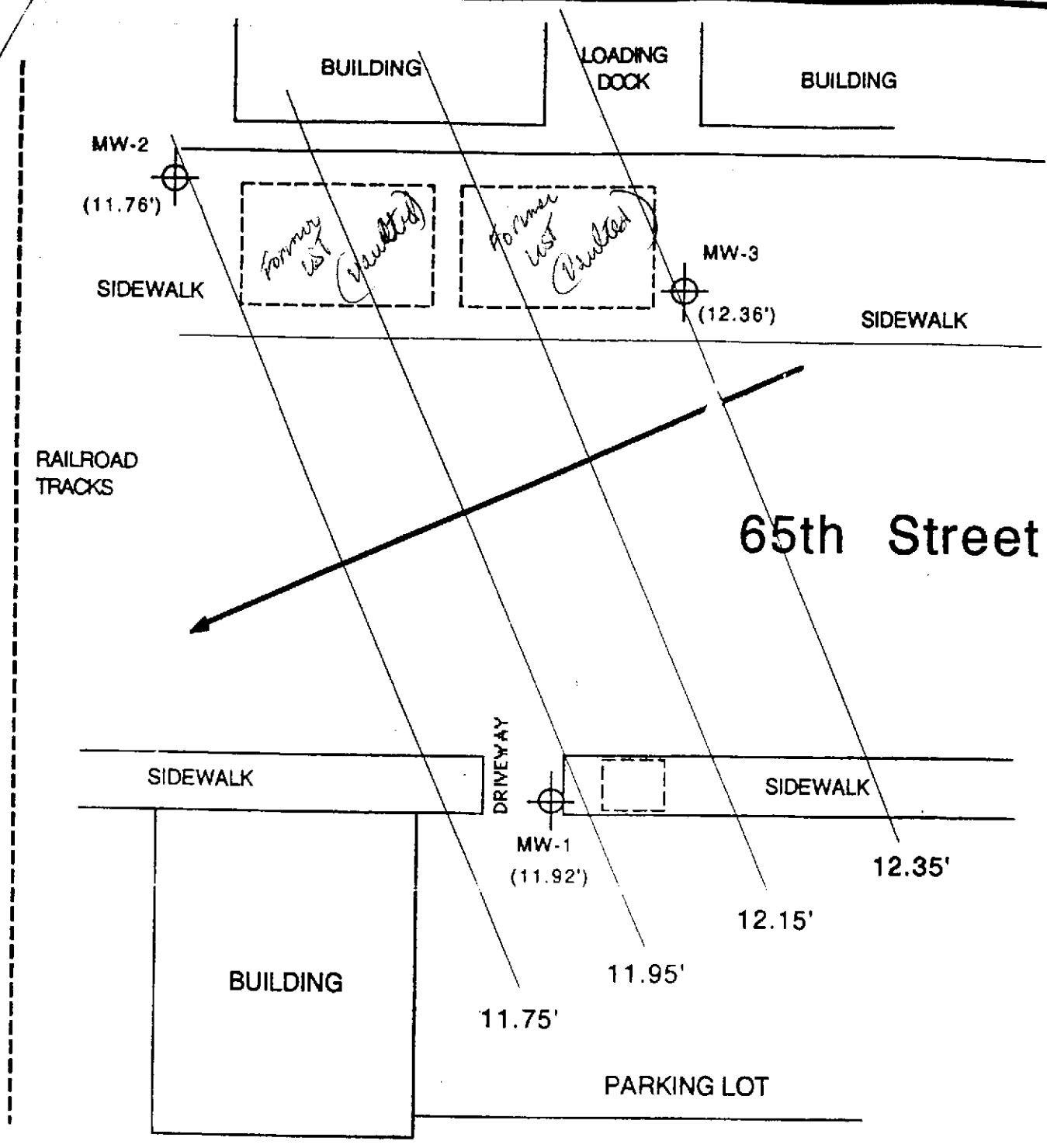
San Joaquin Refining Co., Inc. does not use chlorinated solvents of any kind in the refining or extraction processes to produce Raffex 120, and the product should contain no chlorinated solvents.

Respectfully,

Don Powell
Research Chemist
San Joaquin Refining Co., Inc.
(805) 327- 8248

APPENDIX C

Previous Oliver Rubber Company
Groundwater Gradient Maps, 1992 and 1993



LEGEND

MW-1 (11.92') — Monitoring Well with groundwater depth in feet above mean sea level

Groundwater Gradient direction

N

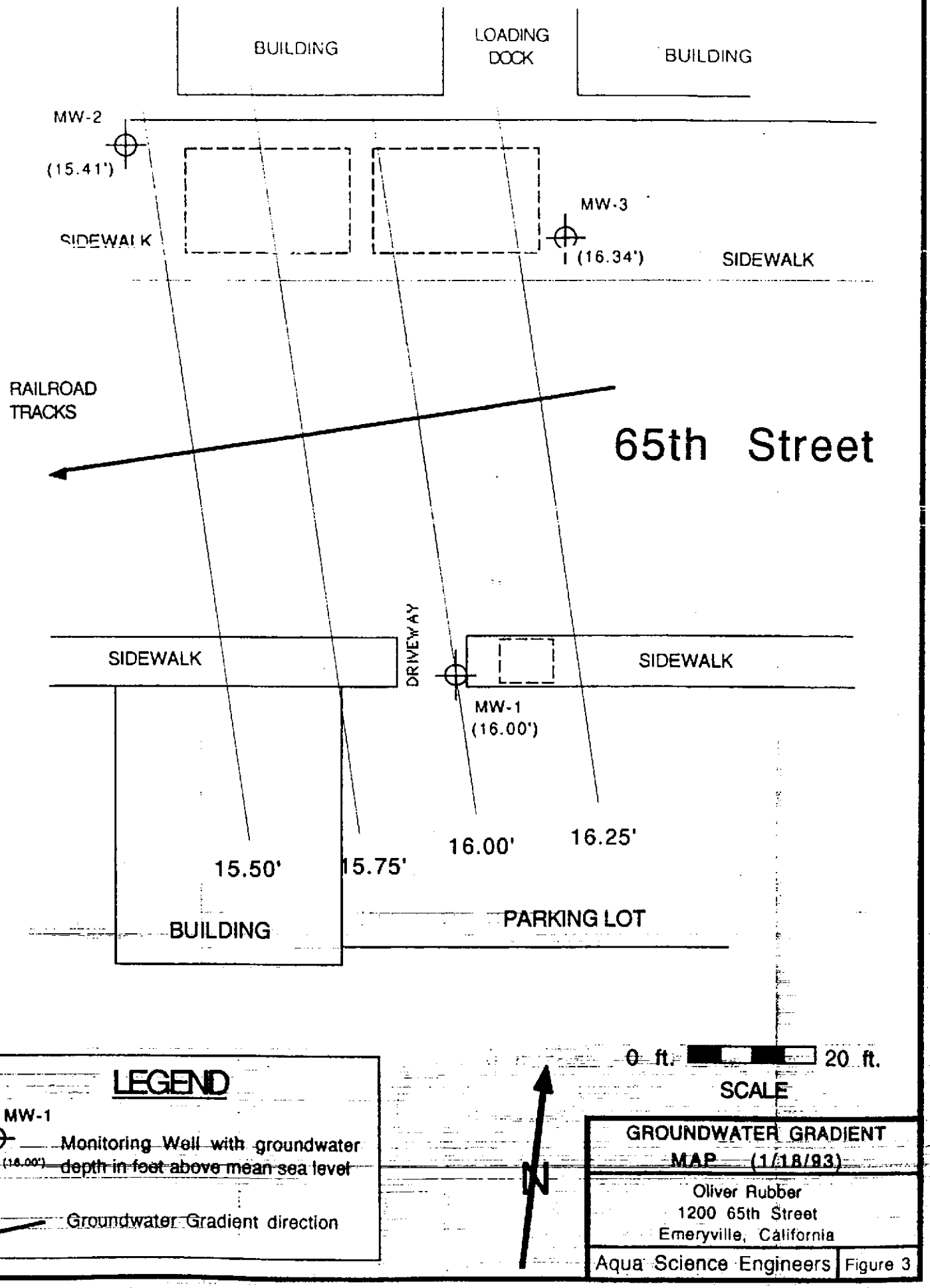
0 ft. — 20 ft.

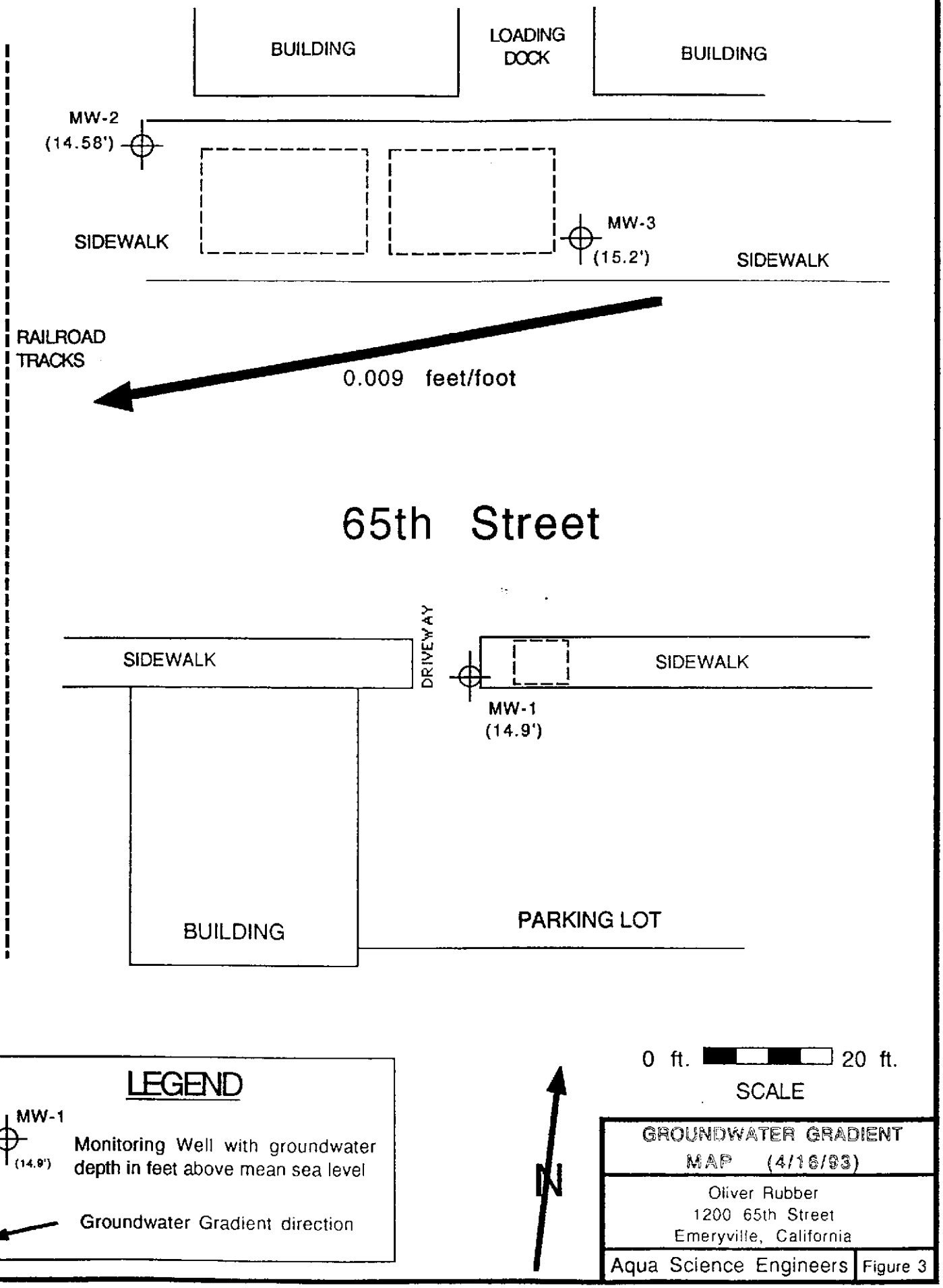
SCALE

GROUNDWATER GRADIENT MAP (10/1/82)

Oliver Rubber
1200 65th Street
Emeryville, California

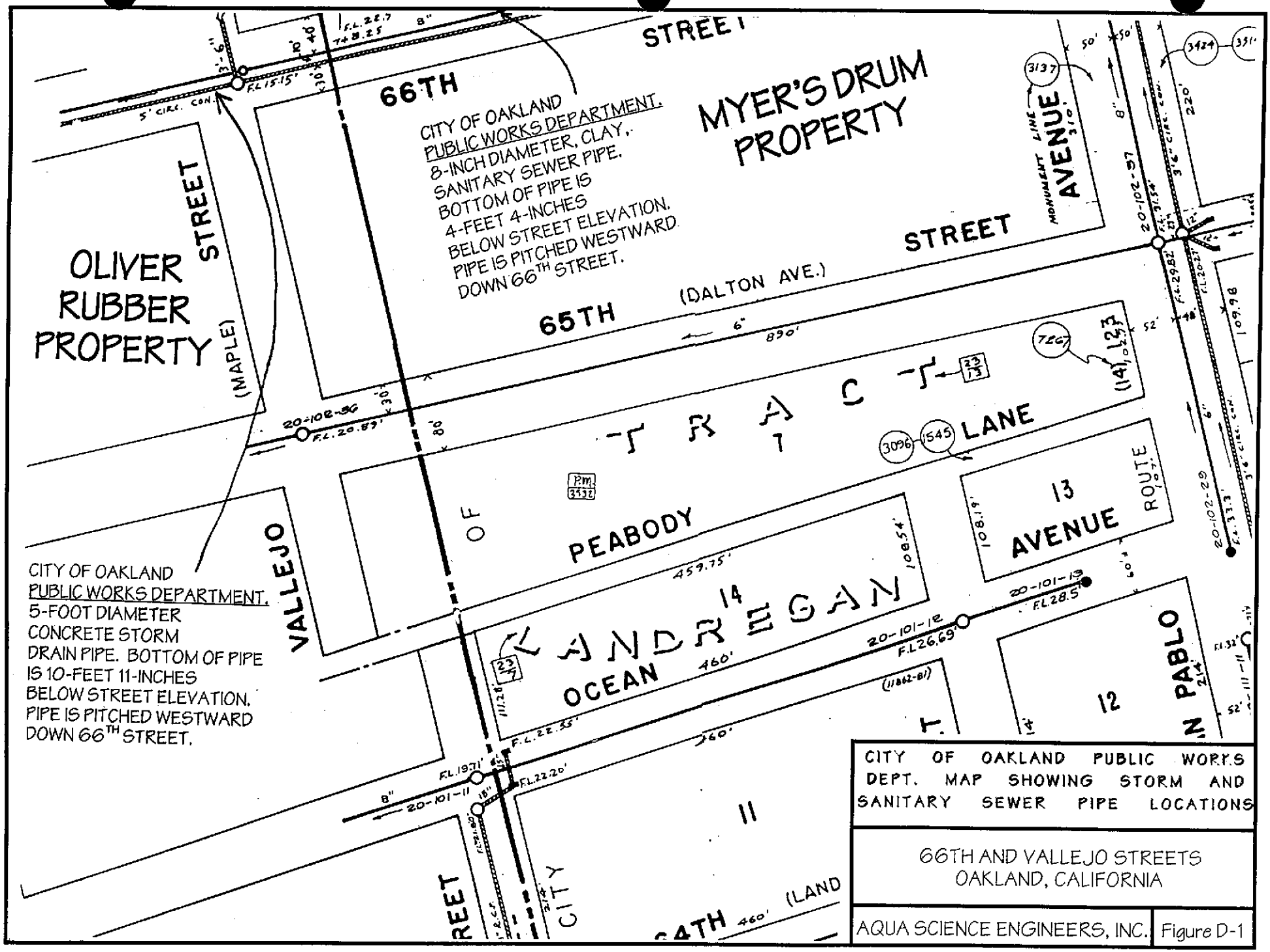
Aqua Science Engineers | Figure 3

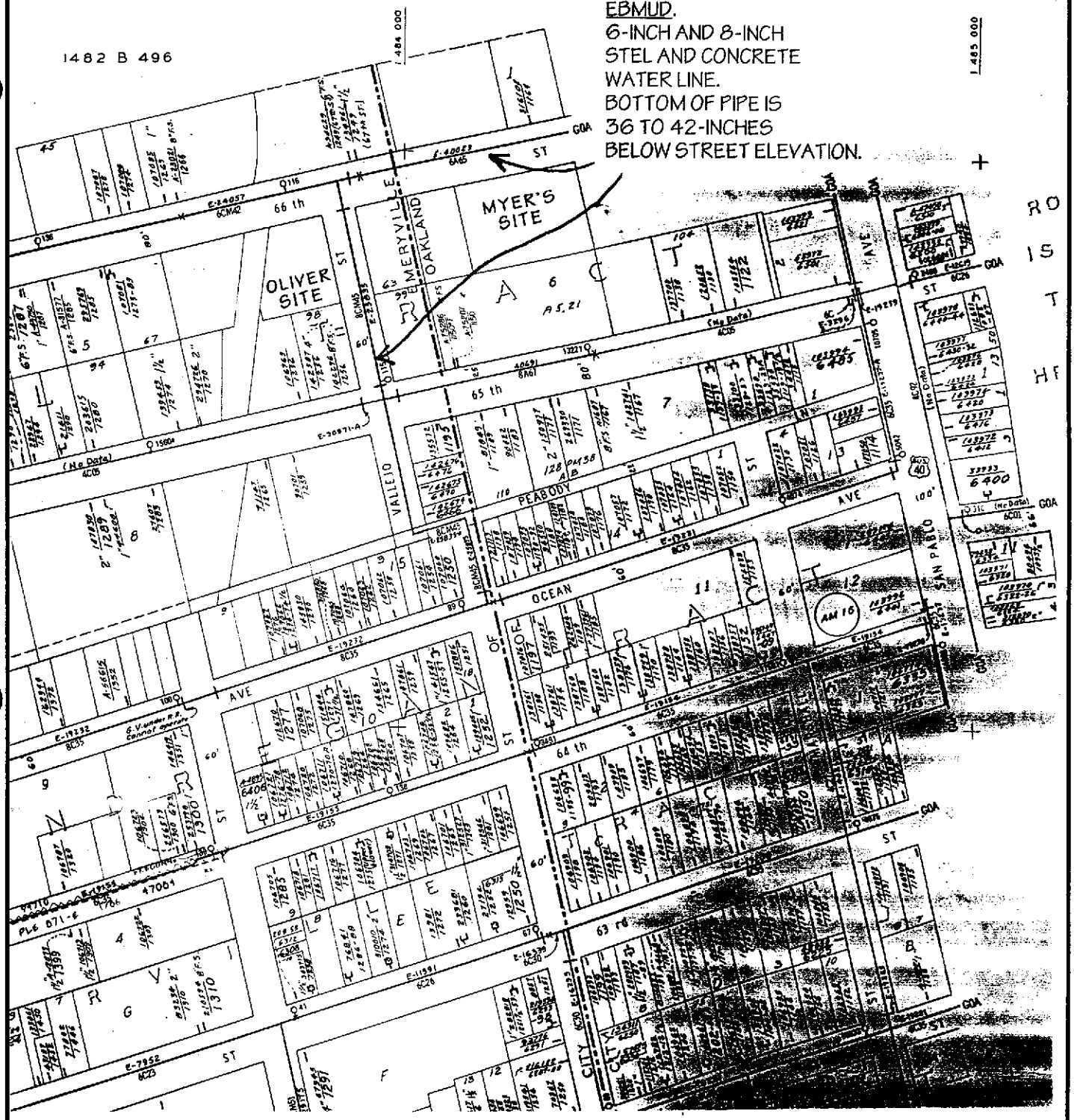

BUILDING
LOADING DOCK
BUILDING
MW-2
(15.41')
MW-3
(16.34')
SIDEWALK
SIDEWALK
RAILROAD TRACKS
65th Street
SIDEWALK
DRIVEWAY
SIDEWALK
MW-1
(16.00')
15.50'
15.75'
16.00'
16.25'
BUILDING
PARKING LOT
LEGEND
MW-1
(16.00')
Monitoring Well with groundwater depth in feet above mean sea level
Groundwater Gradient direction
N
0 ft.
20 ft.
SCALE
GROUNDWATER GRADIENT MAP (1/18/93)
Oliver Rubber
1200 65th Street
Emeryville, California
Aqua Science Engineers
Figure 3


BUILDING
LOADING DOCK
BUILDING
MW-2
(14.58')
SIDEWALK
MW-3
(15.2')
SIDEWALK
RAILROAD TRACKS
0.009 feet/foot
65th Street
SIDEWALK
DRIVEWAY
SIDEWALK
MW-1
(14.9')
BUILDING
PARKING LOT
LEGEND
MW-1
(14.9')
Monitoring Well with groundwater depth in feet above mean sea level
Groundwater Gradient direction
N
0 ft.
20 ft.
SCALE
GROUNDWATER GRADIENT MAP (4/16/93)
Oliver Rubber
1200 65th Street
Emeryville, California
Aqua Science Engineers
Figure 3

APPENDIX D

EBMUD Water Pipe Map
and
City of Oakland Public Works, Sanitary Sewer and
Storm Sewer Pipe Map


66TH STREET
MYER'S DRUM PROPERTY
OLIVER RUBBER PROPERTY
(MAPLE) STREET
65TH STREET (DALTON AVE.)
MONUMENT LINE
AVENUE
VALLEJO
PEABODY
OCEAN
460'
459.75'
108.54'
108.19'
13 AVENUE
ROUTE 107
LANE
N PABLO
12
11
CITY OF OAKLAND
PUBLIC WORKS DEPARTMENT.
8-INCH DIAMETER, CLAY,.
SANITARY SEWER PIPE.
BOTTOM OF PIPE IS
4-FEET 4-INCHES
BELOW STREET ELEVATION.
PIPE IS PITCHED WESTWARD
DOWN 66TH STREET.
CITY OF OAKLAND
PUBLIC WORKS DEPARTMENT.
5-FOOT DIAMETER
CONCRETE STORM
DRAIN PIPE. BOTTOM OF PIPE
IS 10-FEET 11-INCHES
BELOW STREET ELEVATION.
PIPE IS PITCHED WESTWARD
DOWN 66TH STREET.
20-102-36
20-102-57
20-102-29
20-101-13
20-101-12
20-101-11
F.L. 20.89'
F.L. 15.15'
F.L. 19.71'
F.L. 22.20'
F.L. 26.69'
F.L. 28.5'
F.L. 22.35'
F.L. 22.7
890'
360'
220'
CITY OF OAKLAND PUBLIC WORKS DEPT. MAP SHOWING STORM AND SANITARY SEWER PIPE LOCATIONS
66TH AND VALLEJO STREETS
OAKLAND, CALIFORNIA
AQUA SCIENCE ENGINEERS, INC.
Figure D-1



NORTH
NOT TO SCALE

EBMUD MAP SHOWING
WATER PIPE LOCATIONS

66TH AND VALLEJO STREETS
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure D-2

APPENDIX E

Portions of Selected Reports
Contained in the DTSC's File
of
Myer's Container Corporation Site
6549 San Pablo Avenue, Oakland, California

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704

INSPECTION REPORT

MYERS CONTAINER CORPORATION
6549 San Pablo Avenue
Oakland CA
CAD009123217

Inspected by: Tom Gandesbery

Date of Inspection: 4/27, 28/88 Date of Report: June 30, 1988

I. Purpose

Generator Inspection and Industry Survey.

II. Representatives Present

William "Mike" Sather, Plant Manager, Myers Container Corp.
Mark Thomas, Plant Engineer, Myers Container Corp.
Richard Godfrey, Director of Public Health, IMACC Corp.

Thomas R. Gandesbery	on 4/27, 28/88	DHS
George Baker	" "	
Mary Wilson	" "	
Diane Kihara	on 4/28/88	
Bruce Butterfield	" "	

III. Owner/Operator

Myers Container Corp. owned by IMACC Corp.

IV. Background

Myers Container (Myers) has never been inspected by this Department. The facility was inspected by Tom Peacock of the Alameda County Department of Environmental Health; however, no report was ever written. Myers has permits for air pollution discharge from the Bay Area Air Pollution Control District for painting and boiler operations. Myers has a waste water discharge permit from the East Bay Municipal Utility District (EBMUD) for discharge of grey water (toilet) and drum leak tester water. In 1974, Myers suspended all sewer discharge from the drum washing process and installed a plug at the discharge point in an effort to comply with POTW standards.

V. General Description of Facility

Myers is a reconditioner of 55-gallon drums. The facility employs 31 people working in a single shift. The facility is

situated along one-half of a city block in Oakland. According to plant representatives, the facility has been in operation since 1919. The facility is owned and operated by Myers Container Corporation which is in turn owned by IMACC Corporation. IMACC operates a new drum manufacturing plant and a plastic molding plant as well as drum reconditioning plants in other states.

The company operates two drum cleaning plants in Northern California. Myers Container at 6549 San Pablo is a drum washing plant while Myers Container on Shellmound Drive in Emeryville is a drum burning plant.

VI. Hazardous Waste Activity Description

A. Drum Washing Operation:

The facility cleans closed top or "tight head" 55-gallon drums using a hot caustic wash process. Nearly all drums reconditioned at the plant previously held some type of hazardous material. Drums are typically unloaded at the middle loading dock on 66th street (Attachment A).

Within the drum acceptance area, drums that contain a petroleum residue are drained into an oil drainage box which drains into an underground storage tank located under the parking lot (Attachment A). Drums containing oily residues are loaded upside down on the "oil-inside wash" which washes the inside of the drum with a hot caustic solution (Attachments A, B-photos 1, 2). Drums that contain a solvent residue are similarly washed on the "solvent"-inside wash unit which is built into the floor (Attachments A, B-photos 1, 2). Drums that contain a viscous or sticky residue may be washed beforehand using one of two "hard flusher" units (Attachments A, B-photo 2). The hard flushers only differ from the oil and solvent inside washers in that they utilize a "caustic enhancement chemical".

Once the inside of the drum has been washed, the drum is loaded onto the outside wash unit or "outside flusher". This unit is semi-enclosed and uses the same type of caustic wash solution as the inside units (Attachments A, B-photo 3). Drums run through the outside flusher in an easterly direction on a conveyer belt to a water rinse unit (Attachment A). The rinse unit sprays hot water into the drum and onto the drum exterior (Attachments A, B-photo 3). When the water becomes spent, the rinse unit is periodically drained into the wash units. Once the drums have been rinsed, the drums are siphoned to remove residual water, visually inspected and run through a drying oven (Attachments A, B-photos 5, 9). Drums that have hardened residue or rust inside are placed on one of two "chaining machines" (Attachments A,

B-photo 7, 8). Chaining machines spin the drum while a length of chain placed within the drum slides around knocking material free. Solid residues from the drums are emptied by hand. Drums that have not been thoroughly cleaned are run back through the cleaning process or shipped to the Emeryville plant for deheading and processing as an open top drum. Exteriors of drums are shot blasted, dedented and painted in a paint booth before being put in storage in the warehouse (Attachment A). Dust from the shot blast unit is collected in a baghouse located in the alley near the offices (Attachments A, B-photo 37).

B. Drum Storage Yard:

Drums that have no immediate value are stored in a large gravel and dirt lot at the west side of the facility (Attachment A). The vast majority of the drums in storage have not been reconditioned. Many drums appear to have been in storage for many years (Attachments A, B-photos 17, 33). Hazardous wastes generated from the drum reconditioning process are stored in drums in the northeast part of this yard (Attachment B-photos 25-28). These wastes are caustic sludges, paint wastes and shot blast dust which are periodically mixed together with absorbant in a shallow metal trough (Attachment B-photo 27). The trough is then emptied into a roll-off bin also located in the yard (Attachments A, B-photo 28).

C. Aqueous Waste Treatment:

Caustic wash solutions are either stored in the process unit or in one of four sumps. Wash units are interconnected by a network of concrete floor drains called "trenches" (Attachments A, B-photo 6). The facility's process plumbing is diagramed on a process flow diagram that Myers representitives gave to Tom Gandesbery and which is included in this report as Attachment E. Cleaning solution from the "hard" washer is stored in a holding tank (sump) situated immediately north of hard flusher #1. Facility representatives estimated the volume of the hard flusher holding sump to be approximately 3,000 gallons. Caustic cleaning solution from the solvent and the oil inside washers and the outside flusher comingle in the three following sumps (refer to attachment A):

"steamer caustic holding tank" (500 gallon capacity)

"holding tank-settler" (10,000 gallon capacity)

"oil and grease separator" (4000 gallon capacity).

Mark Thomas and Mike Sather stated that the facility does not treat the solutions in the sumps and only "lets nature take its

course", which was interpreted by Department staff to mean that the solids in the cleaning solutions are separated by gravity.

Caustic cleaning solution that can no longer be used for washing drums is pumped through an aboveground feed pipe to a below ground, open-topped 28,000 gallon tank (sump) (Attachment B, photos, 39, 40). The tank is located adjacent to the warehouse and the entrance to the drum storage yard (Attachments A, B-photo 38).

A pump and overhead spigot are attached to the 28,000 gallon sump for emptying into tanker trucks (Attachment A, B, photos 38). The facility transports off site approximately 8,000 gallons of spent cleaning solution per month. The facility has used their own tanker truck to transport the liquid from this sump to their other drum reconditioning plant in Emeryville (also see section VII. #5-7).

VII. Violations

1. Section 25201, Health and Safety Code (H&SC), Section 66371(a), California Code of Regulation (CCR), Title 22.

   The facility treats and stores hazardous waste on site without a permit as follows:

   Drum cleaning:

   Myers cleans drums that previously contained hazardous materials and, in many cases, contain residual amounts of hazardous wastes. The company employs a hot caustic wash system which has a pH of 13 or 14 (as measured by pH paper at facility and by lab analysis).

2. Section 25201, H&SC, 66371 CCR, Title 22)

   The facility accepts hazardous waste without a permit.

   Myers accepts containers that previously held a hazardous material and which contain residual amounts of hazardous materials.

   Myers accepts, for reconditioning, 55-gallon drums that are labeled as a hazardous waste or labeled as containing hazardous materials.

3. Section 261.7 Code of Federal Regulations 40 (40 CFR).

The facility accepts drums that have not been emptied in accordance with Federal standards.

Twenty uncleaned drums were selected for measurement of residue pursuant to federal regulation and sampling. Ten drums were selected from drum storage in the yard and Ten drums were selected from a load that had been unloaded at the loading dock while DHS staff were on site.

four ~~Five~~ of twenty drums sampled had over one inch of residue and one drum held approximately 3/4 of an inch of oil. All liquids were easily drained from the containers by pouring.

Residue levels were checked using a 3/8 inch wooden dowel which was checked against a tape measure.

4. Section 25201, H&SC (refer to section 25123.3. (a)(2), H&SC).

The facility has three waste storage tanks which are all greater than 5,000 gallons in volume and are operated without a permit.

The facility uses the following tanks to store waste in a capacity in excess of 5,000 gallons:

aboveground 15,000 gallon "caustic holding tank",

below grade 10,000 gallon "settler holding tank" (sump),

below grade 28,000 gallon tank (sump) (Attachments A, E).

5. Section 25201, Health and Safety Code (H&SC), Section 66371(a), California Code of Regulation (CCR), Title 22.

Meyers treats hazardous waste with out a permit.

Cleaning solution treatment:

Myers generates a caustic sludge from the cleaning process which is separated by settling in sumps (Attachment A, E).

Comingling of hazardous wastes:

Sludge from the cleaning process is combined with shot blast dust, absorbant and paint wastes in a metal box and a roll-off bin (Attachment A, B, photo 28). The bin is then transported off site to a Class 1 disposal site.

Storage of waste for over 90 days:

Myers Container stores hazardous sludge in a 28,000 gallon tank for greater than 90 days.

Mike Sather, Plant Manager, stated that the 28,000 gallon tank has not been cleaned out in four years. The facility removes 8,000 gallons of waste per month which is shipped to the Emeryville facility.

6. Sections 25160 (b), 25163, 25160.(d), H&SC, Section 66480, 66448,66541, CCR, Title 22, respectivly.

The facility offers for transport, a hazardous waste without preparing a uniform hazardous waste manifest, transports hazardous waste without a manifest, and transports hazardous waste in a vehicle that is not registered with the Department to transport hazardous waste.

Mike Sather, Mark Thomas and Richard Godfrey acknowledged that the facility has used its own tanker truck to transport spent cleaning solution off site to the company's other drum cleaning plant in Emeryville.

A process flow diagram of the facility prepared for the East Bay Municipal Utility District in 1986, shows that an average of 208 gallons per day ("gpd") are sent to the Emeryville plant (Attachment G).

A process flow diagram given to Tom Gandesbery by Mark Thomas indicated that 8,000 gallons of spent cleaning solution are shipped to Emeryville per month (Attachment E).

Mike Sather told Tom Gandesbery that approximately 8000 gallons of spent cleaning liquid is "shipped as product" in the company's own tanker truck in once a month.

Mike Sather and Mark Thomas told Tom Gandesbery, George Baker and Mary Wilson that in the future, the company will transport the liquid using a commercial liquid hauler to comply with the requirements of their insurance company. An internal IMACC Corporation memo, dated 2/2/88 obtained from Richard Godfrey, reiterates the company's intentions to use such a hauler (Attachment F).

An search of manifest files using the Hazardous Waste Information System (HWIS) indicated that no manifests have ever been filed in which the Myers-Emeryville facility is designated as the Treatment Storage or Disposal (TSD) site for wastes transported from Myers-Oakland to Myers-Emeryville.

7. Sections 25189(c), 25189.5(a),(c), H&SC and Section 66480(b), CCR, Title 22.

The facility transports hazardous waste to an unpermitted treatment, storage and disposal facility (TSD).

Myers transports approximately 8,000 gallons of hazardous waste from the Oakland facility to the Emeryville facility for treatment and disposal. Spent drum cleaning solution is transported to the Emeryville facility where it is used to cool ("quench") drums as they emerge from the Emeryville facility's drum burner unit.

8. Section 66492(c), CCR, Title 22.

Facility did not keep copies of waste analyses on file.

Myers Container has shipped approximately 54 tons of hazardous waste off-site for disposal,in the calendar year 1987 (1987 Biennial Report) and has disposed of large amounts of hazardous waste in previous years; but, the facility did not have copies of lab analyses for the waste. Mark Thomas stated that the disposal facility (Casmalia Resources) conducts a lab analyses but that Myers did not have copies of those analyses.

9. Section 66508(a) 2, 3, (c), CCR, Title 22

The facility failed to label approximately 12 drums containing hazardous waste as hazardous waste.

Approximately 12 drums of waste oil were in storage on the platform near the "oil and grease separating tank". The drums were labeled "waste oil". A roll-off bin full of hazardous waste located in the drum storage yard was not labeled in accordance with Section 66508, CCR, Title 22. Specifically, the drums of waste oil were not labeled with the following information:

(i) the words "hazardous waste",

(ii) the date of initial accumulation,

(iii) name and address of person producing the waste and statement or statements that call attention to the particular hazardous properties of the waste (Attachment B-photos 21, 23, 24).

The 15,000 gallon tank located in the alley on the east side of the facility was not labeled as containing hazardous waste.

10. Section 67141(d), Title 22.

The facility has a contingency plan that fails to identify the home addresses of emergency coordinators.

11. Section 67143, CCR, Title 22

The facility failed to amend the contingency plan to include the current address of the Department.

12. Section 67105(b),(c) CCR, Title 22

The facility did not have documentation of a training program in hazardous waste management for personnel handling hazardous waste. The facility did not have documentation of an annual review of training for employees who handle hazardous waste.

13. Section 67105(d)(1), CCR, Title 22

The facility did not have a record of position statements as they pertain to the handling of hazardous waste.

Myers did not have records that include the following:

The job title and name of employee for each position related to hazardous waste management;

a written description for each position;

a written training plan for each position;

records that training requirements have been met.

14. Section 67121(a), CCR, Title 22.

The facility lacks required emergency equipment.

Myers did not have an internal two-way communication device and an alarm for summoning emergency assistance in areas where drums of hazardous waste are stored.

There was no alarm system or communication system in the areas where full drums of hazardous waste are stored.

Drums containing hazardous waste generated by on site reconditioning operations are stored in the following three areas (refer to map, Attachment A):

west wall of process area near inside wash units (Attachment B, photos 13, 14)

platform near sumps (waste oil storage) (Attachment B, photos 22, 24)

north east side of drum storage yard (Attachment B, photos 25, 26).

Myers lacks adequate spill control and decontamination equipment. There is no safety shower or eyewash in the area of the yard where hazardous wastes are handled and stored.

15. Section 67122, CCR, Title 22.

The facility does not properly maintain and test emergency systems.

An eyewash near the # 1 hard wash unit was not maintained (Attachment B, photo 29). The facility does not document testing of eyewashes and safety showers.

16. Section 67124, CCR, Title 22

The facility did not provide adequate aisle space to allow for the unobstructed movement of emergency equipment and personnel in areas where drums of hazardous waste are located (see violation 15, above, for waste storage areas).

Aisle space in these areas did not allow inspection of containers and the unobstructed movement of emergency equipment.

17. Section 67120(a), CCR, Title 22

The facility was not maintained and operated to minimize the possibility of a fire, explosion or any unplanned, sudden or non-hazardous release of hazardous waste to the air, soil or surface water which could threaten human health and the environment.

The 28,000 gallon tank is located adjacent to the street with no fence or locked covering (Attachment B, photo 38, 39).

The 28,000 gallon tank did not have two feet of freeboard, and gravel surrounding the 28,000 gallon tank is stained black indicating that the tank has been allowed to overflow (Attachment B, photo 39, 40).

Drum washing equipment and systems are not designed to prevent splashing, spilling and leaking of the wash solutions onto the floor (Attachment B, photos 7, 9, 11, 12) Examples of such leakage or spillage were observed emanating from the chaining machine (Attachment B photo 15), the outside washer ("flusher") (Attachment B, photo 11, 12), and pump at the # 1 hard flusher (Attachment B, photo 36).

A roll-off bin full of hazardous waste and belonging to American Environmental was present in the drum storage yard (Attachment B, photo 26, 28). The roll-off bin was observed to be leaking into a steel trough placed below the rear gate of the bin (Attachment B, photo 49).

18. Section 67241, CCR, Title 22.

A roll-off bin full of hazardous waste was leaking and it did not contain an inner liner (see last paragraph of violation 17, above).

19. Section 67243(a), CCR, Title 22.

The facility stored hazardous waste in containers that were not closed and secured.

Rings were not in place on approximately 12 drums containing hazardous waste. Drums containing waste oil were stored on the platform next to the four sumps (Attachment A, B-photos 21, 22, 23, 24). All the drums were observed to be lacking rings which secure the lid to the drum so that lids were resting on the tops of the drums.

20. Section 67241, CCR, Title 22.

The facility stores hazardous waste containers that were not in good condition.

Drums of hazardous waste were in the hazardous waste storage

area located within the drum storage yard were dented, had buldging lids, and were rusted (Attachment B, photos 19, 20, 25, 26).

21. Section 67257(c), CCR, Title 22.

The facility failed to maintain two feet of freeboard in open top tanks (sumps) (Attachment A).

The 28,000 gallon sump, oil and grease separator sump, settler sump, and steamer caustic sump all had less than two feet of freeboard.

22. Title 40, Part 265, Section 190, 40 Code of Federal Regulation. (refer to Title 40, Part 262, Section 34(a)(1).

The facility has not determined that tanks and tank systems are not leaking or unfit for use.

Myers Container operates a waste treatment and storage system composed of five concrete sumps. The sumps as designated by the facility are: "steamer caustic holding tank" (500 gallons), "hard flusher holding tank" (3,000 gallons), "oil and grease separator" (4,000 gallons), storage tank (28,000 gallons) (Attachment B, photo 38). In addition, the facility has an open, aboveground tank called the "stripper caustic holding tank" (Attachment A, B-photo 48). Within the process area, the facility has a network of concrete drains ("trenches") which act as conduits for cleaning solution during normal operations (Attachment B, photo 6).

None of the facility's tanks, sumps or drains are equipped with secondary containment and they are used to store or treat liquid "RCRA"-listed hazardous waste.

On May 17, 1988, Peter Cutt, Operations Manager for IMACC Corporation, stated in a phone conversation with Tom Gandesbery that the 28,000 gallon tank was installed in 1975. He stated that the installation date for the other tanks are not known but that they have been in use since 1963 (Attachment D).

23. Section 25191(d), H&SC. (pursuant to Sections 25189.5 (b),(c).

The facility is disposing of waste on site without a permit.

On the Myers site is a large warehouse where finished drums are stored and loaded onto trucks (Attachment A). The floor

of the warehouse is approximately three feet above the ground. Under the building was free liquid to a depth of approximately four feet. Mike Sather stated that the company once stored materials under the building in a "basement". This basement area was filled with liquid up to existing grade.

Richard Godfrey stated that the company had, in the past, pumped several thousands gallons of liquid out of the basement area and transported the liquid off site as hazardous waste. A tour and discussion with management at Myers indicated that the facility solidifies all solid and sludge wastes and disposes of them in a roll-off bin. A search of manifest files using the HWIS showed that on 12/19/85 the facility transported 20,8500 tons of "unspecified sludge waste" via tanker truck.

VIII. Other Observations

On April 28, 1988, DHS staff inspected the area beneath the warehouse. Anonymous sources had tipped off DHS staff to the presence of free liquid under the warehouse. With the assistance of a Myers worker, DHS staff opened two access doors located along the west wall of the warehouse (Attachments A, B-photo 43). Dark liquid, floating rubbish and a submerged drum were observed from the south door (Attachment B-photos 44, 45). From the north door, damp soil and puddles of liquid were visible (Attachment B, photo 41). The liquids extend back from the doors (eastward) at least 20 feet. Samples were taken from both doors using a 12 foot pool scooper (Attachments B-photos 41, 42, 46, 47, H-samples MOT009, MOT010).

Gravel along the south and west sides of the 28,000 gallon tank is discolored. The gravel is stained grey and black with the color fading with the distance from the tank (Attachment B, photo 39). This discoloration suggests that the sump has overflown in the past.

Soil is discolored near to an area where unprocessed oil drums are stored. The stained and discolored soil suggests that containers have been allowed to leak onto the ground. The area is south of the drum pile that skirts the northern perimeter of the drums storage area (Attachment A, B, photo 25, 35).

The 15,000 gallon above-ground "caustic holding tank" located in the alley on the east side of the facility appears to be open and uncovered on top. According to facility personnel, the tank was taken out of service several years ago after the bottom valve became plugged with solids (Attachment B, photo 48).

The certification sticker on the roll-off bin containing hazardous waste was expired. The sticker was valid through February 1988 (Attachment B, photo 28).

IX. Sampling Summary

Samples were taken from process units/storage units and from spillage areas as follows and as specified in the Drum Reconditioning Industry Survey Protocol. Sample depth is noted in parentheses. Refer to Attachment H for sample locations.

Sample #	Location of sample point	Sample Type/Description
(MOT)		
001	steamer caustic sump (0-6")	aqueous liquid
001-Z	VOA of above	
002	hard flusher sump (0-1')	viscous oil-sludge
003	oil+grease sep. sump (0-1')	aqueous and viscous oil
004	" " "	sludge
005	" " "	"
006	28000 gallon tank (0-1')	viscous grey liquid
007	" (1-2')	grey sludge
008	shot blast dust	drum at baghouse
009	under warehouse-north door	black oily liquid
010	" " -south door	" " "
011	roll-off bin (0-6")	thick-sticky semi-solid
012	--- no sample assigned ---	
013*	soil at pad near warehouse	soil
014*	soil at waste storage area	"
015*	soil at east foot of drum pile	"
016	drum in storage yard	liquid
017	" "	"
018	" "	"
019	" "	"
020	drum from loading dock	"
022*	QC sample colocated with sample 011	solid

* Split samples of soils were not given to facility because the extremely hard gravel and soil surface in the yard made collecting an adequate sample dificult. On April 29, 1988 Department staff gave a sketch of the sample points, showing coordinates for each sample point, to Richard Godfrey.

Sampling was concluded on April 28, 1988 at approximately 4:30 pm. However, the facility representatives had left for the day

so split samples were given to Richard Godfrey on April 29, 1988 (Attachment K).

Sample results pending.

X. Discussion with Management

On April 27, 1988, Mike Sather and Mark Thomas provided us with various documents and diagrams necessary for completion of the generator checklist and drum reconditioning survey. They answered questions posed to them by Tom Gandesbery and George Baker.

On April 28, 1988, Richard Godfrey was available for questions during the collection of samples.

On April 29, 1988, Tom Gandesbery, George Baker and Mary Wilson conducted an exit interview with Richard Godfrey. After the exit interview, duplicate samples were given to Mr. Godfrey with a sample receipt form (Attachment K).

XI. Attachments

A. Map.

B. Photos.

C. Lab Analysis Request Form.

D. Record of Communication dated 5/17/88.

E. Process Flow Diagram obtained on 4/27/88.

F. Internal IMACC memo dated 2/22/88.

G. Part C of East Bay Municipal Utility District Waste Water Discharge Permit.

H. Sample Locations.

I. Statement of Officers for Myers Corp.

J. Statement of Officers for IMACC Corp.

K. Sample Receipt Form.

L. Photo log.

M. Generator Checklist.

Thomas Robert Gandesbery
Hazardous Materials Specialist

Patricia Barni
Senior Hazardous Materials Specialist

TRC Environmental Solutions Inc.

FINAL
REMEDIAL ACTION PLAN

MYERS CONTAINER CORPORATION
FORMER DRUM RECONDITIONING FACILITY
6549 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Prepared for:

California Environmental Protection Agency
Department of Toxic Substance Control
Region 2, Berkeley, California

Prepared by:

TRC Environmental Solutions, Inc.

Walnut Creek, California

Project No. 95-916
May 24, 1996

James J. Severns, Vice President
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REGISTERED GEOLOGIST
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Mohammad Bazargani
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Catherine Henrich, C.E.G.
Principal Hydrogeologist

1.0 INTRODUCTION

1.1 PURPOSE OF A REMEDIAL ACTION PLAN

The purpose of a Remedial Action Plan (RAP) is to compile and summarize site data gathered from the remedial investigation (RI) and the feasibility study (FS) in order to identify, and subsequently design, plan and implement an appropriate final remedial action for a site. RAPs must also establish specific remedial action objectives and timeframes for completion of remedial actions.

This Final RAP incorporates the comments provided during the Public Comment period for the Draft RAP. The Draft RAP was published on February 23, 1996, and circulated for public comment on March 1, 1996. Circulation of a RAP for public comment is required by Section 25356.1 of the California Health and Safety Code (HSC). RAPs are not intended to contain specific engineering design details of the proposed remedial alternative.

1.2 SITE IDENTIFICATION

The Myers Container Corporation (Myers) former drum reconditioning facility (Site) is located at 6549 San Pablo Avenue on the northwestern side of Oakland near the city limits of Emeryville and Berkeley (Figure 1-1). It is bordered by 66th Street on the north, San Pablo Avenue on the east, and Vallejo Street on the west. Industrial, commercial and residential parcels separate the south boundary of the Site from 65th Street (Figure 1-2).

From 1939 to 1991, reconditioning of 55-gallon steel drums was performed at the Site and involved the cleaning, testing, and painting of used drums.

1.3 INFORMATION PRESENTED IN THE REMEDIAL ACTION PLAN

This RAP is based upon the results of soil and groundwater investigations conducted at the Site, a risk assessment, and a FS which are documented by the following reports:

- *Remedial Investigation, Myers Container Corporation, 6549 San Pablo Avenue, Oakland, California*, TRC Environmental Corporation, March 1992.
- *Soil and Groundwater Investigation, Myers Container Corporation, 6549 San Pablo Avenue, Oakland, California*, TRC Environmental Corporation, August 1993.
- *Human Health and Environmental Risk Assessment, Myers Container Corporation, Drum Reconditioning Facility, 6549 San Pablo Avenue, Oakland, California*, TRC Environmental Corporation, May 1994.

- *Feasibility Study, Myers Container Corporation Site, Drum Reconditioning Facility, 6549 San Pablo Avenue, Oakland, California*, TRC Environmental Solutions, Inc., March 24, 1995.
- *Addendum to the Feasibility Study*, Myers *Container Corporation, Drum Reconditioning Facility, 6549 San Pablo Avenue, Oakland, California*, TRC Environmental Solutions, Inc., February 1996.

2.0 EXECUTIVE SUMMARY

Section 25356.1 of the HSC requires the California Environmental Protection Agency (Cal/EPA), DTSC to prepare or approve RAPs for listed hazardous substance release sites prior to undertaking final remedial actions. Section 25356.1 also requires that RAPs be consistent with Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations [CFR], 300 et seq.). Subpart E of the NCP establishes methods and criteria for determining the appropriate response to releases of hazardous substances into the environment. This Draft RAP has been prepared for the Site in accordance with HSC Section 25356.1 and the NCP.

The Site is located at 6549 San Pablo Avenue, California. Historically, the Site has been used as a wooden barrel cooperage from approximately 1917 through the 1930s. Steel drum reconditioning began in 1939 and continued until 1991. The Site has been vacant since 1991.

In March and June 1988, the Site was inspected by the DTSC as part of a state-wide drum recycling survey. The inspection revealed violations of the requirements for storage, handling, transportation, disposal and treatment of hazardous waste. Due to drum recycling practices, there had been periodic releases of hazardous waste at the Site. DTSC collected samples of the standing water that was present under the Storage Warehouse. Results showed that the liquid contained a high level of soluble lead which could be potentially hazardous to human health and the environment.

On June 28, 1991, the Cal/EPA DTSC issued an Imminent and Substantial Endangerment and Remedial Action Order (Order), Docket No. I&/SE 90/91-021, to Industrial Molding and Container Corporation (IMACC; parent company of Myers) and Mrs. Dorothy Warburton, for the investigation and appropriate remediation of the Site. The Order required that releases of hazardous substances at the Site be investigated and remediated.

In response to the Order, Myers conducted a Site RI/FS. An RI for the Site was completed on March 10, 1992. Investigation activities included: background studies, geophysical studies, soil gas studies, drilling and monitoring well installation, geotechnical testing, aquifer testing, and sampling and analysis of air, soil, and groundwater samples. The results of the investigation studies identified chemical compounds present in the soil and groundwater onsite. In general, chemical compounds identified include volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), lead and arsenic.

The contaminated areas are designated as "SOU1", "SOU2" and "GWOU1" in Figures 8-1 and 8-2, respectively. A summary of chemicals detected in soil and groundwater are presented in Tables 2-1A (soil), Table 2-1B (sumps), and Table 2-2 (groundwater).

Media affected by these chemicals includes the upper 5 to 7 feet of alluvial fill materials and the shallow groundwater beneath the Site, particularly at the Process Building, Storage Warehouse, and in the area of Monitoring Well W-6.

As part of the RI/FS, a Human Health and Environmental Risk Assessment (HHERA) was prepared following guidelines established by Cal/EPA's Supplemental Guidance for *Human Health Multi-Media Risk Assessments of Hazardous Waste Sites and Permitted Facilities (1992b)* and the U.S. Environmental Protection Agency's (U.S. EPA's) *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final* (U.S. EPA, 1989a) and *Volume II Environmental Evaluation Manual* (U.S. EPA, 1989b). Chemicals of concern (COCs) addressed in the HHERA were identified primarily based on the frequency of detection, concentration and toxicity.

As described in the Addendum to the FS, preliminary remediation goals (PRGs) were developed for the two possible future land use scenarios following the EPA's *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B - Development of Risk-Based Preliminary Remediation Goals, Interim Final* (U.S., EPA, 1981a) and the results of the HHERA (1994). The two land use scenarios for which PRGs were developed were:

- Future Commercial/Industrial Use at an acceptable theoretical excess cancer risk of 1×10^{-6}
- Future Residential Use at an acceptable theoretical excess cancer risk of 1×10^{-5}

For the commercial/industrial scenario, three COCs (dieldrin, Aroclor-1260 [i.e., a polychlorinated biphenyl (PCB)]), and tetrachloroethene [PCE]) were identified for soils and one COC (vinyl chloride) was identified for groundwater. For the residential scenario, two COCs (dieldrin and Aroclor-1260) were identified for soils and one COC (vinyl chloride) was identified for groundwater.

The risk-based PRGs calculated for the Site are consistent with corresponding PRGs published by the U.S. EPA (September 1995) for applicable site uses (i.e., industrial and residential). The calculated PRGs are presented in Table 2-3 (commercial/industrial) and Table 2-4 (residential), and the proposed soil and groundwater cleanup goals are presented in Table 2-5 (soil) and Table 2-6 (groundwater).

The FS was prepared following the U.S. EPA Interim Final *Guidance for Conducting Remedial Investigations and Feasibility Studies* under *CERCLA, Interim Final* (U.S. EPA, 1988). Two soil operable units (OUs) and one groundwater OU requiring remediation were designated for the Site:

- **Soil Operable Unit 1 (SOU1):** SOU1 consists of the contaminated soil underneath the Process Building, the Storage Warehouse, sumps, and the underground storage tanks (USTs). The estimated volumes of soil with concentrations of chemicals above the soil cleanup levels for the future commercial/industrial and residential scenarios are approximately 2,200 and 4,600 cubic yards, respectively.:
- **Soil Operable Unit 2 (SOU2):** SOU2 consists of the contaminated soil at the Drum Storage Yard Area. The estimated volumes of soil with concentrations of chemicals above the soil cleanup levels for the future commercial/industrial and residential scenarios are approximately 300 and 2,400 cubic yards, respectively.
- **Groundwater Operable Unit 1 (GWOU1):** For both the commercial/industrial and residential scenarios, GWOU1 consists of approximately 67,000 gallons of the contaminated shallow groundwater under the Process Building and the area of Monitoring Well W-6 in the Drum Storage Yard Area.

The remedial action objectives for soils are as follows:

- Prevent ingestion of and dermal contact with soils, and inhalation of dusts containing carcinogenic chemicals at concentrations which pose a lifetime theoretical excess cancer risk of greater than 1×10^{-6} for the future commercial/industrial scenario or 1×10^{-5} for the future residential scenario.
- Prevent ingestion of and dermal contact with soils, and inhalation of dusts containing noncarcinogenic chemicals at concentrations exceeding a Hazard Index (HI) of one for the future commercial/industrial or residential scenarios.
- Prevent the further contamination of groundwater through leaching of chemicals from soil.

The remedial action objectives for groundwater for protection of human health is as follows:

- Reduce concentrations of chemicals in the shallow groundwater to the maximum contaminant levels (MCLs).

A broad list of potential technology types and process options was developed and an initial screening was conducted for each of the OUs. This initial screening was performed on the basis of effectiveness, implementability, and to a lesser extent, cost. Making use of the potentially applicable technologies that remained after screening, Alternatives 1 through 4 were developed and presented in the FS (March 24, 1995). Subsequent to the completion of the FS, Alternatives 1 through 4 were updated and Alternative 5 was developed in the Addendum to the FS (February 1996) to address the residential scenario. The five remedial alternatives are described below.

- Alternative 1 - No Action (required for baseline comparison).
- Alternative 2 - Onsite Consolidation and Containment (Soil Above Commercial/Industrial Cleanup Levels)

- Alternative 3 - Bioremediation and Offsite Disposal (Soil Above Commercial/Industrial Cleanup Levels)
- Alternative 4 - Offsite Disposal (Soil Above Commercial/Industrial Cleanup Levels)
- Alternative 5 - Offsite Disposal (Soil Above Residential Cleanup Levels)

In addition to the components identified above, groundwater extraction and treatment of GWOU1 and building demolition are components of all alternatives except Alternative 1 (No Action). Long-term OM&M activities are components of Alternatives 2 through 4. A long-term OM&M plan will not be required in Alternative 5 once the groundwater is remediated. Deed restrictions are components of Alternatives 2 through 4. The deed restrictions would limit the future use of the Site to commercial/industrial activities.

A detailed analysis of the five remedial alternatives was performed using the following nine criteria prescribed by the NCP (40 CFR 300.430(e)):

- Overall Protection of Human Health and the Environment
- Compliance with State and Federal Requirements
- Long-Term Effectiveness
- Reduction of Toxicity, Mobility and Volume (TMV)
- Short-Term Effectiveness
- Implementability
- Cost
- Regulatory Agency Acceptance
- Community Acceptance

Based on this detailed analysis, the preferred alternative is Alternative 5.

Under this alternative, the existing structures at the Site would be demolished. The construction debris would be transported to an appropriate offsite disposal facility. The boilers containing asbestos would be removed by a licensed asbestos abatement contractor. The existing USTs at the Site would be removed by a licensed hauler. SOU1 and SOU2 soils, which includes soil from sump and equipment foundations from underneath the Process Building, from the Storage Warehouse, and from the Drum Storage Yard Area, would be excavated to the residential cleanup goals shown in Table 2-5 and disposed at an appropriate offsite landfill. Excavated areas at the Site would be backfilled with clean soil.

Upon completion of the excavation and backfill activities, groundwater would be extracted and treated to meet the cleanup goals shown in Table 2-6 through a combined air stripper/activated carbon treatment system. It is assumed that three extraction wells would be installed to adequately remove the contaminated groundwater. The groundwater would be discharged to the East Bay Municipal Utility District (EBMUD) sewer line after treatment.

The main advantage of this alternative is that it would result in a site that is suitable for residential development which does not require long-term OM&M or deed restrictions. The selected alternative would meet the remedial action objectives while providing the greatest protection of human health and the environment. This alternative also eliminates the source of the groundwater contamination through excavation and disposal of the contaminated soil at an appropriate landfill.

Pursuant to HSC Section 25356.1(e), DTSC has also prepared a Statement of Reasons (see Chapter 10.0) setting forth the basis for the remedial action selected for the Site and stating why DTSC believes the proposed remedial actions would mitigate public health and environmental hazards at the Site. The Statement of Reasons is required to include a Nonbinding Preliminary Allocation of Responsibility (NBAR) naming PRPs identified by DTSC as responsible for remedial action at the Site. The following are the PRPs identified by the DTSC in the NBAR and the percentage of responsibility which they have been allocated:

- 54 percent - Dorothy Warburton
- 30 percent - Kaiser Steel Company
- 16 percent - IMACC

An Administrative Record List is included in Appendix A and identifies documents considered or relied upon by DTSC in selecting the remedial action for the Site.

The RAP process provides an opportunity for community residents, local agencies, neighborhood groups, elected officials, and interested citizens to review and comment on the actions planned, or the actions taken by the DTSC.

A public meeting to discuss the Draft RAP and answer questions was held at:

- Days Inn, Marina Room
  1603 Powell Street
  Emeryville, California
  March 19, 1996 @ 7:00 p.m.

During the 30-day period of public review and comment, March 1, 1996 through April 1, 1996, written comments or questions were sent to:

- California Environmental Protection Agency
  Department of Toxic Substances Control
  700 Heinz Avenue, Suite 200
  Berkeley, California 94710
  Attn: Ted Park
  Telephone: (510) 540-3847

DTSC has also set up an information repository where the public may review copies of Site reports. The information repository is located at:

- Oakland Public Library
  Golden Gate Branch, Reference Desk
  5606 San Pablo Avenue
  Oakland, California 94608
  (510) 597-5023

  Hours of Operation: Sunday/Monday - Closed
  Tuesday - 11:30 a.m. - 7:00 p.m.
  Wednesday/Thursday/Saturday - 10:00 a.m. - 5:30 p.m.
  Friday - 12:00 p.m. - 5:30 p.m.

Pursuant to CEQA (Chapter 3, Article 6, Section 15070 of Title 14, CCR), DTSC has prepared a Negative Declaration stating that the remedial action proposed for the Site would have no adverse effects on the environment. A copy of the Negative Declaration is available at the information repository and is included as Appendix C to this Final RAP. The review and comment period for the Negative Declaration was scheduled to coincide with the review and comment period for the Draft RAP. Written answers to comments and questions received during the Public Comment period are included in a Responsiveness Summary which is included as Appendix D to this Final RAP. Copies of the Fact Sheet and newspaper advertisement for the public meeting are included in Appendix E.

TRC

SEMIANNUAL GROUND WATER MONITORING REPORT

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Prepared for:

Myers Container Corporation

Prepared by:

TRC

Walnut Creek, California

February 1998

TRC

SEMIANNUAL GROUND WATER MONITORING REPORT

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Prepared for:

Myers Container Corporation

Prepared by:

TRC Environmental Solutions, Inc.

Walnut Creek, California

Project No. 97-713
February 1998

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TABLE OF CONTENTS

	PAGE NO.
LIST OF TABLES/LIST OF FIGURES	ii
1.0 INTRODUCTION	1
2.0 FIELD PROGRAM	1
3.0 ANALYTICAL PROGRAM	2
4.0 RESULTS	2
5.0 DISCUSSION	3
6.0 ANNUAL SUMMARY	4

TABLES
FIGURES

APPENDIX A: ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD

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TABLE OF CONTENTS
(Continued)

LIST OF TABLES

TABLE NO.	TITLE
1	Ground Water Elevation Data
2	Ground Water Sample Analytical Results

LIST OF FIGURES

FIGURE NO.	TITLE
1	Site Location
2	Monitoring Well Location Map
3	Ground Water Contour Map - April 1995
4	Ground Water Contour Map - August 1995
5	Ground Water Contour Map - October 1995
6	Ground Water Contour Map - January 1996
7	Ground Water Contour Map - August 1997
8	Ground Water Contour Map - December 1997

TRC

1.0 INTRODUCTION

1. This report presents the results of TRC's semiannual ground water monitoring report for the Myers Container Corporation (Myers) former drum reconditioning facility (Site) located at 6549 San Pablo Avenue in Oakland, California (Figure 1). The ground water monitoring was performed in accordance with TRC's proposed Ground Water Monitoring Program dated June 3, 1997, as amended by the Department of Toxic Substances Control (DTSC) in a letter dated June 13, 1997. The initial semiannual ground water monitoring event for 1997 was performed in two field efforts: August 22 and September 3, 1997.

2. A semiannual ground water monitoring program has been required by the Cal/EPA Department of Toxic Substances Control (DTSC) and has been in effect (previously as a quarterly monitoring program) since the first ground water monitoring wells were installed as part of remedial investigation activities. The program has been modified as the ground water from each well has been characterized and the ground water flow direction and gradient determined. The program involves the determination of ground water elevation in each monitoring well using an electronic sounder (sounding) and collecting samples from identified wells for chemical analyses, as follows:

   - Collect ground water elevation data from 13 shallow monitoring wells (W-1 through W-13) as shown in Figure 2.
   - Collect samples of ground water from Site monitoring wells and submit to a California-certified hazardous materials laboratory for analysis by EPA Method 8240 (or 8260) for volatile organic compounds (VOCs), as follows:
     - Monitoring Well W-5 (Vallejo Street)
     - Monitoring Well W-6 (66th Street)
     - Monitoring Well W-10 (offsite and downgradient)
     - Monitoring Well W-12 (front of process building)
   - Prepare a report of findings for submittal to DTSC.

2.0 FIELD PROGRAM

1. In accordance with the above described semiannual program, monitoring wells W-5, W-6, W-10 and W-12 were sounded, and sampled as applicable, on December 23, 1997. Prior to sounding, the ground water monitoring wells were opened to allow their piezometric surfaces to adjust to atmospheric pressure. After allowing approximately one hour for adjustment, the depths to water were measured using an electronic sounder (Table 1).

2. Prior to sampling, the four monitoring wells were typically purged of an excess of three well volumes using a separate disposable bailer for each well. Temperature, conductivity, and pH measurements of the purged waters were recorded during purging. Following purging, the water levels in the wells were allowed to recover to 90 percent of their original level prior to sampling.

3. Ground water samples from each of the identified monitoring wells were collected using a separate disposable bailer for each well; each sample was released into clean, laboratory supplied bottles using disposable, bottom-emptying VOC samplers. After collection, the samples were capped, labeled according to well number, sealed in individual plastic bags and stored in a cooler with frozen blue ice. The samples were transported under Chain-of-Custody documentation to Curtis & Tompkins, Ltd. Laboratory (Curtis & Tompkins) in Berkeley, California, a California-certified hazardous materials testing laboratory.

4. The sampling equipment was decontaminated before and after use with a laboratory soap wash and a deionized water rinse. The purged water was placed in a labeled, Department of Transportation approved 55-gallon steel drum.

3.0 ANALYTICAL PROGRAM

1. The ground water samples were analyzed by Curtis and Tompkins, a California-certified hazardous materials testing laboratory. The samples were analyzed for VOCs according to EPA Test Method 8260. A copy of the laboratory analytical report and Chain-of-Custody record is presented in Appendix A.

4.0 RESULTS

1. The top-of-well casing elevations, depth to water measurements, and ground water elevation data for the December 1997 and previous ground water monitoring events are presented in Table 1. On the basis of the ground water elevation data collected during the December 1997 monitoring event, the Site's calculated ground water flow direction and gradient is approximately 0.03 ft/ft in a generally west-northwesterly direction (Figure 8). The December 1997 ground water elevations for Monitoring Wells W-5 and W-13 are plotted in Figure 8; however, these wells are located in an inferred perched ground water zone and

their ground water elevations were not used to calculate the ground water flow direction or gradient.

2. No detectable levels of VOCs were reported to be present in the ground water sample collected from Monitoring Wells W-5 or W-10. These results are consistent with prior monitoring of these wells.

3. The ground water sample collected from Monitoring Well W-6 was reported to contain 15.0 µg/L of TCE.

4. The ground water sample collected from Monitoring Well W-12, located near the northwest end of the Process Building, was reported to contain detectable levels of solvents and aromatic hydrocarbons, as follows:

• 1,1-Dichloroethane	210 µg/L
• 1,2-Dichloroethene (Total)	100 µg/L
• Trichloroethene	120 µg/L
• Acetone	1,100 µg/L
• 2-Butanone	160 µg/L
• Toluene	310 µg/L
• Ethylbenzene	180 µg/L
• Xylenes	329 µg/L

5. These results are consistent with laboratory results reported during prior quarterly monitoring of this well.

5.0 DISCUSSION

1. As discussed in Section 6.0, ground water flow is generally toward the west-northwest, although the pattern has been somewhat irregular in the project vicinity. The results for December 1997 are consistent with observations during the previous semiannual and quarterly monitoring events. Ground water elevations in December 1997 (winter) have increased an average of 2 feet since the previous August 1997 (summer) ground water monitoring. These results are consistent with expected seasonal variations which have been observed at the Site during prior semiannual and quarterly monitoring events.

2. The ground water sample collected from Monitoring Well W-6 was reported to contain detectable concentrations of TCE. No other VOCs were detected. TCE was also detected in this well at approximately the same level during each of the prior semiannual and quarterly ground water monitoring events.

3. The observed levels of VOCs reported in the sample collected from Monitoring Well W-12 are consistent with those reported during previous quarterly monitoring events.

6.0 ANNUAL SUMMARY

1. Quarterly ground water monitoring events were performed in April, August, and October 1995 and January 1996. The first semiannual monitoring event for 1997 was performed on August 22 and September 3, 1997; the second semiannual monitoring event for 1997 was performed on December 23, 1997. Observed ground water fluctuations in the 13 wells are consistent with anticipated seasonal variations.

2. Figures 3 through 8 show the observed ground water contour patterns since April 1995. Although the indicated flow patterns are variable in the vicinity of the Site, the general direction of ground water flow is toward the west-northwest. The observed flow pattern in December 1997 is consistent with that observed in the previous semiannual monitoring in August/September 1997. The calculated gradient for December 1997 is approximately 0.03 ft/ft (west-northwesterly), whereas the calculated gradients for the previous August/September 1997 monitoring varied from approximately 0.009 ft/ft (westerly) to approximately 0.014 ft/ft (northwesterly).

3. No detectable levels of VOCs were reported for ground water samples collected from Monitoring Wells W-5 and W-10.

4. Reported concentrations of TCE and VOCs in Monitoring Wells W-6 and W-12, respectively, are consistent with those reported during previous quarterly monitoring events.

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-1	40.92	11/7/90	13.40	27.52
		11/19/90	13.30	27.62
		11/20/90	13.38	27.54
		12/4/90	13.30	27.62
		3/8/91	11.48	29.44
		7/17/91	13.15	27.77
		10/29/91	13.00	27.92
		12/27/91	12.02	28.90
		4/15/92	11.36	29.56
		7/21/92	12.94	27.98
		9/30/92	13.39	27.53
		1/19/93	8.82	32.10
		4/8/93	10.40	30.53
		7/14/93	12.68	28.24
		10/28/93	13.42	27.50
		2/1/94	12.00	28.92
		4/28/94	11.92	29.00
		7/29/94	13.16	27.76
		10/26/94	13.60	27.32
		1/17/95	8.38	32.54
		4/11/95	10.24	30.68
		8/23/95	13.04	27.88
		10/27/95	13.33	25.57
		1/2/96	11.31	29.61
		8/22/97	13.23	27.69
		12/23/97	9.68	31.24
W-2	36.63	11/7/90	10.85	25.78
		11/19/90	10.87	25.76
		11/20/90	10.96	25.67
		12/4/90	11.00	25.63
		3/8/91	9.85	26.78
		7/17/91	10.78	25.85
		10/28/91	10.80	25.83
		12/27/91	10.60	26.03
		4/15/92	9.88	26.75
		7/21/92	10.66	25.97
		9/30/92	10.98	25.65
		1/19/93	9.54	27.10
		4/8/93	9.39	27.04
		7/14/93	10.63	26.00
		10/28/93	11.04	25.59

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

TRC

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-2 (Cont.)		2/1/94	10.27	26.36
		4/28/94	10.28	26.35
		7/29/94	10.82	25.81
		10/26/94	11.27	25.36
		1/17/95	9.19	27.44
		4/11/95	9.32	27.31
		8/23/95	10.74	25.89
		10/27/95	11.02	25.61
		1/2/96	10.01	26.62
		8/22/97	10.90	25.73
		12/23/97	9.64	26.99
W-3	38.85	11/7/90	12.85	26.00
		11/19/90	12.92	25.93
		11/20/90	12.96	25.89
		12/4/90	NA	NA
		3/8/91	10.37	28.48
		7/17/91	12.57	26.28
		11/12/91	12.68	26.17
		12/27/91	12.56	26.29
		4/15/92	10.38	28.47
		7/21/92	12.24	26.61
		9/30/92	13.02	25.83
		1/19/93	9.15	29.70
		4/8/93	9.67	29.18
		7/14/93	12.12	26.73
		10/28/93	13.17	25.68
		2/1/94	10.96	27.89
		4/28/94	11.03	27.82
		7/29/94	12.63	26.22
		10/26/94	13.32	25.53
		1/17/95	8.49	30.36
		4/11/95	9.65	29.20
		8/23/95	12.47	26.38
		10/27/95	13.06	25.79
		1/2/96	10.31	28.54
		8/22/97	12.58	26.27
		12/23/97	9.57	29.28

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

NA = Not Available

TRC

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-4	34.63	11/7/90	12.70	21.93
		11/19/90	9.85	24.78
		11/20/90	9.90	24.73
		12/4/90	9.95	24.68
		3/8/91	8.58	26.05
		7/17/91	9.47	25.16
		10/24/91	9.98	24.65
		12/27/91	9.84	24.79
		4/15/92	3.86	30.77
		7/21/92	9.54	25.09
		9/30/92	9.82	24.81
		1/19/93	7.83	26.80
		4/8/93	8.33	26.30
		7/14/93	9.39	25.24
		10/28/93	9.94	24.69
		2/1/94	9.27	25.36
		4/28/94	9.23	25.40
		7/29/94	9.60	25.03
		10/26/94	10.04	24.59
		1/17/95	7.85	26.78
		4/11/95	5.32	29.31
		8/23/95	9.61	25.02
		10/27/95	9.98	24.65
		1/2/96	9.35	25.28
		8/22/97	9.75	24.88
		12/23/97	9.39	25.24
W-5	33.76	11/7/90	7.55	26.21
		11/19/90	7.50	26.26
		11/20/90	7.59	26.17
		12/4/90	7.59	26.17
		3/8/91	6.22	27.54
		7/17/91	6.33	27.43
		10/29/91	6.85	26.91
		12/27/91	6.36	27.40
		4/15/92	5.62	28.14
		7/21/92	10.49	23.37
		9/30/92	8.06	25.70
		1/19/93	5.40	28.36
		4/8/93	5.19	28.57
		7/14/93	6.65	27.11
		10/28/93	7.37	26.39

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-5 (Cont)		2/1/94	6.30	27.46
		4/28/94	6.28	27.48
		7/29/94	6.88	26.88
		10/26/94	7.29	26.47
		1/17/95	4.74	29.02
		4/11/95	5.15	28.61
		8/23/95	6.90	26.86
		10/27/95	7.33	26.43
		1/2/96	6.33	27.43
		8/2/97	6.97	26.79
		12/23/97	6.04	27.72
W-6	34.07	10/21/91	9.78	24.13
		10/22/91	9.80	24.11
		12/27/91	9.43	24.48
		4/15/92	8.78	25.29
		7/21/92	9.45	24.62
		9/30/92	9.76	24.31
		1/19/93	8.49	25.58
		4/8/93	8.59	25.48
		7/14/93	9.19	24.88
		10/28/93	9.68	24.39
		2/1/94	9.11	24.96
		4/28/94	9.10	24.97
		7/29/94	9.52	24.55
		10/26/94	9.78	24.29
		1/17/95	9.39	24.68
		4/11/95	8.70	25.37
		8/23/95	9.54	24.53
		10/27/95	9.70	24.37
		1/2/96	9.15	24.92
		9/3/97	9.62	24.45
		12/23/97	9.47	24.60
W-7	35.13	10/21/91	10.66	24.31
		10/24/91	10.54	24.43
		10/28/91	10.80	24.17
		12/27/91	10.55	24.42
		4/15/92	9.84	25.29
		7/21/92	10.31	24.82
		9/30/92	10.54	24.59
		1/19/93	9.50	25.63
		4/8/93	9.61	25.53
		7/14/93	10.15	24.98

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

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TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-7 (Cont)		10/28/93	10.57	24.56
		2/1/94	10.07	25.06
		4/28/94	9.99	25.14
		7/29/94	10.37	24.76
		10/26/94	10.59	24.54
		1/17/95	9.28	25.85
		4/11/95	9.31	25.82
		8/23/95	10.31	24.82
		10/27/95	10.53	24.60
		1/2/96	9.98	25.15
		8/22/97	10.38	24.75
		12/23/97	NA	NA
W-8	35.24	10/21/91	10.42	24.82
		12/27/91	9.80	25.44
		4/15/92	4.52	30.72
		9/30/92	10.30	24.94
		1/19/93	6.48	28.76
		4/8/93	6.86	28.38
		7/14/93	9.24	26.00
		10/28/93	10.40	24.84
		2/1/94	8.21	27.03
		4/28/94	8.30	26.94
		7/29/94	9.71	25.53
		10/26/94	10.50	24.74
		1/17/95	6.08	29.16
		4/11/95	3.71	31.53
		8/23/95	9.49	25.75
		10/27/95	10.12	25.12
		1/2/96	7.44	27.80
		8/22/97	9.63	25.61
		12/23/97	7.49	27.75
W-9	41.19	10/21/91	15.45	25.74
		11/12/91	18.16	23.03
		12/27/91	14.86	26.33
		4/15/92	11.29	29.90
		7/21/92	14.18	27.01
		9/30/92	15.58	25.61
		1/19/93	8.44	32.75
		4/8/93	9.80	31.39
		7/14/93	14.49	26.70
		10/28/93	15.76	25.43
		2/1/94	10.51	30.68
		4/28/94	10.91	30.28

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

NA = Not Available

TRC

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-9 (Cont)		7/29/94	NA	NA
		10/26/94	15.89	25.30
		1/17/95	6.91	34.28
		4/11/95	10.25	30.94
		8/23/95	14.73	26.46
		10/27/95	15.45	25.74
		1/2/96	10.00	31.19
		8/22/97	14.89	26.30
		12/23/97	9.91	31.28
W-10	35.68	1/20/92	9.20	26.48
		4/15/92	9.05	26.63
		7/21/92	9.45	26.23
		9/30/92	9.58	26.10
		1/19/93	8.65	27.03
		4/8/93	8.88	26.80
		7/14/93	9.35	26.33
		10/28/93	9.66	26.02
		2/1/94	9.08	26.61
		4/28/94	9.17	26.51
		7/29/94	9.62	26.06
		10/26/94	9.79	25.89
		1/17/95	8.19	27.49
		4/11/95	8.61	27.07
		8/23/95	9.55	26.13
		10/27/95	9.67	26.01
		1/2/96	9.32	26.36
		8/22/97	9.61	26.07
		12/23/97	8.81	26.87
W-11	41.30	10/21/91	14.87	26.43
		11/12/91	15.35	25.95
		12/27/91	14.30	27.00
		4/15/92	12.16	29.14
		7/21/92	14.01	27.29
		9/30/92	14.78	26.52
		1/19/93	10.38	30.92
		4/8/93	11.25	30.05
		7/14/93	13.79	27.51

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

NA = Not Available

TRC

TABLE 1

GROUND WATER ELEVATION DATA
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

WELL NUMBER	TOP OF CASING ELEVATION (feet)[1]	DATE	DEPTH TO WATER (feet)[2]	GROUND WATER ELEVATION (feet)[1]
W-11 (Cont)		10/28/93	14.72	26.58
		2/1/94	12.40	28.90
		4/28/94	12.50	28.80
		7/29/94	NA	NA
		10/26/94	14.80	26.50
		1/17/95	8.59	32.71
		4/11/95	11.21	30.09
		8/23/95	13.82	27.48
		10/27/95	14.50	26.80
		1/2/96	12.00	29.30
		8/22/97	13.93	27.37
		12/23/97	10.98	30.32
W-12	37.81	7/14/93	11.05	26.76
		10/28/93	11.59	26.22
		2/1/94	10.60	27.21
		4/28/94	10.58	27.23
		7/29/94	11.52	26.29
		10/26/94	12.13	25.68
		1/17/95	9.34	28.47
		4/11/95	9.82	27.99
		8/23/95	11.56	26.25
		10/27/95	11.89	25.92
		1/2/96	10.44	27.37
		8/22/97	11.72	26.09
		12/23/97	10.66	27.15
W-13	36.52	7/14/93	10.08	26.44
		10/28/93	10.66	25.86
		2/1/94	9.58	26.94
		4/28/94	9.60	26.92
		7/29/94	10.42	26.10
		10/26/94	10.93	25.59
		1/17/95	8.21	28.31
		4/11/95	8.52	28.00
		8/23/95	10.35	26.17
		10/27/95	10.70	25.82
		1/2/96	9.38	27.14
		8/22/97	10.47	26.05
		12/23/97	9.26	27.26

97-713 (2/3/98/jes)

(1) Elevations above mean sea level.

(2) Depth to water measured from top of casing.

TRC

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA

VOLATILE ORGANIC COMPOUNDS
(EPA TEST METHOD 8240)

WELL NUMBER	SAMPLING DATE	COMPOUND													
		Vinyl Chloride (µg/l)	1,1-DCA (µg/l)	Total 1,2-DCE (µg/l)	1,2-DCA (µg/l)	TCE (µg/l)	Benzene (µg/l)	Acetone (µg/l)	2-Butanone (µg/l)	4-Methyl-2-Pentanone (µg/l)	PCE (µg/l)	Toluene (µg/l)	1,1,1-TCA (µg/l)	$MeCl_2$ (µg/l)	Other Compounds (µg/l)
W-1	10/90	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	3/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-2	10/90	89	31	340	22	46	5	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	3/91	180	30	370	23	72	5	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(2.8)(5.0) 1,2-DCP
	3/91 (Duplicate)	200	34	400	18	71	5	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(2.6)(5.0) 1,2-DCP
	7/91	190	110	290/43[1]	22	69	13	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.5)(5.0) 1,2-DCP
	10/91	200	56	300/52[1]	17	110	8	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.9)(5.0) 1,2-DCP D(3.9)(5.0) 1,1-DCE D(2.7)(5.0) Chlorobenzene
	4/92	88	15	240/13[1]	19	35	ND(10)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/92	100	90	230/30[1]	20	40	10	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/92 (Duplicate)	70	90	220/30[1]	20	40	10	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	120	70	190/30[1]	20	40	ND(10)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93	70	23	200/18[1]	17	33	D(3)(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93 (Duplicate)	80	30	230/23[1]	20	30	D(4)(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3)(5) 1,2-DCP
	4/93	80	20	230/20[1]	20	40	ND(10)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/93 (Duplicate)	90	20	260/20[1]	20	50	ND(10)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/93	70	63	150/23[1]	16	20	D(4)(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/93	80	66	31/66[1]	13	26	D(4.9)(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.1)(5) Chlorobenzene
	2/94	60	51	110/26[1]	17	21	D(4)(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-3	10/90	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	3/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	D(3.3)(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-4	10/90	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	3/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND

[1] Results broken into cis-1,2-Dichloroethene/trans-1,2-Dichloroethene
µg/l = micrograms per liter

ND = Not detected at or above reporting limit; reporting limit shown in parentheses.
D = Detected below reporting limit; results and detection limits are in respective parentheses.

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

VOLATILE ORGANIC COMPOUNDS
(EPA TEST METHOD 8240)

WELL NUMBER	SAMPLING DATE	COMPOUND													
		Vinyl Chloride (µg/l)	1,1-DCA (µg/l)	Total 1,2-DCE (µg/l)	1,2-DCA (µg/l)	TCE (µg/l)	Benzene (µg/l)	Acetone (µg/l)	2-Butanone (µg/l)	4-Methyl-2-Pentanone (µg/l)	PCE (µg/l)	Toluene (µg/l)	1,1,1-TCA (µg/l)	$MeCl_2$ (µg/l)	Other Compounds (µg/l)
W-5	10/90	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	3/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	15	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/91 (Duplicate)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	8/97	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	5.1 Chloroform
	12/97	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-6	10/91	ND(10)	ND(5.0)	D(3.3)(5.0)	ND(5.0)	13	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.1)(5.0) 1,1-DCE
	4/92	ND(10)	ND(5.0)	D(4.0(5.0)	ND(5.0)	12	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.0)(5.0) 1,1-DCE
	4/92 (Duplicate)	ND(10)	ND(5.0)	D(4.0)(5.0)	ND(5.0)	12	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.0)(5.0) 1,1-DCE
	7/92	ND(10)	ND(5.0)	D(3.0)(5.0)	ND(5.0)	13	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.0)(5.0) 1,1-DCE
	10/92	ND(10)	ND(5.0)	D(4.0)(5.0	ND(5.0)	15	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.0(5.0) 1,1-DCE
	4/93	ND(10)	ND(5)	D(4)(5)	ND(5)	14	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.8)(5) 1,1-DCE
	7/93	ND(10)	ND(5)	D(4)(5)	ND(5)	14	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	7 1,1-DCE
	10/93	ND(10)	ND(5)	D(3.8)(5)	ND(5)	18	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	14	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.5)(5) 1,1-DCE
	2/94 (Duplicate)	ND(10)	ND(5)	D(3)(5)	ND(5)	14	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	9/97	ND(10)	ND(5)	D(3)(5)	ND(5)	9.7	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	12/97	ND(10)	ND(5)	ND(5)	ND(5)	15.0	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-7	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-8	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	D(3.3)(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
W-9	10/91	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	160	63	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	11 2-Hexanone
	7/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND

µg/l = micrograms per liter

ND = Not detected at or above reporting limit; reporting limit shown in parentheses.
D = Detected below reporting limit; results and detection limits are in respective parentheses.

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

VOLATILE ORGANIC COMPOUNDS
(EPA TEST METHOD 8240)

WELL NUMBER	SAMPLING DATE	COMPOUND													
		Vinyl Chloride (µg/l)	1,1-DCA (µg/l)	Total 1,2-DCE (µg/l)	1,2-DCA (µg/l)	TCE (µg/l)	Benzene (µg/l)	Acetone (µg/l)	2-Butanone (µg/l)	4-Methyl-2-Pentanone (µg/l)	PCE (µg/l)	Toluene (µg/l)	1,1,1-TCA (µg/l)	$MeCl_2$ (µg/l)	Other Compounds (µg/l)
W-10	10/90	ND(10)	ND(5.0)	ND(5.0	ND(5.0)	D(4.5)(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	8	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3.0)(5.0) Total Xylenes
	10/92	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	7	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/93	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	6	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/93	ND(10)	ND(5)	ND(5)	ND(5)	D(3.3)(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	D(3)(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/94 (Duplicate)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/94	ND(10)	ND(5)	ND(5)	ND(5)	D(3)(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	1/95	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/95	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	8/95	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	All ND
	10/95	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	D(4.7)(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	All ND
	1/96	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	2.8(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	All ND
	8/97	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	All ND
	12/97	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	All ND
W-11	10/91	D(5.6)(10.0)	ND(5.0)	12/ND(5)[1]	ND(5.0)	21	ND(5.0)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	87 Chloroform 120 CCl_4
	4/92	11	14	16/ND(5)[1]	ND(5.0)	38	ND(5.0)	ND(20)	ND(10)	ND(10)	8	ND(5)	7	ND(20)	80 Chloroform 170 CCl_4
	7/92	ND(10)	7	12/ND(5)[1]	ND(5.0)	23	ND(5.0)	ND(20)	ND(10)	ND(10)	D(4.0)(5.0)	ND(5)	ND(5)	ND(20)	61 Chloroform 100 CCl_4
	7/92 (Duplicate)	ND(10)	7	13/ND(5)[1]	ND(5.0)	23	ND(5.0)	ND(20)	ND(10)	ND(10)	D(4.0)(5.0)	ND(5)	ND(5)	ND(20)	62 Chloroform 100 CCl_4
	10/92	ND(50)	480	80/ND(5)[1]	ND(30)	490	ND(30)	ND(100)	ND(50)	ND(50)	170	30	230	900	90 CCl_4 130 Chloroform 60 FreoN 113
	10/92 (Duplicate)	ND(50)	420	60/ND(5)[1]	ND(30)	400	ND(30)	ND(100)	ND(50)	ND(50)	140	D(20)(30)	210	ND(100)	120 Chloroform 40 FreoN 113 90 CCl_4
	1/93	D(8)(10)	110	32/ND(5)[1]	D(8)(10)	110	ND(5)	190	40	40	48	D(4)(5)	43	160	99 CCl_4 77 Chloroform 15 Freon 113
	4/93	ND(800)	800	ND(800)	ND(800)	500	ND(400)	7,000	1,800	D(500)(800)	D(200)(400)	ND(400)	ND(400)	1,700	All ND
	7/93	ND(2,000)	1,000	ND(1,000)	ND(1,000)	D(600)(800)	ND(1,000)	24,000	6,000	ND(2,000)	ND(1,000)	ND(1,000)	ND(1,000)	ND(4,000)	All ND
	10/93	ND(2,000)	1,000	ND(1,000)	ND(1,000)	D(590)(1000)	ND(1,000)	51,000	13,000	2,000	ND(1,000)	ND(1,000)	ND(1,000)	ND(4,000)	All ND
	2/94	ND(200)	700	100/ND(100)	ND(100)	400	ND(100)	10,000	2,200	600	300	D(50)(100)	100	1,300	100 Chloroform

[1] Results broken into cis-1,2-Dichloroethene/trans-1,2-Dichloroethene

µg/l = micrograms per liter

ND = Not detected at or above reporting limit; reporting limit shown in parentheses.

D = Detected below reporting limit; results and detection limits are in respective parentheses.

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS
MYERS CONTAINER CORPORATION - OAKLAND, CALIFORNIA
(Continued)

VOLATILE ORGANIC COMPOUNDS
(EPA TEST METHOD 8240)

WELL NUMBER	SAMPLING DATE	COMPOUND													
		Vinyl Chloride (µg/l)	1,1-DCA (µg/l)	Total 1,2-DCE (µg/l)	1,2-DCA (µg/l)	TCE (µg/l)	Benzene (µg/l)	Acetone (µg/l)	2-Butanone (µg/l)	4-Methyl-2-Pentanone (µg/l)	PCE (µg/l)	Toluene (µg/l)	1,1,1-TCA (µg/l)	$MeCl_2$ (µg/l)	Other Compounds (µg/l)
W-12	5/93	ND(200)	300	100/ND(100)	ND(100)	400	ND(100)	2,800	ND(200)	200	500	300	ND(100)	ND(400)	100 Ethylbenzene D(80)(100) Styrene D(200)(300) Xylenes
	7/93	ND(500)	500	D(200)(300)/ND	ND(300)	D(200)(300)	ND(300)	5,000	ND(500)	600	D(200)(300)	400	ND(300)	ND(1,000)	D(200)(300) Xylenes
	7/93 (Duplicate)	ND(500)	500	D(200)(300)/ND	ND(300)	D(200)(300)	ND(300)	6,000	ND(500)	600	D(200(300)	400	ND(300)	ND(1,000)	D(250)(300) Xylenes
	10/93	ND(500)	540	D(170)(250)/ND	ND(250)	ND(250)	ND(250)	8,200	1,700	1,200	D(170)(250)	450	ND(250)	ND(1,000)	D(150)(250) Ethylbenzene 470 Xylenes
	10/93 (Duplicate)	ND(500)	510	D(180)(250)/ND	ND(250)	ND(250)	ND(250)	9,200	1,900	1,300	D(160)(250)	450	ND(250)	ND(1,000)	470 Xylenes
	2/94	ND(500)	700	ND(300)	ND(300)	D(200)(300)	ND(300)	16,000	2,500	1,800	D(100)(300)	600	ND(300)	ND(1,000)	D(200)(300) Ethylbenzene 500 Xylenes
	4/94	ND(1,000)	700	ND(500)	ND(500)	ND(500)	ND(500)	12,000	3,000	1,000	ND(500)	600	ND(500)	ND(2,000)	D(300)(500) Xylenes
	4/94 (Duplicate)	ND(1,000)	700	ND(500)	ND(500)	ND(500)	ND(500)	12,000	2,000	1,000	ND(500)	600	ND(500)	ND(2,000)	D(300)(500) Xylenes
	7/94	ND(500)	470	ND(300)	ND(300)	ND(300)	ND(300)	7,400	2,100	1,300	ND(300)	480	ND(300)	ND(1,000)	D(250)(300) Xylenes
	10/94	ND(1,000)	D(470)(500)	ND(500)	ND(500)	ND(500)	ND(500)	12,000	2,700	D(870)(1000)	ND(500)	630	ND(500)	ND(2,000)	D(330)(500) Xylenes
	1/95	ND(50)	200	66	ND(25)	120	31	3,000	410	350	47	270	ND(25)	ND(100)	88 Chloroethane 85 Ethylbenzene 42 Styrene 280 Xylenes
	1/95 Duplicate	ND(50)	190	62	ND(25)	120	30	2,300	410	350	49	270	ND(25)	ND(100)	75 Chloroethane 85 Ethylbenzene 40 Styrene 280 Xylenes
	8/97	ND(200)	180	ND(100)	ND(100)	ND(100)	ND(100)	2,900	440	120	ND(100)	280	ND(100)	ND(400)	150 Ethylbenzene 288 Xylenes
	12/97	ND(100)	210	100	ND(50)	120	ND(50)	1,100	160	ND(100)	ND(50)	310	ND(50)	ND(200)	180 Ethylbenzene 329 Xylenes
W-13	5/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	10/93	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	2/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(30)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	4/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	All ND
	7/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(2.5)(5) CCl_4
	10/94	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3)(5) CCl_4
	10/94 (Duplicate)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(3)(5) CCl_4
	1/95	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(10)	ND(5)	ND(5)	ND(5)	ND(20)	D(4.7)(5) CCl_4

µg/l = micrograms per liter

ND = Not detected at or above reporting limit; reporting limit shown in parentheses.
D = Detected below reporting limit; results and detection limits are in respective parentheses

0 1/2

Statute Miles

SOURCE: USGS Oakland West Quadrangle
7.5 Minute Series (Topographic)
Scale 1:24,000

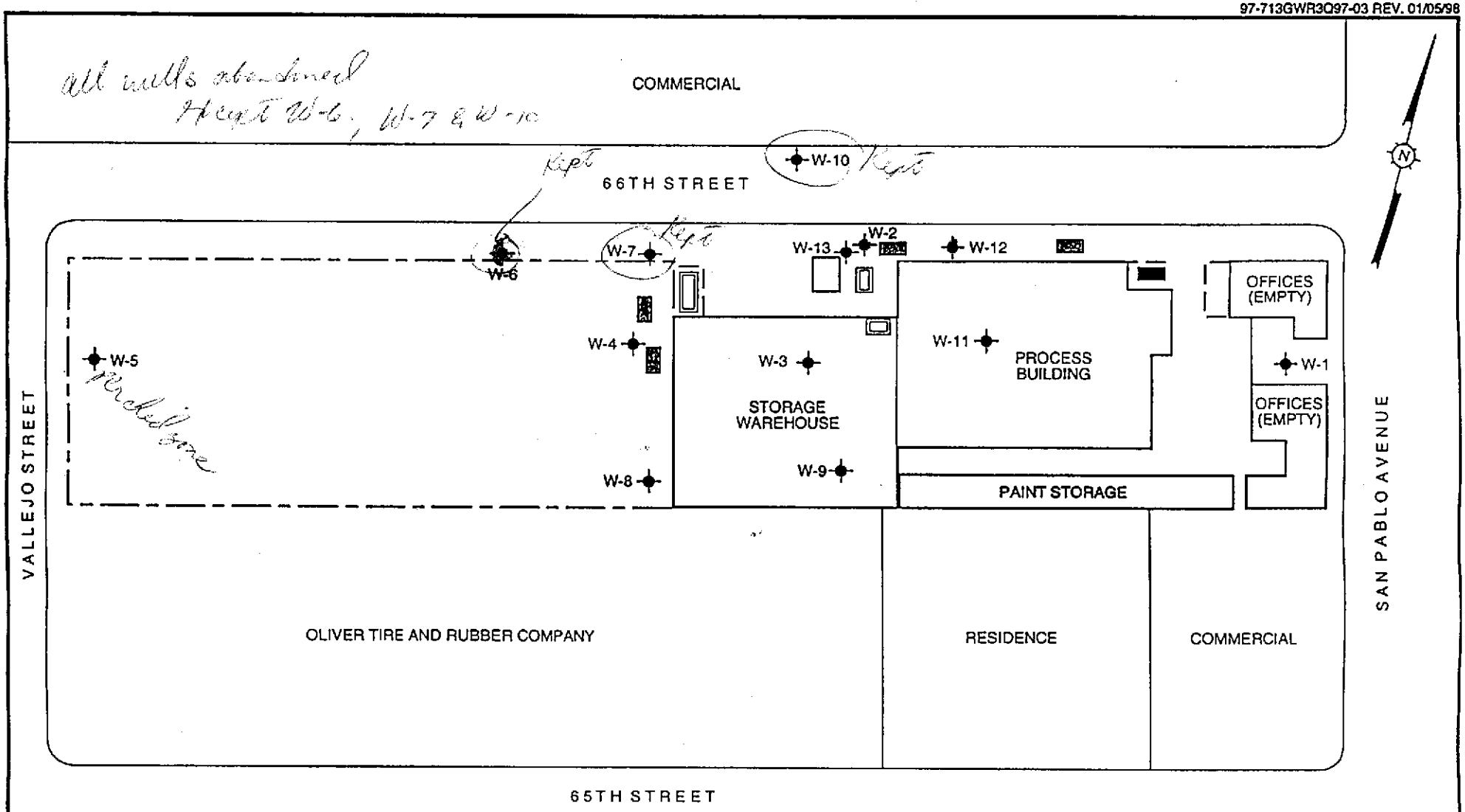
FIGURE 1

SITE LOCATION

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC ENVIRONMENTAL SOLUTIONS, INC.

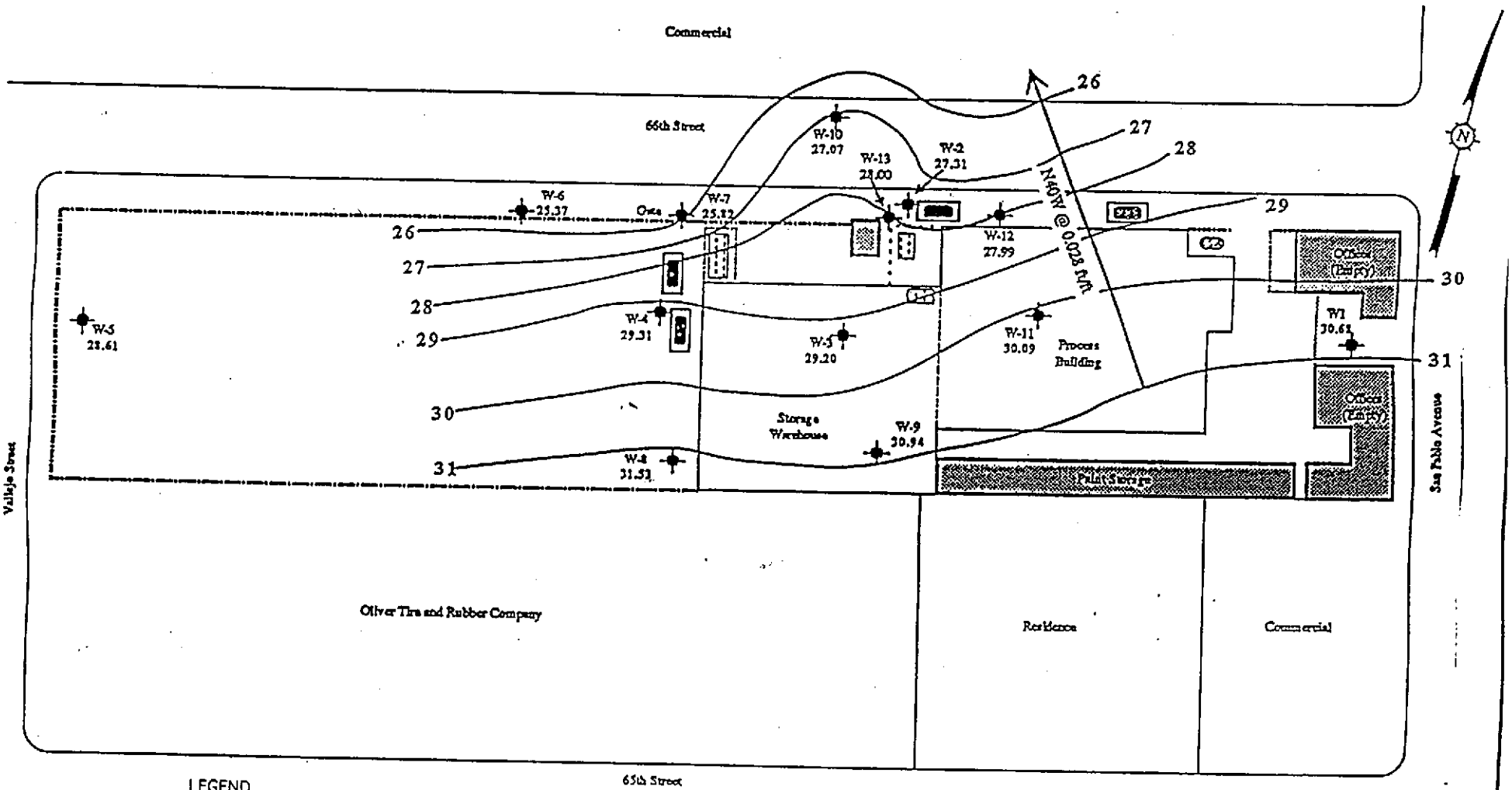
97-713GWR3Q97-03 REV. 01/05/98



MONITORING WELL LOCATION MAP

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC | FIGURE 2



LEGEND

- PROPERTY BOUNDARY (FENCE LINE)
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- PROCESS WATER SUMP
- W-6 (25.37) MONITORING WELL LOCATION WITH GROUND WATER ELEVATION MEAURED 4/11/95
- 29 GROUND WATER CONTOUR ELEVATION ON 4/11/95 IN FEET ABOVE MEAN SEA LEVEL
- N40W@ 0.028 ft/ft GROUND WATER FLOW DIRECTION AND GRADIENT

0 70 140 FEET

SCALE

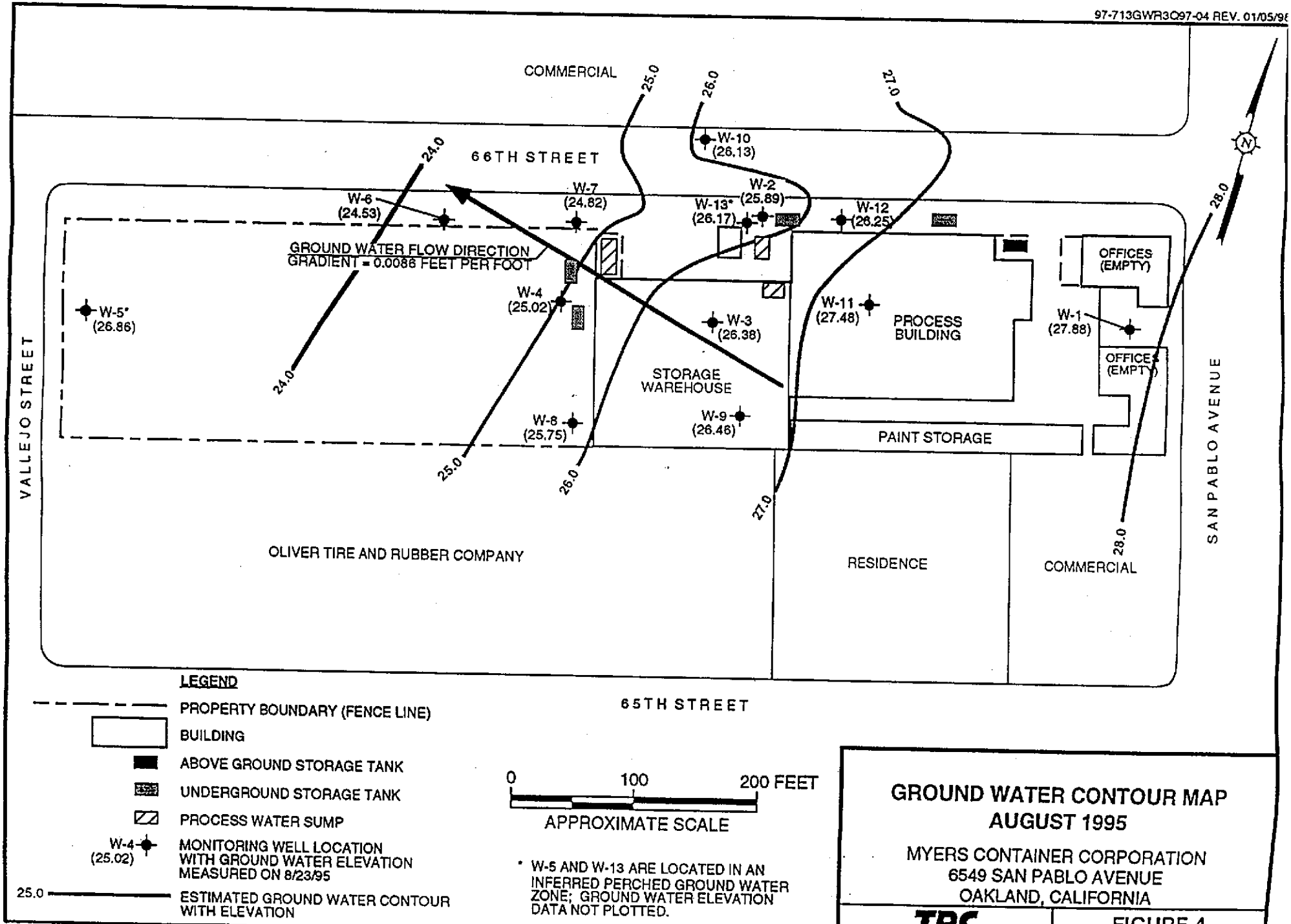
CONTOUR INTERVAL: 1 FOOT

FIGURE 3

GROUND WATER CONTOUR MAP APRIL 1995

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC ENVIRONMENTAL SOLUTIONS, INC.



LEGEND

- PROPERTY BOUNDARY (FENCE LINE)
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- PROCESS WATER SUMP
- W-4 (25.02) MONITORING WELL LOCATION WITH GROUND WATER ELEVATION MEASURED ON 8/23/95
- 25.0 ESTIMATED GROUND WATER CONTOUR WITH ELEVATION

0 100 200 FEET
APPROXIMATE SCALE

* W-5 AND W-13 ARE LOCATED IN AN INFERRED PERCHED GROUND WATER ZONE; GROUND WATER ELEVATION DATA NOT PLOTTED.

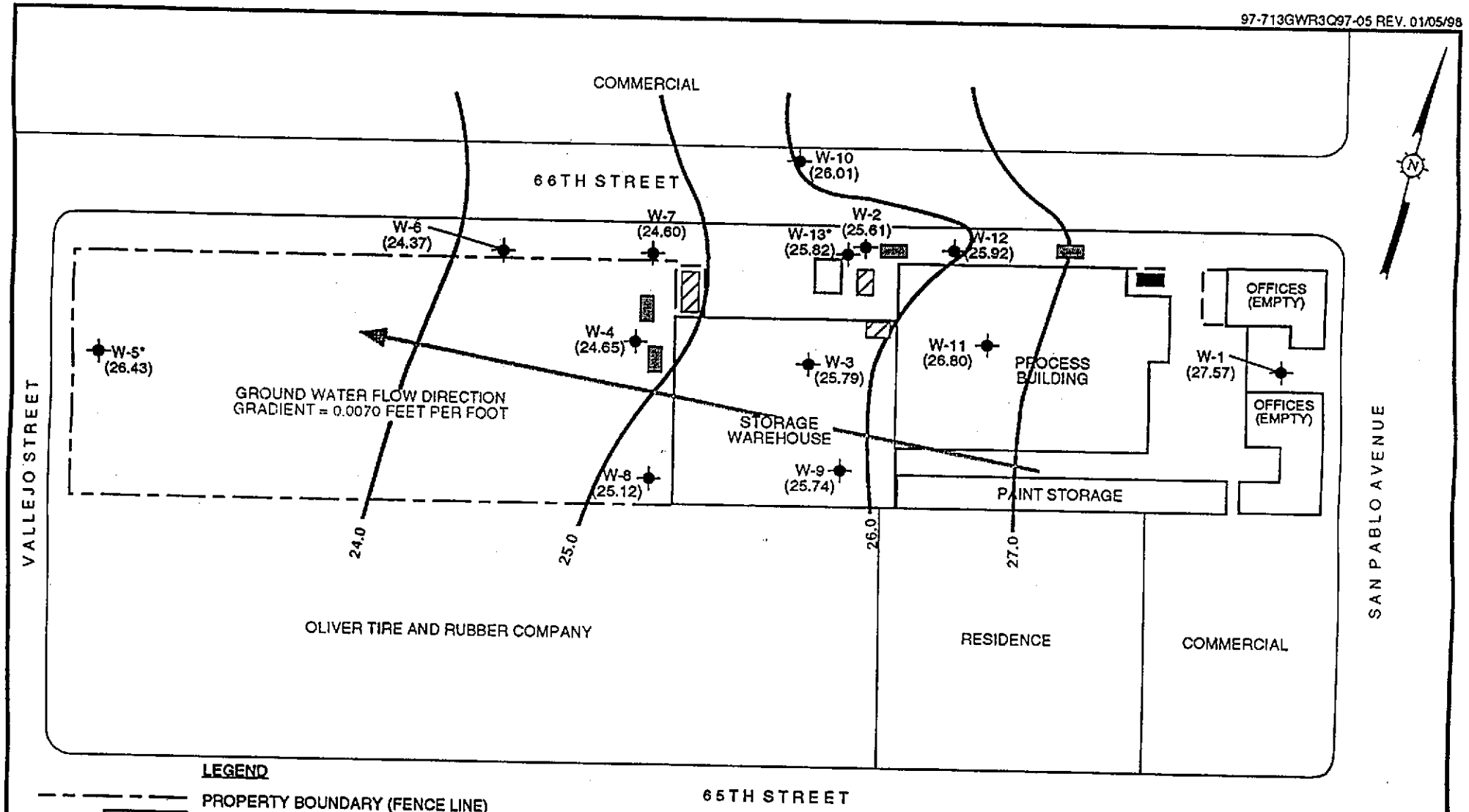
GROUND WATER CONTOUR MAP
AUGUST 1995

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC

FIGURE 4

97-713GWR3Q97-05 REV. 01/05/98



LEGEND

- PROPERTY BOUNDARY (FENCE LINE)
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- PROCESS WATER SUMP
- W-4 (24.65) MONITORING WELL LOCATION WITH GROUND WATER ELEVATION MEASURED ON 10/27/95
- 25.0 ESTIMATED GROUND WATER CONTOUR WITH ELEVATION

0 100 200 FEET

APPROXIMATE SCALE

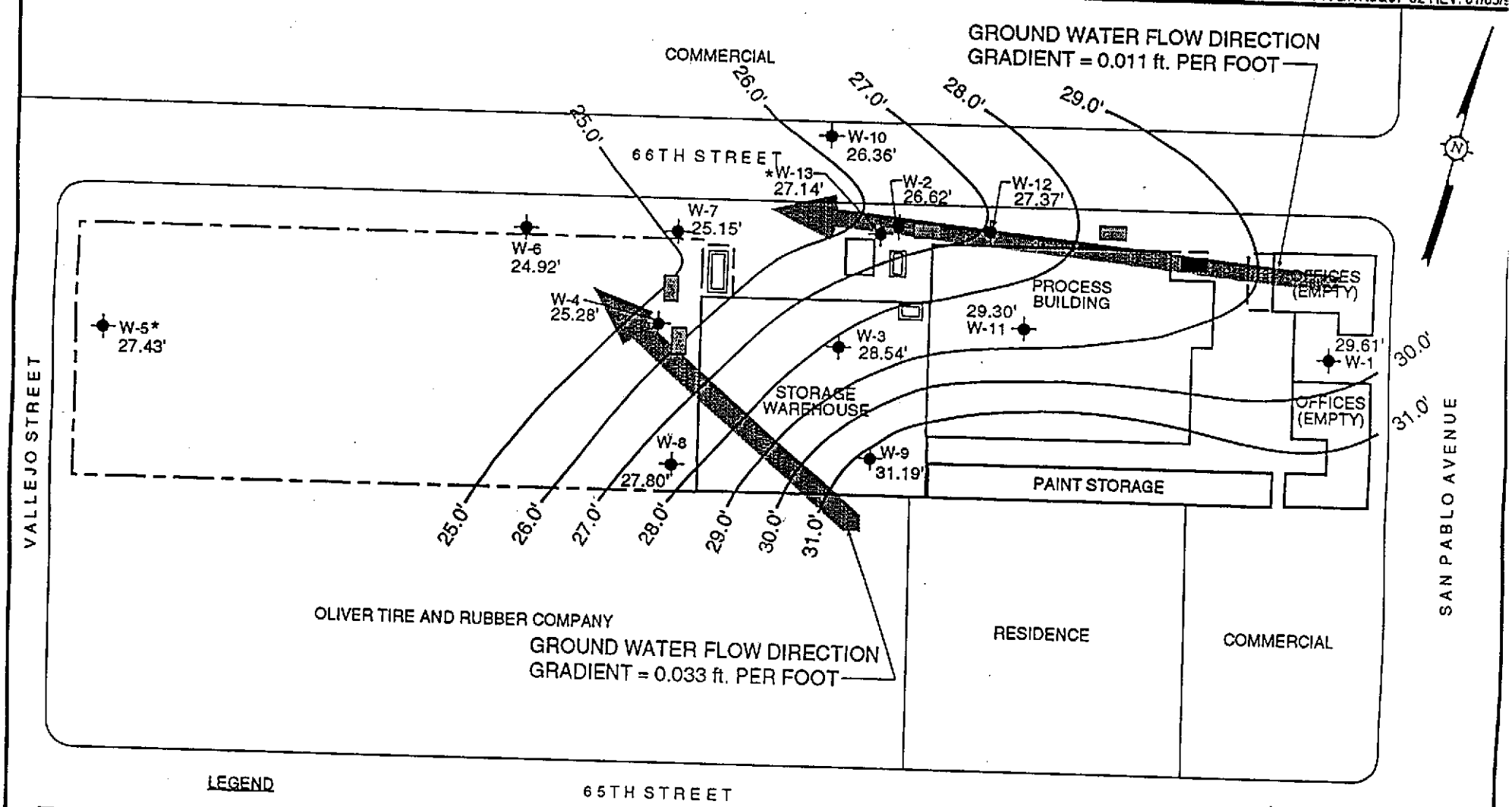
* W-5 AND W-13 ARE LOCATED IN AN INFERRED PERCHED GROUND WATER ZONE; GROUND WATER ELEVATION DATA NOT PLOTTED.

GROUND WATER CONTOUR MAP
OCTOBER 1995

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC

FIGURE 5



LEGEND

- PROPERTY BOUNDARY (FENCE LINE)
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- PROCESS WATER SUMP
- W-5 MONITORING WELL LOCATION
- 25.0' GROUND WATER CONTOUR ELEVATION (IN FEET ABOVE MEAN SEA LEVEL)

* W-5 AND W-13 ARE LOCATED IN AN INFERRED PERCHED GROUND WATER ZONE, THEIR GROUND WATER DATA ARE NOT PLOTTED.

0 100 200 FEET
APPROXIMATE SCALE

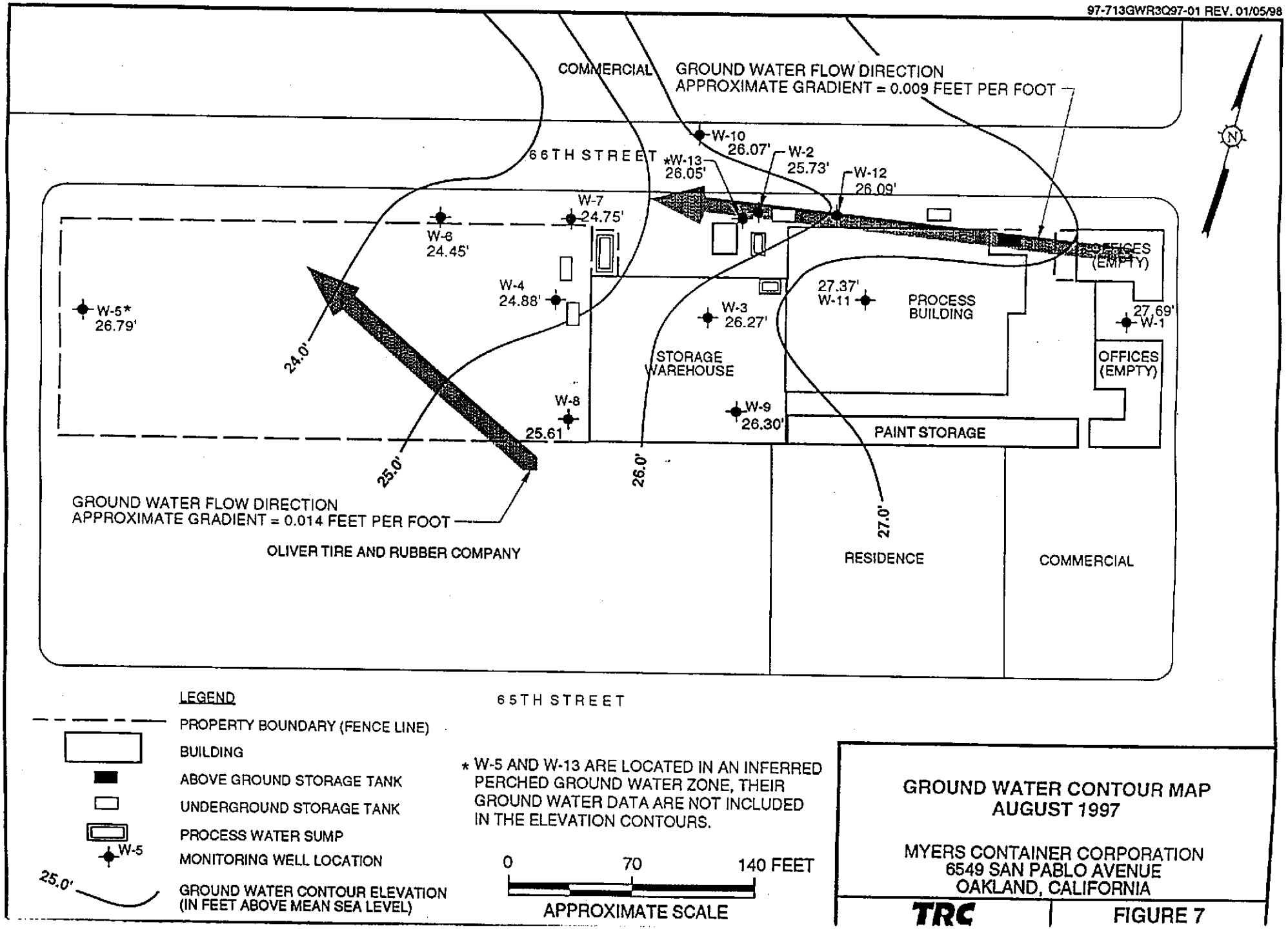
GROUND WATER CONTOUR MAP
JANUARY 1996
QUARTERLY GROUND WATER MONITORING

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC

FIGURE 6

97-713GWR3Q97-01 REV. 01/05/98



LEGEND

- PROPERTY BOUNDARY (FENCE LINE)
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- PROCESS WATER SUMP
- W-5 MONITORING WELL LOCATION
- 25.0' GROUND WATER CONTOUR ELEVATION (IN FEET ABOVE MEAN SEA LEVEL)

* W-5 AND W-13 ARE LOCATED IN AN INFERRED PERCHED GROUND WATER ZONE, THEIR GROUND WATER DATA ARE NOT INCLUDED IN THE ELEVATION CONTOURS.

0 70 140 FEET

APPROXIMATE SCALE

GROUND WATER CONTOUR MAP
AUGUST 1997

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

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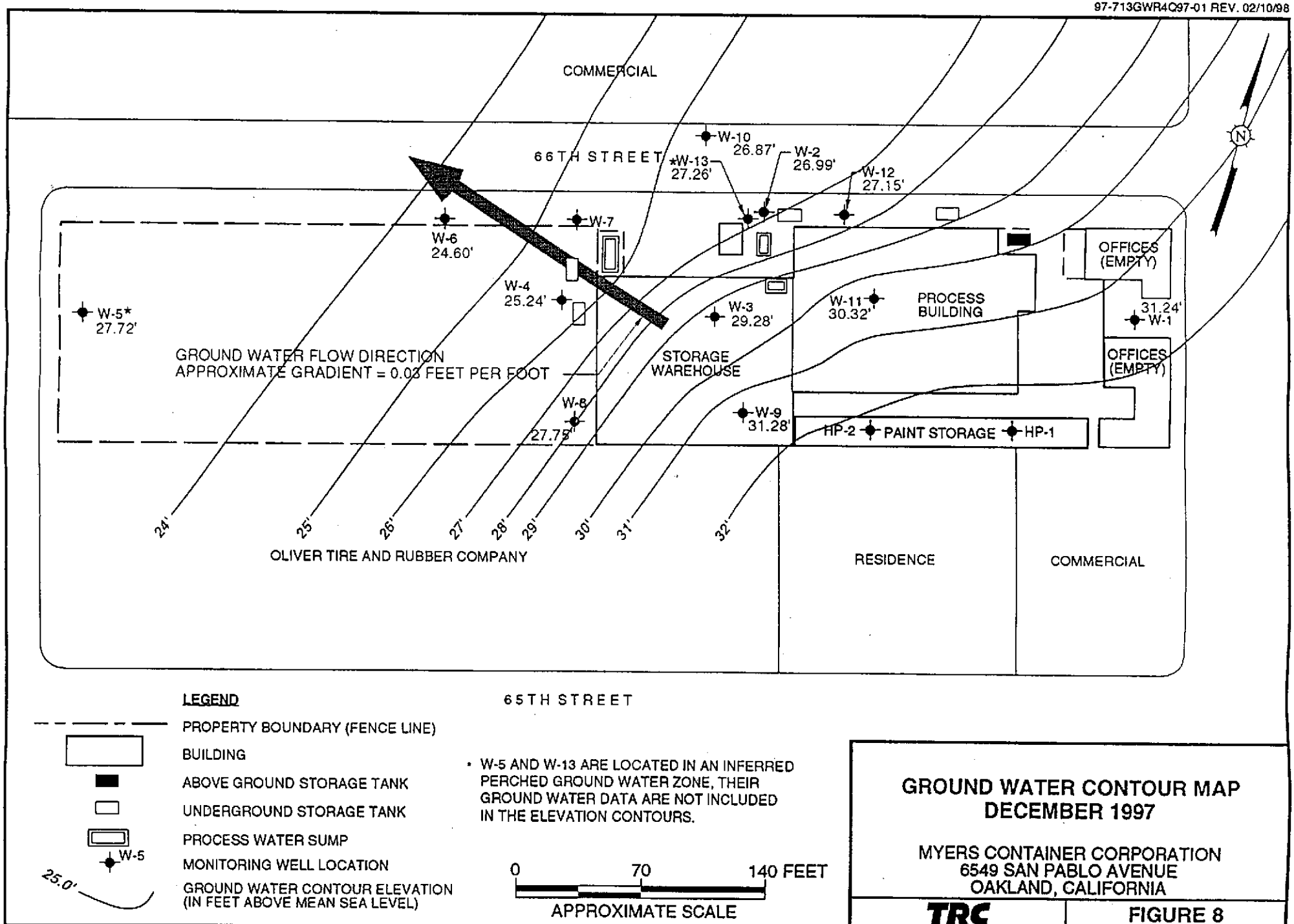
FIGURE 7

97-713GWR4Q97-01 REV. 02/10/98



- W-5 AND W-13 ARE LOCATED IN AN INFERRED PERCHED GROUND WATER ZONE, THEIR GROUND WATER DATA ARE NOT INCLUDED IN THE ELEVATION CONTOURS.

GROUND WATER CONTOUR MAP
DECEMBER 1997

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

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FIGURE 8

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PHASE I REMEDIAL DESIGN AND IMPLEMENTATION PLAN

MYERS CONTAINER CORPORATION
FORMER DRUM RECONDITIONING FACILITY
6549 San Pablo Avenue, Oakland, California

Prepared for

California Environmental Protection Agency
Northern California - Coastal Cleanup Operations Branch
Berkeley, California

Presented by

TRC

Project No. 96-757
June 1998

TRC

PHASE I REMEDIAL DESIGN AND IMPLEMENTATION PLAN

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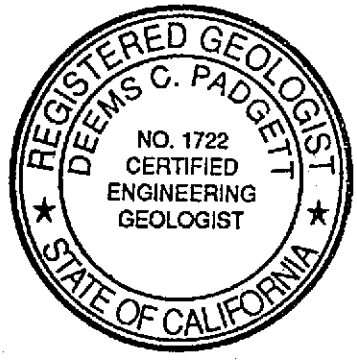

Project No. 96-757
June 1998
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TABLE OF CONTENTS

	PAGE NO.
LIST OF FIGURES	iii
1.0 INTRODUCTION	1
2.0 PREPARATORY ACTIVITIES	3
2.1 Health and Safety	3
2.2 Permitting	3
2.3 Site Preparation	4
2.3.1 Utility Protection	4
2.3.2 Soil and Debris Stockpile Area	4
2.3.3 Monitoring Well Abandonment	4
3.0 FACILITIES REMOVAL	5
3.1 Building Demolition	5
3.2 Removal of Sumps, Equipment Footings and Storage Tanks	5
4.0 SOIL EXCAVATION	7
4.1 Construction Equipment	7
4.2 Soil Excavation Procedures	7
4.2.1 Excavation of Soil in Area SOU1-A (Process Building Area)	8
4.2.2 Excavation of Soil in Area SOU1-B (Storage Warehouse Area)	9
4.2.3 Excavation of Soil in Area SOU2-A (W-5 Area)	9
4.2.4 Excavation of Soil in Area SOU2-B (Drum Storage Yard Area)	9
4.3 Construction Monitoring	10
4.4 Dust Control and Air Monitoring	10
4.5 Excavation Backfill	10
4.6 Transportation and Disposal Procedures	11
4.7 Equipment Decontamination Procedures	11
5.0 CONFIRMATION SOIL SAMPLING	11
5.1 Field Test Kit Screening	12
5.2 Confirmation Sampling Procedures	12
5.3 Laboratory Analysis	12

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TABLE OF CONTENTS
(Continued)

	PAGE NO.
6.0 REPORTING	12
7.0 PHASE I RDIP SCHEDULE	13

APPENDIX A: HEALTH AND SAFETY PLAN FOR THE PHASE I REMEDIAL DESIGN AND IMPLEMENTATION PLAN

TRC

TABLE OF CONTENTS
(Continued)

LIST OF FIGURES

FIGURE NO.	TITLE
1	Site Location Map
2	Operable Units and Remedial Plan
3	Project Schedule

TRC

1.0 INTRODUCTION

On behalf of Myers Container Corporation (Myers), TRC has prepared this Phase I Remedial Design and Implementation Plan (RDIP) for the former drum reconditioning facility (Site) located at 6549 San Pablo Avenue in Oakland, California (Figure 1). This RDIP has been prepared for submittal to the California Environmental Protection Agency (EPA), Department of Toxic Substances Control (DTSC), as required by Provision 15.5.2 of the June 28, 1991, Imminent and Substantial Endangerment Order (Order) issued by DTSC to IMACC Corporation (parent company of Myers) and Mrs. Dorothy H. Warburton (Order; Docket No. I&SE 90/91-021).

As described in the *Final Remedial Action Plan* (RAP) (TRC Environmental Solutions, Inc., May 24, 1996), the remedial actions include:

- Building demolition.
- Excavating approximately 7,000 cubic yards of impacted soil to meet the established residential soil cleanup goals and disposal at approved waste disposal facilities.
- Backfilling the excavated areas with clean soil.
- Installing the groundwater extraction and treatment system.

Implementation of this remediation will occur in two phases. The Phase I RDIP outlines the procedures for permitting, building demolition, soil excavation and monitoring, confirmation soil sampling, backfilling and report preparation. A Phase II RDIP will be prepared for the groundwater pump and treatment system and submitted for DTSC review and approval prior to implementation.

Prior to the excavation of impacted Site soils, the Site buildings will be demolished and hauled to permitted offsite disposal facilities.

The RAP requires the excavation of soil impacted with constituents of concern (COCs) above established residential cleanup goals. The COCs for Site soils include dieldrin (a pesticide), Aroclor-1260 (a polychlorinated biphenyl [PCB]) and tetrachloroethylene (PCE, a solvent). The following cleanup goals have been established for the Site:

- Dieldrin - 0.2 milligrams per kilogram (mg/kg)
- PCB (Aroclor-1260) - 0.3 mg/kg
- PCE - 13.5 mg/kg.

The soil operable units (SOUs) delineated in Figure 2 will be excavated and backfilled in accordance with the procedures specified in Section 4.5. The backfilling will proceed concurrently with excavation activities.

As discussed in the RAP, groundwater samples were collected from the former Paint Storage Area. These samples were collected using a Hydropunch® technique in order to confirm the extent of the plume. The results of the investigation showed that ground water in the Paint Storage Area was not impacted with COC's. The results were made available to the DTSC in a letter report dated, January 30, 1998.

Impacted shallow groundwater in two areas in the northern portion of the Site has been identified as a groundwater operable unit (GWOU1). These areas are delineated in Figure 2. Following completion of Phase I, a workplan will be prepared to monitor the shallow groundwater quality in GWOU1 to determine the nature of residual contamination, and to finalize the scope of the groundwater extraction and treatment system for Phase II RDIP, if necessary.

The proposed schedule for conducting the remedial activities outlined in this RDIP is provided in Figure 3.

The remainder of this RDIP includes the following:

- **Chapter 2.0: Preparatory Activities** - Includes health and safety, permitting, and site preparation activities.
- **Chapter 3.0: Facilities Removal** - Includes a description of construction equipment, building demolition activities, removal of sumps, equipment footings, and storage tanks.
- **Chapter 4.0: Soil Excavation** - Includes soils removal and backfilling including equipment to be utilized, excavation procedures, construction monitoring, air monitoring, backfilling, transportation and disposal procedures, and equipment decontamination procedures.
- **Chapter 5.0: Confirmation Soil Sampling** - Includes confirmation sampling to assure the appropriate amount of soil has been removed, soil sampling procedures, and laboratory analytical procedures.
- **Chapter 6.0: Reporting** - Includes a description of the Phase I Remediation Summary Report, procedures for progress reporting, and modifications to the remediation program.
- **Chapter 7.0: Phase I RDIP Schedule** - Provides a schedule for the completion of remedial activities.

2.0 PREPARATORY ACTIVITIES

2.1 HEALTH AND SAFETY

A health and safety plan (HSP) has been developed for the implementation of the Phase I RDIP and is included in Appendix A. The HSP describes hazards associated with soil excavation and backfilling operations and provides health and safety guidance for Site work. The following documents were used to develop this HSP:

- *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), United States Coast Guard, EPA Publication, Number 85-115, October 1985.
- *Standard Operation Safety Guides*, EPA, July 1988.
- *Title 29, Code of Federal Regulations (CFR), Parts 1910 and 1026.*
- *Title 8, Section 5192, California Code of Regulations (CCR).*
- *Site Safety Plan*, "Guidance Document for Site Assessment and Site Mitigation Projects", California Department of Health Services, 1988.

Equipment and procedures that will be used to control dust emissions and to monitor airborne levels of dust particulates at the Site are discussed in the HSP.

2.2 PERMITTING

Well abandonment and soil excavation activities will likely require permits and/or agency notification. TRC will contact the appropriate agencies and apply for and secure permits required by the Alameda County Public Health Department, Alameda County Public Works Agency (ACPWA), the Bay Area Air Quality Management District (BAAQMD), and, if necessary, the Regional Water Quality Control Board (RWQCB), Cal-OSHA, Pacific Gas and Electric (PG&E), and East Bay Municipal Utilities District (EBMUD). The contractor chosen to perform the excavation will secure necessary permits (excavation, grading, etc.) as required by the City of Oakland.

A draft fact sheet describing the remediation work and schedule will be prepared and submitted to DTSC. TRC will distribute a final, DTSC approved fact sheet to residents of the surrounding neighborhood.

2.3 SITE PREPARATION

2.3.1 UTILITY PROTECTION

Prior to conducting excavation work, Underground Service Alert (USA) will be contacted to identify the location of utilities entering the Site. Following removal of concrete and wooden floors, an underground utility locating service will be contracted to clear the proposed excavation area of subsurface obstructions. The location and depth of utilities identified either by USA or the utility contractor will be clearly marked with flagging attached to stakes, spray painted on ground surfaces, and noted on field drawings. Underground pipes and utilities related to site operations will be removed during the soil excavation activities. Other utilities such as water main, telephone lines, storm drainage lines, etc., will be protected during soil excavation.

2.3.2 SOIL AND DEBRIS STOCKPILE AREA

Stockpile areas will be designated by the contractor for temporary placement of impacted soil and construction debris generated during building demolition and soil excavation activities. Stockpile areas will be situated in reasonable proximity to the excavation areas. Stockpiled material will be sampled before removal to permitted offsite disposal or recycling facilities.

Contaminated soil will be stockpiled on plastic liners and covered with plastic sheets to prevent dust emission and control erosion. The edge of the liner will be elevated a minimum of 4 inches to prevent precipitation run-on and runoff. The edges will also be weighted down with clean soil or sandbags to prevent the plastic from shifting or blowing away. Chemical testing will be performed for every 2,000 cubic yards of imported material.

2.3.3 MONITORING WELL ABANDONMENT

Groundwater Monitoring Wells W-2 through W-12 (except W-6, W-7, and W-10) are located within the limits of the proposed excavation areas and, therefore, will be abandoned prior to excavation. Monitoring Well W-6 and W-7 are at the boundary of excavation and will be saved. Monitoring Well W-1 is located outside of the contamination; therefore, this monitoring well is no longer required and will be abandoned. Analytical data are available for quarterly monitoring events conducted since 1990 from these monitoring wells.

Abandonment of existing monitoring wells will be conducted in accordance with applicable requirements of the ACPWA (Zone 7) by overdrilling the well casings using a hollow-stem auger drilling rig. Well components will be removed from the well boreholes and a bentonite

(5 percent)/cement (95 percent) slurry will be placed in each borehole through a tremie pipe to the surface. Specific well abandonment procedures will be documented in the well abandonment permit application.

Following excavation and backfilling of the impacted soils, several new monitoring and extraction wells will be installed for continued monitoring and assessment for needed future remediation.

3.0 FACILITIES REMOVAL

3.1 BUILDING DEMOLITION

Building demolition and asbestos removal has been addressed in a *Building Demolition Plan* (TRC Environmental Solutions, Inc., October 1996. The wooden floor of the storage warehouse will be removed as part of this RDIP. Chip samples of the wooden floor demolition debris will be collected and analyzed for all of the COCs listed in Section 1.0. Based on the wooden floor demolition debris sample results, an appropriate offsite disposal facility will be selected. The wooden floor debris will then be disposed at a DTSC-approved offsite disposal facility.

3.2 REMOVAL OF SUMPS, EQUIPMENT FOOTINGS AND STORAGE TANKS

Existing sumps and equipment footings will be removed using a backhoe or excavator, as appropriate. Six sumps (OAK designation) and one equipment footing (OEF designation) which are located outside of SOUs will be removed. These are indicated in Figure 2 and include:

- OAK-1
- OAK-2
- OAK-3
- OAK-4
- OAK-6
- OAK-11
- OEF-7

Demolition debris resulting from the removal of these six sumps and one footing will be segregated into separate stockpiles. Approximately 3 to 6 feet of adjacent soils, in the lateral and vertical extent, will also be excavated during removal of the six sumps and the single footing. The initial horizontal and vertical limits of soil excavation will be based on visual observations of stained soil during excavation activities. Visually stained soils will be stockpiled with the impacted soils from the SOUs and the excavation will continue, in 6-inch depth increments, until visually "clean" soil conditions are evident. Following excavation of impacted soils from the cavity of each sump or equipment footing, confirmation soil samples will be collected. The number of confirmation

samples to be collected from each excavation will be based on the size of each excavation. At a minimum, one confirmation soil sample will be collected from each side of each excavation and from the base of the excavation. Confirmation soil samples will not be composited. At least one additional confirmation soil sample will be collected along every additional 100 square feet of excavation wall surface area and/or every additional 100 square feet of excavation base surface area. All confirmation soil samples will be analyzed for all of the COCs listed in Section 1.0. The final horizontal and vertical limits for soil excavation following sump/footing removal will be based on confirmation soil sample results.

Sumps OAK-1, OAK-2, OAK-3, and OAK-4 are deep sumps which extend to the groundwater table. During the excavation of these sumps, the bottom concrete will be removed and a bottom soil sample will be collected. To prevent further groundwater infiltration, upon collection of sample, the sumps will be backfilled with clean material to the ground water elevation. Side wall confirmation sampling and excavation will not be extended below the groundwater.

Existing storage tanks, including one aboveground tank (AST) and four underground storage tanks (USTs), will be removed by a licensed contractor. These tanks are shown in Figure 2 and include gasoline, diesel and waste oil tanks.

Demolition debris as a result of sump, equipment footing and UST removal will be sampled and analyzed for all of the COCs listed in Section 1.0. The demolition debris will be disposed at a DTSC-approved offsite disposal facility, selected based on the demolition debris sample results.

The removal of USTs, and associated soil investigations, will be conducted according to applicable *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank* Sites (Regional Water Quality Control Board, August 10, 1990) and will include the excavation of approximately 2 feet of soil surrounding each UST to an anticipated depth of approximately 10 feet below ground surface (bgs), as appropriate, and depending on field conditions (e.g., tank depth and observation of stained soils). Following excavation of impacted soils surrounding the USTs, confirmation soil samples will be collected. The number of confirmation samples to be collected from each UST excavation will be based on the size of each excavation. At a minimum, one confirmation soil sample will be collected from each side of each excavation and from the base of the excavation. Confirmation soil samples will not be composited. At least one additional confirmation soil sample will be collected along every additional 100 square feet of excavation wall surface area and/or every additional 100 square feet of excavation base surface area. All confirmation soil samples will be analyzed for all of the COCs listed in Section

1.0. The final horizontal and vertical limits for soil excavation will be based on confirmation soil sample results.

Removal of the three equipment footings located within the former Process Building (i.e., OEF-8, OEF-9 and OEF-10) will be accomplished using the same equipment as for the footings located outside of SOUs. However, the soil removal associated with these footings will be conducted as part of the SOU soil removal described in Chapter 4.0.

4.0 SOIL EXCAVATION

This chapter describes the procedures for the types of construction equipment to be used, procedures for excavating, construction monitoring, air monitoring, excavation backfilling, soil transportation and disposal, and equipment decontamination.

4.1 CONSTRUCTION EQUIPMENT

Backhoes, excavators, and front-end loaders will be used to excavate and load soil from onsite stockpiles into trucks. Graders may be used during the backfilling and final grading operations. The excavation equipment referenced above will have enclosed cabs in order to minimize dust exposure to onsite workers.

4.2 SOIL EXCAVATION PROCEDURES

Prior to soil excavation in the Process Building, the concrete slab will be removed. Concrete that is removed will be visually inspected for staining and stockpiled separately if found to be visually stained. The stained concrete will be disposed with the COC-impacted soils excavated as part of this remedial action. Unstained concrete will be segregated into separated stockpiles which will be transported for off-site disposal at an approved Class III landfill or recycling facility.

Soil impacted with COCs will be excavated using a backhoe or other suitable equipment. The SOU excavation areas have been subdivided into SOU1-A, SOU1-B, SOU2-A, and SOU2-B subareas and are shown in Figure 2. In addition to soils contaminated with dieldrin, PCBs and PCE, soils visually stained with petroleum hydrocarbons (e.g., in the areas surrounding USTs and/or beneath the wooden flooring of the Storage Warehouse) will be excavated and disposed at an appropriate offsite landfill or recycling facility.

Preliminary estimates of the soil volumes to be excavated in each of the four subareas were calculated in the RAP based on the available data as follows:

Subarea	Soil Volume (cy)
• SOU1-A	1,500 (at Process Building area to 5 feet)
• SOU1-B	2,500 (at Storage Warehouse area to 7 feet)
• SOU2-A	1,100 (at W-5 area to 6 feet)
• SOU2-B	1,300 (at Drum Storage Yard area to 1 foot)
• Sumps and USTs	600
TOTAL	7,000

The actual soil excavation depths will be determined for each SOU subarea based on confirmation sampling and analysis results. Therefore, the final dimensions of each excavation may be different from those estimated in the RAP.

The approach for excavating soils in each of the above designated SOU subareas is outlined in the following subsections of this chapter.

The soil removed from each excavation will be temporarily stockpiled near the excavations as described in Section 2.3.2. If ground water is encountered, excavation will continue to approximately 2 to 3 feet below the groundwater. However, confirmation samples will not be collected below the groundwater table.

If dewatering is required during excavation activities, the groundwater will be contained in temporary mobile storage tanks (i.e., Baker tanks) located at the Site. Samples will be obtained and analyzed to characterize the water and establish appropriate disposal methods. The water will be disposed to the storm sewer system, or used for dust control based on sampling results under the approval of the RWQCB. Alternatively, depending on the volume of dewatering fluids and analytical results, the water will be transported to an appropriate offsite disposal facility. Additional clean water that may be needed for dust control will be obtained from a nearby fire hydrant on 66th Street.

4.2.1 EXCAVATION OF SOIL IN AREA SOU1-A (PROCESS BUILDING AREA)

Following removal of the equipment footings and the concrete floor in SOU1-A, soil will be excavated to a depth of approximately 3 feet below ground surface (bgs) initially, based on visual observation of stained soil and field test kit results, as described in Section 5.1. The base of the excavation in SOU-1A will be then divided into 16 cells as shown in Figure 2, for the purpose of

collecting confirmation soil samples. The size of each cell is approximately 500 square feet. At least one confirmation soil sample will be collected from each cell within the base of the excavation. Confirmation soil samples will not be composited. At least one additional confirmation soil sample will be collected along every additional 100 square feet of excavation wall surface area. All confirmation soil samples will be analyzed for all of the COCs listed in Section 1.0. The final horizontal and vertical limits for soil excavation in SOU-1A will be based on confirmation soil sample results.

4.2.2 EXCAVATION OF SOIL IN AREA SOU1-B (STORAGE WAREHOUSE AREA)

Following removal of the wooden floor, surface sludge and soil in SOU1-B will be excavated to a depth of approximately 3 feet bgs based on visual observation of stained soil and field test kit results. The base of the excavation in SOU-1B will then be divided into 25 cells as shown in Figure 2, for the purpose of collecting confirmation soil samples. The size of each cell is approximately 500 square feet. At least one additional confirmation soil sample will be collected for every additional 100 square feet of excavation wall surface area. Confirmation soil samples will be collected and analyzed using the protocol specified in Section 4.2.1. The final horizontal and vertical limits for soil excavation in SOU-1B will be based on confirmation soil sample results.

4.2.3 EXCAVATION OF SOIL IN AREA SOU2-A (W-5 AREA)

Following abandonment of Monitoring Well W-5, soils in the vicinity of Monitoring Well W-5 will be excavated to a depth of 6 feet bgs and approximately 10 feet by 10 feet surrounding the well. Confirmation soil samples will be collected and analyzed using protocol specified in Section 4.2.1. The final horizontal and vertical limits for soil excavation in the vicinity of Monitoring Well W-5 will be based on confirmation soil sample results.

The excavation may extend close to the adjacent property building. Should the excavation encroach within 10 feet of the building and exceed depths of 5 feet, a registered California geotechnical engineer will conduct a stability evaluation to determine whether additional soil support systems are necessary.

4.2.4 EXCAVATION OF SOIL IN AREA SOU2-B (DRUM STORAGE YARD AREA)

Removal of COC-impacted soils in SOU2-B will involve the uniform removal of the upper 1-foot of surface soils. Confirmation soil sampling and analyses will be collected at locations shown in Figure 2. Additional confirmation sampling will be performed along the northern portion of the area where surface soil was contaminated with PCBs. Excavation will continue, as necessary, depending on the results of confirmation soil sampling.

4.3 CONSTRUCTION MONITORING

During excavation activities, a Site remediation supervisor will be onsite daily to coordinate site safety, to verify that work is completed in compliance with technical specifications, assist in traffic control coordination, confirm contractor quantities, approve field changes, evaluate sampling results, document field observations, and verify compliance with the HSP (Appendix A). The contractor(s) will be required to follow the procedures outlined in the HSP. The field observations will include noting stained areas, nonnative fill materials, underground structures (i.e., utilities, piping, etc.), and groundwater conditions. Daily field reports regarding the above activities will be prepared.

4.4 DUST CONTROL AND AIR MONITORING

The BAAQMD regulation requires wetting (water spray) during building demolition, excavation, and loading activities to control visible emissions (large particulates).

Air monitoring will be performed by a technician during excavation and loading activities at the Site. Portable aerosol monitoring devices will be used to measure total dust levels on a real-time basis. Total dust action levels are specified in the HSP (Appendix A). Dust suppression using water spray will be required whenever total dust levels approach the established action levels in the HSP. Field operations will be conducted so that offsite migration of dust is controlled during excavation operations. Additional air monitoring information is presented in the HSP.

4.5 EXCAVATION BACKFILL

Site excavations will be backfilled with only clean imported fill material. Unstained concrete demolition debris will not be used onsite as backfill material; however, it will be disposed at an offsite disposal facility (see Section 4.2). The placement of backfill will be conducted according to the following requirements:

- Dewater the excavation, as necessary, before placing the backfill material.
- Place backfill materials in loose lifts no more than approximately 8 inches thick, unless otherwise indicated.
- Moisten each lift, as necessary, before compacting. Use clean water for this purpose. Uniformly apply water to surface, subgrade, or lift of backfill material to prevent free water from forming on the surface during or after compaction.
- Compact each 8-inch-thick lift to the extent possible either by a vibratory plate attached to a backhoe or by other mechanical means. Roll over each lift three times, at least, before placing the next lift.
- Compact backfill material to 90 percent relative compaction based on laboratory tests according to ASTM Method 1557. The compaction will be verified in the field using a nuclear density gauge.

4.6 TRANSPORTATION AND DISPOSAL PROCEDURES

These procedures are based on guidelines contained in the *Transportation Plan - Preparation Guidance for Site Remediation* (California EPA, May 1994). The contaminated soils will be disposed at an approved disposal facility. The soils will be transported by a trucking company that is an approved hazardous waste transporter. The necessary documents, such as the bill of lading or waste manifest forms, will be completed and will accompany the truck driver to the waste disposal facility. Noncontaminated soil and construction debris/concrete will be transported separately to a local Class III landfill in Alameda County.

The trucks will be loaded at the Site and appropriately covered using tarps or similar covers. It is anticipated that approximately 350 truckloads will be required to remove and replace the 7,000 cubic yards of soil involved in the remedial activities. In order to minimize the truck traffic and expedite soil moving operations, trucks which are used to bring in backfill material may also be used, when convenient, to remove contaminated soils from the Site following equipment decontamination. These trucks will be decontaminated at the disposal site to prevent contamination of the backfill material.

Up to thirty 20-ton trucks will enter and leave the Site each day during the construction period. The trucks will exit the Site and travel west on 66th Street, north on Hollis Street approximately six blocks to Ashby Avenue. On Ashby Avenue, they will travel west approximately one-quarter mile to Interstate 80. From Interstate 80, the trucks will use freeways and interstate highways to travel to disposal facilities. The trucks will attempt to avoid the major commute times and will avoid residential and school areas.

4.7 EQUIPMENT DECONTAMINATION PROCEDURES

Demobilization at the end of the soil excavation and transportation activities will include the decontamination and removal of equipment. The decontamination procedures are presented in the HSP (Appendix A).

5.0 CONFIRMATION SOIL SAMPLING

This chapter describes the procedures for collecting confirmation soil samples to determine the final boundary of soil excavation areas. This chapter also includes a discussion of soil sampling procedures and analytical testing requirements.

5.1 FIELD TEST KIT SCREENING

During the excavation, field samples will be collected and analyzed for PCBs and VOCs using field test kits. The field test kits typically use an immunoassay/chromogenic technique for analysis and can be set at the factory for various detection limits. Once the limits of excavation have been confirmed using the field test kits, confirmation samples will be collected for analysis by a state certified laboratory.

5.2 CONFIRMATION SAMPLING PROCEDURES

Confirmation soil samples will be collected from the excavation sidewalls and floors, as outlined in Chapter 4.0 and as shown in Figure 2 to confirm the removal of soil exceeding the cleanup levels.

For excavations 4 feet deep or less, floor soil samples will be obtained by driving a brass sampling tube into freshly exposed soil for at least 6 inches. The sampling tube will be driven into the ground using a slide hammer or equivalent device. For excavations greater than 4 feet deep, excavation floor samples will be obtained using the backhoe bucket. Brass tubes will be used to collect the soil samples from the backhoe bucket by manually pressing the tubes into the soil.

The soil samples will be covered on each end with Teflon squares and capped with plastic end caps. The samples will be placed in a chilled cooler and transported along with appropriate Chain-of-Custody documentation to the laboratory. Each sample will be labeled with the project number, sample designation and depth, and the date the sample was collected.

5.3 LABORATORY ANALYSIS

Confirmation soil samples collected from each excavation area will be analyzed for dieldrin and Aroclor-1260 by U.S. EPA Method 8080. Soil samples collected from SOU1 areas will also be analyzed for PCE by U.S. EPA Method 8010 while only 1/2 of the soil samples collected in SOU2 will be analyzed for PCE. The reduced frequency of PCE analysis in SOU2 is because current concentrations in SOU2 are below cleanup levels. Samples will be analyzed on a priority-turnaround basis (24 to 48 hours) to allow for expedited remediation.

6.0 REPORTING

A Phase I Remediation Summary Report will be prepared to document the excavation of the soils and well abandonments described in this RDIP. The report will include the following elements:

- Summary of the well abandonment and excavation activities.
- Procedures, location, and results of the confirmation soil sampling.
- Documentation of offsite transport and disposal of excavated soil.
- Health and safety monitoring.
- Documentation of the excavation backfill material and procedures.
- Daily field reports.
- The report will be certified by a registered professional civil engineer or registered engineering geologist.

The Summary Report will be submitted to DTSC for review and approval within 30 days of the completion of backfilling activities.

7.0 PHASE I RDIP SCHEDULE

The activities described in this RDIP can be completed according to the closure plan schedule presented in Figure 3.

96-757/FIGS/Lo/4/30/98

0 1/2

Statute Miles

USGS 1:24,000 SCALE

QUADARANGLE TOPOGRAPIC MAP

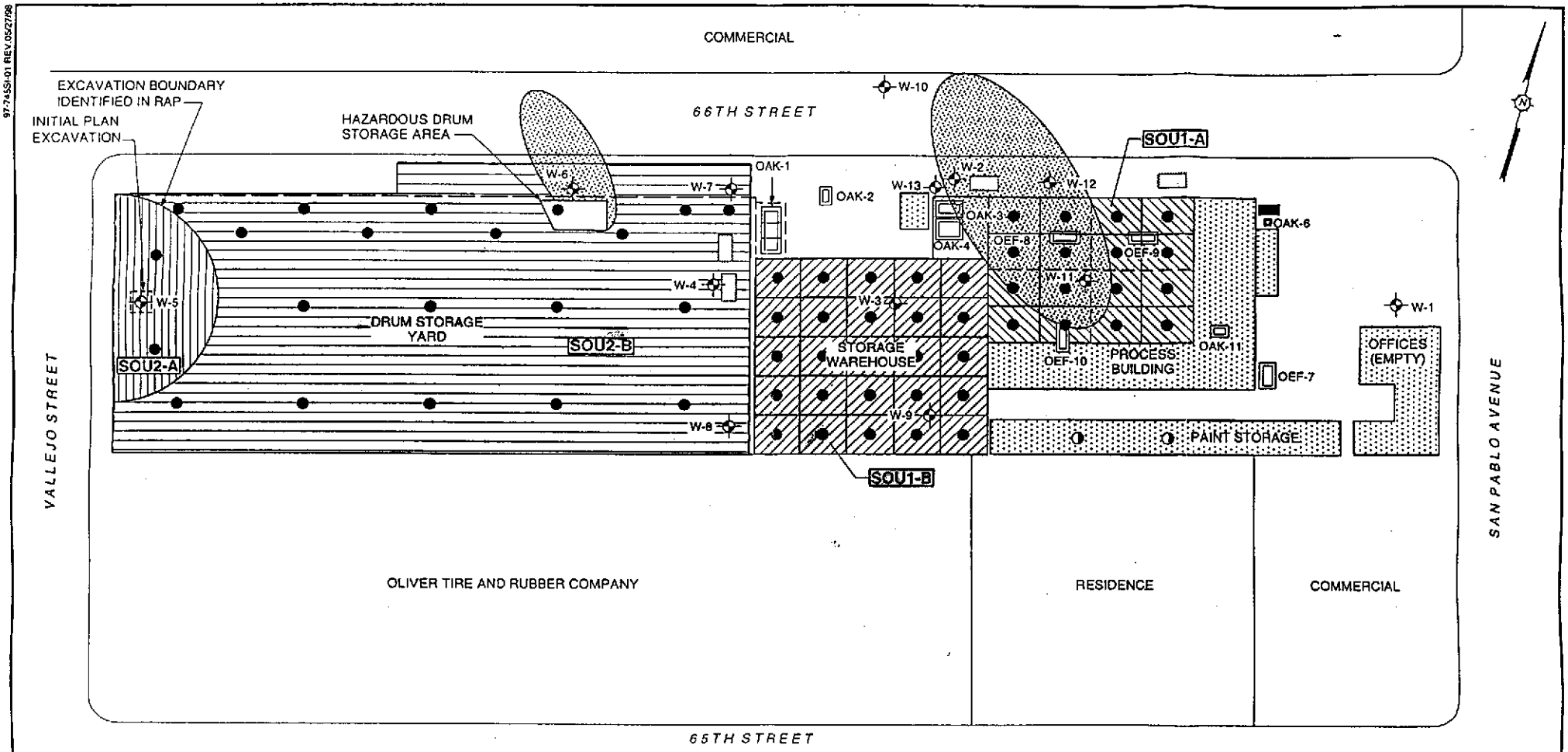
FIGURE 1

SITE LOCATION

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC

97-7455I-01 REV.052798



LEGEND

- SOU1-A
- SOU1-B
- SOU2-A
- SOU2-B
- W-5 MONITORING WELL LOCATION
- PROPERTY BOUNDARY (FENCE LINE)
- GWOU1
- BUILDING
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- SUMP OR EQUIPMENT FOUNDATION
- PROPOSED CONFIRMATION SOIL SAMPLE LOCATION
- GROUNDWATER (HYDROPUNCH) SAMPLE LOCATION

0 60 120 FEET
SCALE

OPERABLE UNITS AND REMEDIAL PLAN

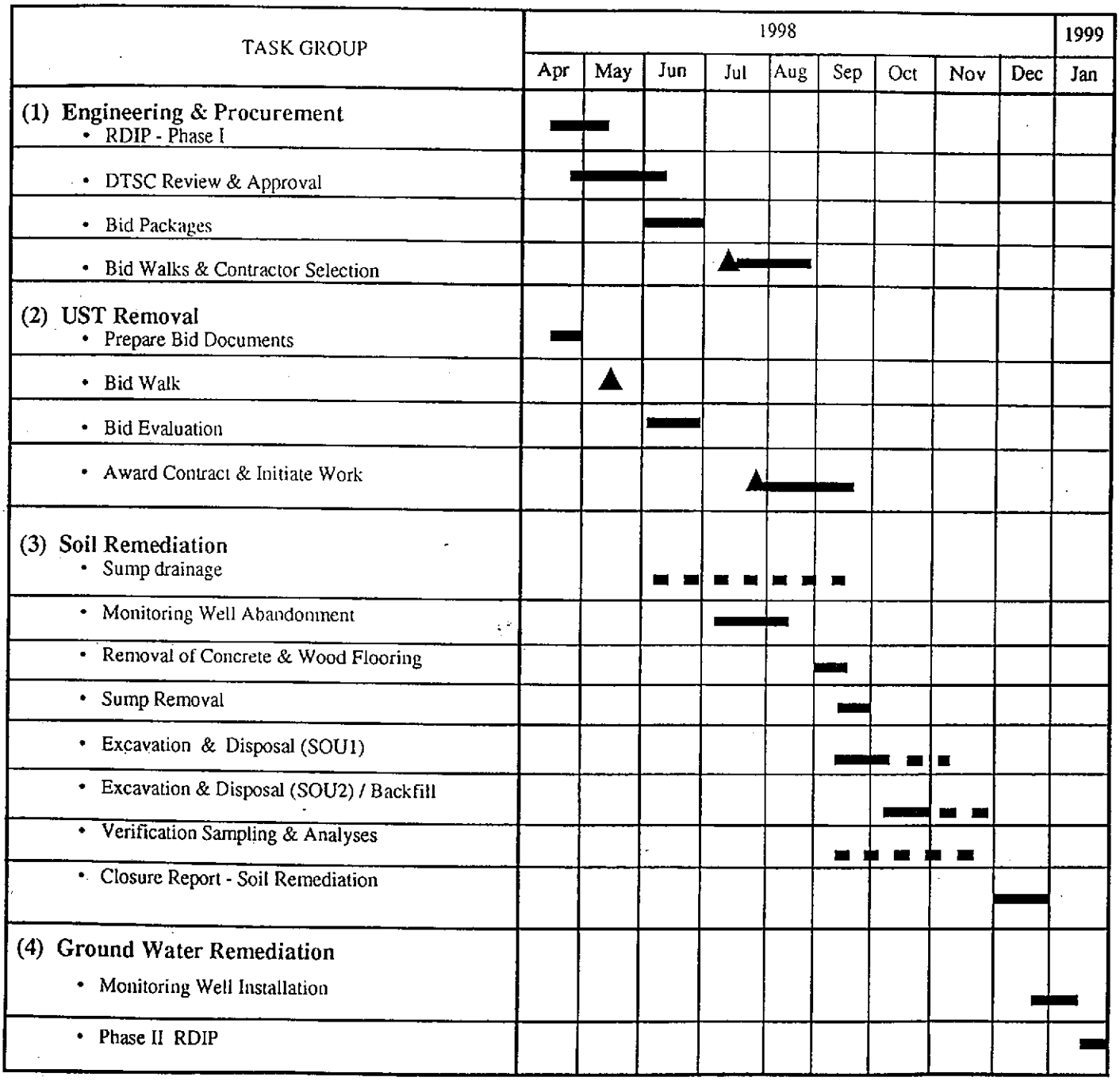
MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

TRC | FIGURE 2

MYERS CONTAINER CORPORATION
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

Figure 3

Remediation Schedule



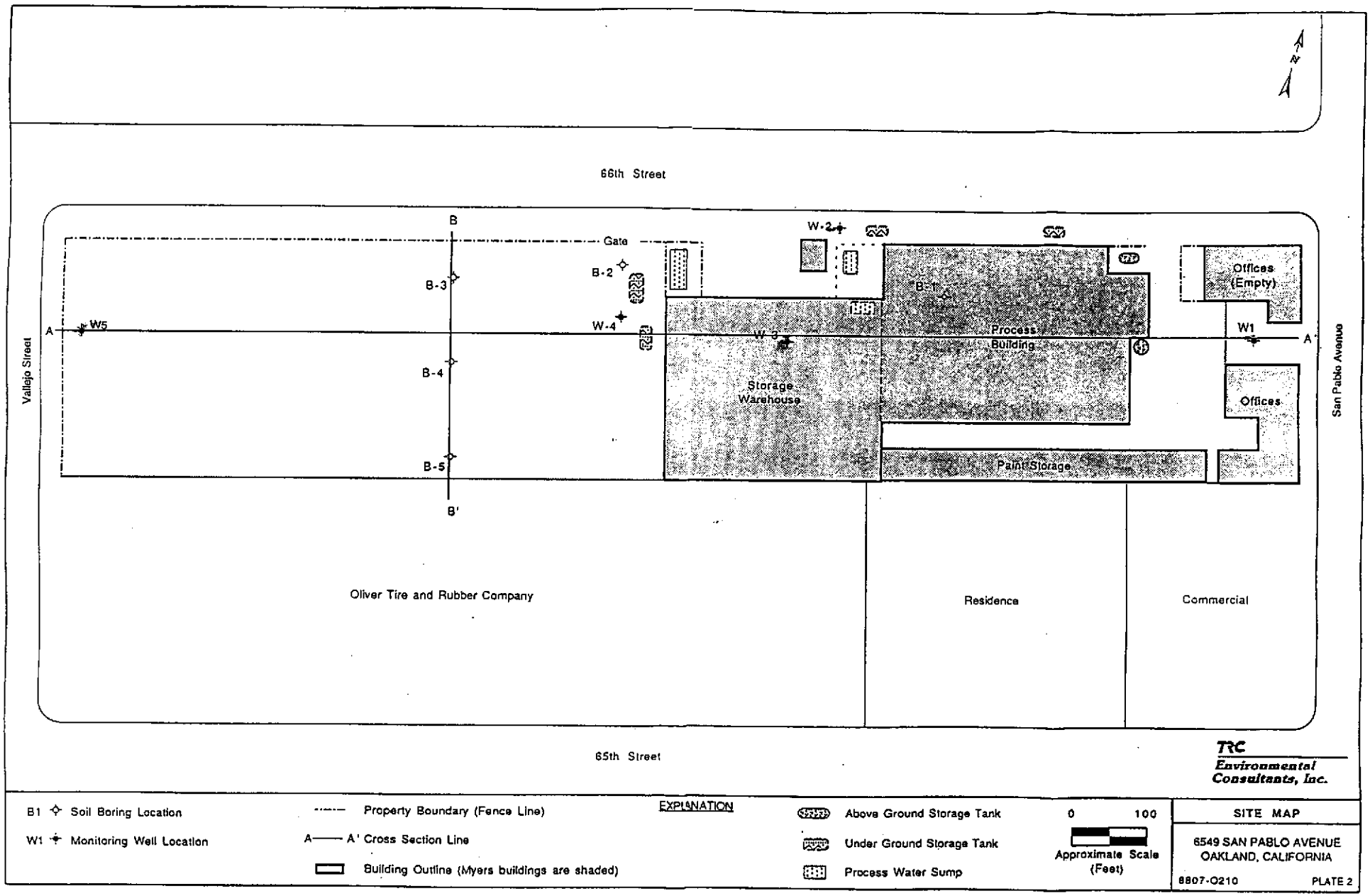
96-757 (4/29/98/rb)

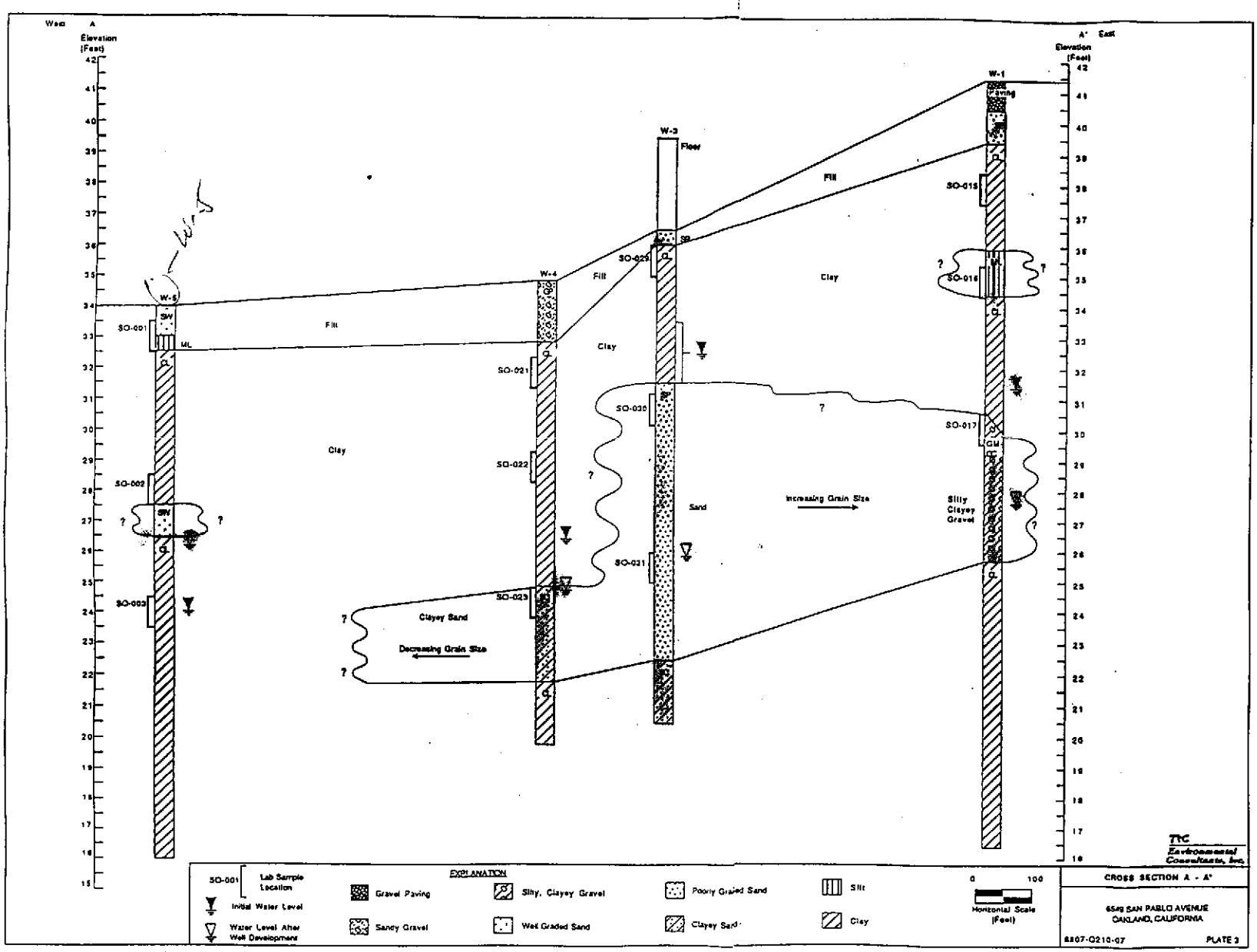
Scheduled task activity

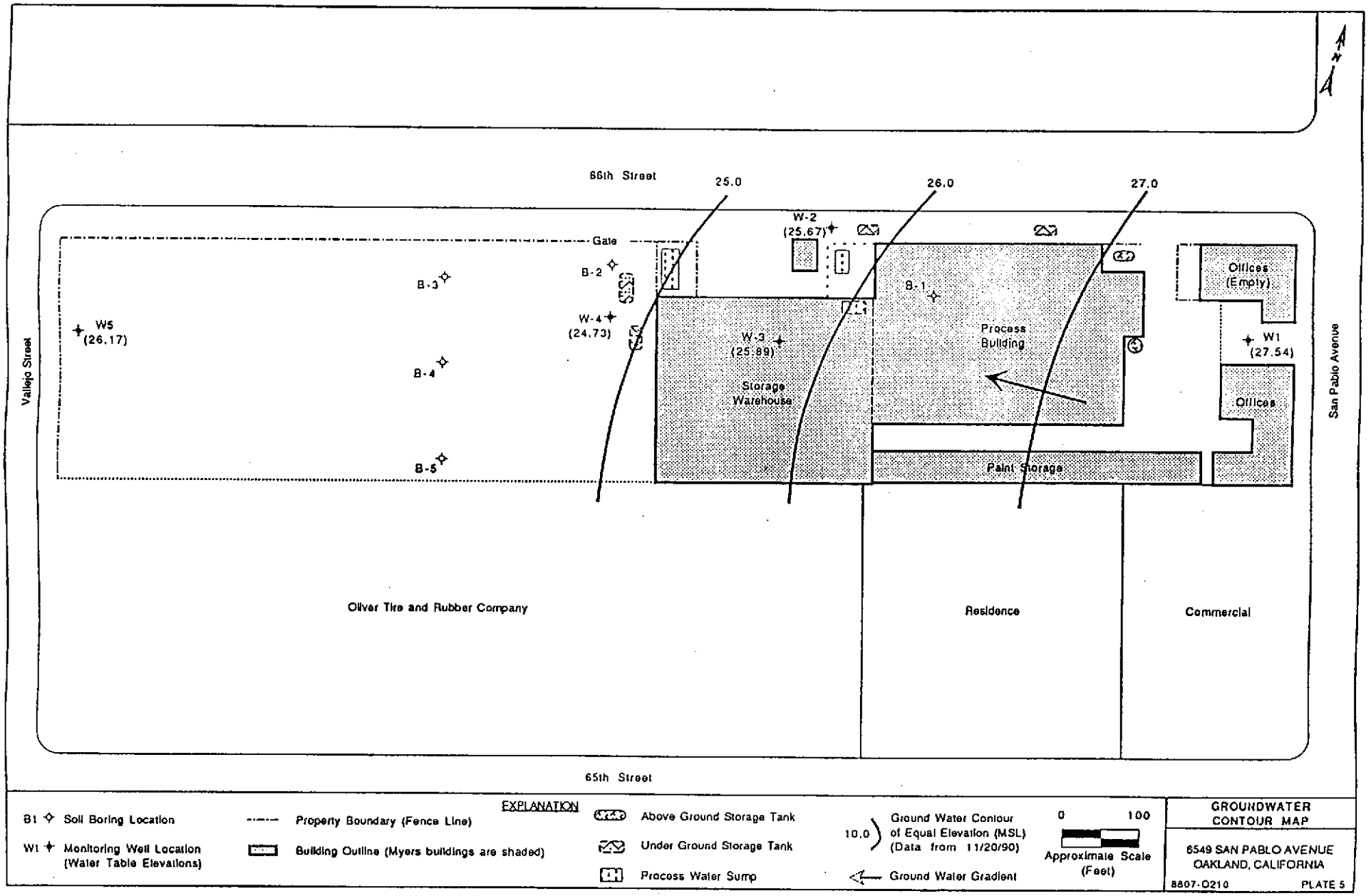
Potential task activity

Event

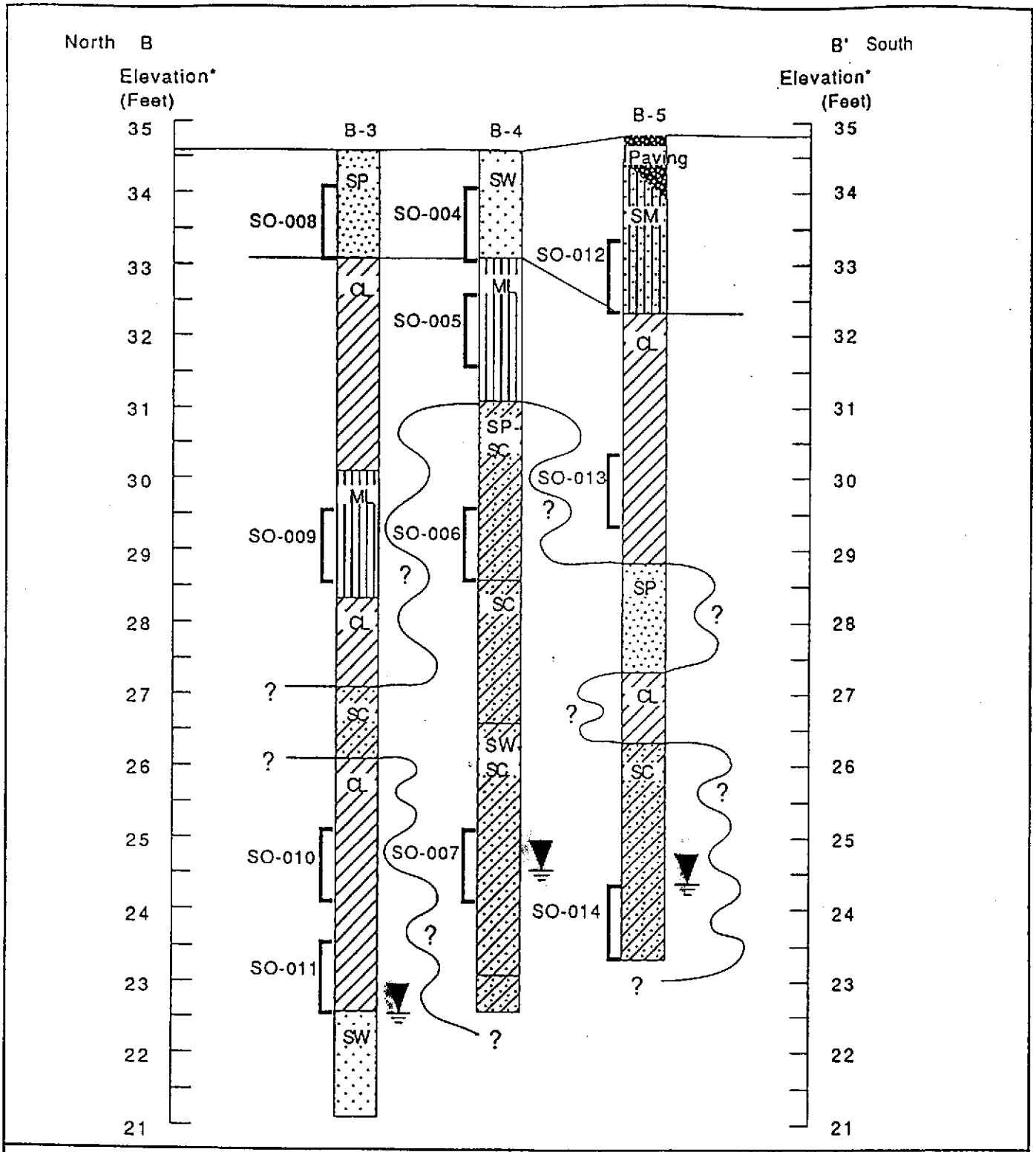
TRC


66th Street
B
Gate
B-3
B-2
W-2
B-1
Offices (Empty)
A
W5
W-4
W-3
W1
A'
Process Building
B-4
Storage Warehouse
Offices
B-5
Paint Storage
B'
Vallejo Street
San Pablo Avenue
Oliver Tire and Rubber Company
Residence
Commercial
65th Street
TRC
Environmental Consultants, Inc.
EXPLANATION
B1 Soil Boring Location
W1 Monitoring Well Location
Property Boundary (Fence Line)
A—— A' Cross Section Line
Building Outline (Myers buildings are shaded)
Above Ground Storage Tank
Under Ground Storage Tank
Process Water Sump
0 100
Approximate Scale (Feet)
SITE MAP
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA
8807-0210
PLATE 2


West A
Elevation (Feet)
A' East
Elevation (Feet)
W-1
Paving
W-3
Floor
W-4
W-5
SO-001
SO-002
SO-003
SO-015
SO-016
SO-017
SO-020
SO-021
SO-022
SO-023
SW
ML
SP
GM
Fill
Clay
Sand
Clayey Sand
Silty Clayey Gravel
Increasing Grain Size
Decreasing Grain Size
EXPLANATION
Lab Sample Location
Initial Water Level
Water Level After Well Development
Gravel Paving
Sandy Gravel
Silty, Clayey Gravel
Well Graded Sand
Poorly Graded Sand
Clayey Sand
Silt
Clay
Horizontal Scale (Feet)
TTC Environmental Consultants, Inc.
CROSS SECTION A - A'
65aq SAN PABLO AVENUE
OAKLAND, CALIFORNIA
6807-0210-07
PLATE 3


66th Street
25.0
26.0
27.0
W-2
(25.67)
Gate
B-3
B-2
W5
(26.17)
W-4
(24.73)
B-4
B-5
B-1
Offices
(Empty)
Process
Building
W-3
(25.89)
Storage
Warehouse
W1
(27.54)
Offices
Paint Storage
Vallejo Street
San Pablo Avenue
Oliver Tire and Rubber Company
Residence
Commercial
65th Street
EXPLANATION
B1 Soil Boring Location
W1 Monitoring Well Location (Water Table Elevations)
Property Boundary (Fence Line)
Building Outline (Myers buildings are shaded)
Above Ground Storage Tank
Under Ground Storage Tank
Process Water Sump
10.0 Ground Water Contour of Equal Elevation (MSL) (Data from 11/20/90)
Ground Water Gradient
0
100
Approximate Scale (Feet)
GROUNDWATER CONTOUR MAP
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA
8807-0210
PLATE 5

TRC



SO-008 Lab Sample Location

EXPLANATION

Location of First Water

Silty Sand

Well Sorted Clayey Sand

See Figure 3 for other soil symbols

0 100

Horizontal Scale (Feet)

*Elevation approximate for boreholes

CROSS SECTION B - B'

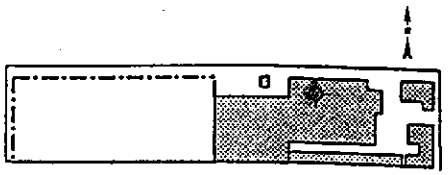
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

8807-Q210-07

PLATE 4

TRC

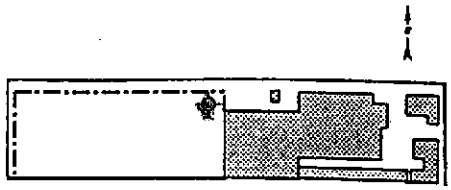
BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/31/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 1	
Borehole Number: B-1	Borehole Diameter: 3"	
Elev. & Datum:	Total Depth (Feet): 3.5'	
Drilling Co: N/A	Depth to Water: N/A	
Drilling Equip: N/A	Logged By: WRS	
Sampler Type: Grab	Checked By: CAH	
Drilling Method: Hand Auger	Completion Information:	
Driller: Bill Shofner	Backfilled with Portland cement and bentonite.	
Helper: N/A		

Depth (Feet)	Description	Lithology	OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
1	Olive gray sandy silt (ML), 5 Y 4/1, medium dense, very moist, with 68% silt, 20% fine sand, 10% clay, 2% coarse gravel.	ML		SO-027	0900		
2							
3				SO-028	0930		
4	END BORING AT 3 1/2 FEET. NO FREE WATER ENCOUNTERED.						
5							
6							
7							
8							
9							
10							
11							

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 1	
Borehole Number: B-2	Borehole Diameter: 7"	
Elev. & Datum:	Total Depth (Feet): 11'	
Drilling Co: West Hazmat	Depth to Water: 11'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	Backfilled with Portland cement and bentonite.	
Helper: Darrin		

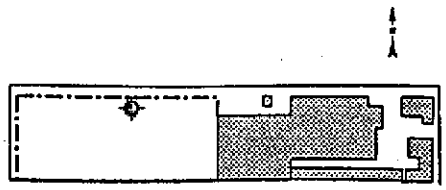
Depth (Feet)	Description	Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	Remarks
1	Gravel and sand paving, asphalt remnants				1020		Drilled through paving. Too much gravel for an environmental sample.
2	Brown black silty CLAY (CL), 5 YR 2/1, stiff, moist, with 80% clay, 20% silt. Grades with depth to dark greenish gray, 5 G 4/1.	CL	25	SO-018		8/13/16	OVA >1000 ppm in borehole
3							
4	2% orange and white coarse sand-sized nodules at 3 1/2 to 4 1/2 feet.		26			5/17/20	OVA 200 ppm in borehole
5			18		1040	10/15/21	OVA 200 ppm in borehole
6				SO-019			
7	2% coarse gravel and 2% green, red & orange sandy nodules (coarse sand-sized) at 6 1/2 feet.					10/12/24	
8	Dark greenish gray clayey SAND with gravel (SC), 5 G 4/1, medium dense, moist, with 30% fine sand, 30% medium sand, 20% clay, 20% fine gravel.	SC	20		1055	21/30/22	OVA 20 ppm in borehole
9							
10	Dark greenish gray CLAY with silt (CL), 5 G 4/1, very stiff, moist, with 90% clay, 10% silt.	CL	3	SO-020	1105	11/20/15	OVA 25 ppm in borehole
11	Wet at 11 feet. END BORING AT 11 FEET. INITIAL WATER ENCOUNTERED AT 11 FEET.						Saturated at 11 feet. OVA 100 ppm in borehole

= Lab Sample

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: B-3	Borehole Diameter: 7"	
Elev. & Datum:	Total Depth (Feet): 13 1/2'	
Drilling Co: West Hazmat	Depth to Water: 12'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	Backfilled with Portland cement and bentonite.	
Helper: Darrin		

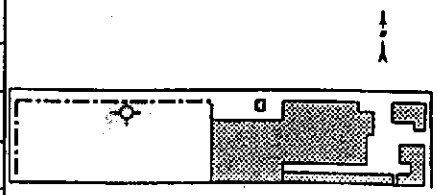


Depth (Feet)	Description	Lithology	OVA (ppm)	Number	Time	Blow Count	Remarks
1	Greenish black poorly graded SAND with clay and gravel (SP), 5 GY 2/1, dense, moist, with 70% fine sand, 20% coarse gravel, 10% clay, patchy orange and red staining.	SP		SO-008	1410	69/59/14	
2	Dark greenish gray CLAY (CL), 5 GY 4/1, medium stiff, moist, with 95% clay, 5% medium sand.	CL				10/6/10	Poor sample recovery at 1 1/2 to 3 feet
3	Change at 3 feet to olive gray, 5 Y 4/1, 5% fine gravel, and 20% pockets of fine gravel.				1420	9/17/23	
4							
5	Dusky yellowish brown SILT with clay (ML), 10 YR 2/2, medium dense, moist, with 83% silt, 10% clay, 5% fine sand, 2% fine gravel.	ML		SO-009		15/34/20	
6							
7	Moderate yellowish brown silty CLAY (CL), 10 YR 5/4, stiff, moist, with 80% clay, 20% silt, some orange & black mottlings.	CL			1430	6/7/18	
8	Dark greenish gray clayey SAND with gravel (SC), 5 G 4/1, medium dense, moist, with 30% fine sand, 30% medium sand, 20% clay, 20% fine gravel.	SC	16			16/16/20	
9	Moderate yellowish brown silty CLAY (CL), 10 YR 5/4, stiff, moist, with 80% clay, 20% silt, 5% fine gravel, black mottlings.	CL			1445	9/13/17	
10				SO-010			
11	Fine gravel and sand-rich layers, ~6 inches thick at 10 1/2 feet.				1455	19/27/35	
12				SO-011			Saturated at 12 feet.

= Lab Sample

TRC

BOREHOLE/COMPLETION LOG

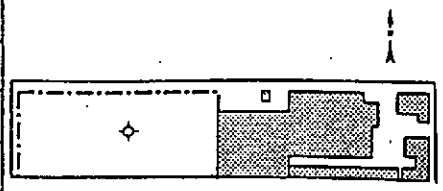
Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: B-3	Borehole Diameter: 7"	
Elev. & Datum:	Total Depth (Feet): 13 1/2'	
Drilling Co: West Hazmat	Depth to Water: 12'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	Backfilled with Portland cement and bentonite.	
Helper: Darrin		

Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
13	Moderate yellowish brown well graded sand with gravel (SW), 10 YR 5/4, medium dense, wet, with 60% medium sand, 15% fine sand, 5% coarse sand, 5% fine gravel, 5% coarse gravel, 5% silt, 5% clay.	SW			1510 1520	14/14/14	
14	END BORING AT 13 1/2 FEET. INITIAL WATER ENCOUNTERED AT 12 FEET.						

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 1 of: 1	
Borehole Number: B-4	Borehole Diameter: 7"	
Elev. & Datum:	Total Depth (Feet): 12'	
Drilling Co: West Hazmat	Depth to Water: 10'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	Backfilled with Portland cement and bentonite.	
Helper: Darrin		



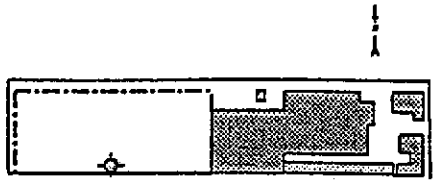
Depth (Feet)	Description	Lithology	OVA (ppm)	Number	Time	Blow Count	Remarks
1	Dark yellowish orange well graded SAND with gravel (SW), 10 YR 6/6, very dense, dry, with 40% medium sand, 30% fine sand, 30% coarse gravel.	SW		SO-004	1055	60/50-2"	
2	Brownish black SILT (ML), 5 YR 2/1, loose, slightly moist, with 95% silt, 5% clay.	ML		SO-005		7/9/9	
3						3/6/7	
4	Olive gray poorly graded SAND with clay (SP-SC), 5 Y 4/1, stiff, slightly moist, with 85% medium sand, 10% clay, 5% fine gravel.	SP-SC				4/10/17	Poor sample recovery at 4 1/2 to 6 feet.
5				SO-006			
6							
7	Olive gray poorly graded clayey SAND (SC), 5 Y 4/1, loose, slightly moist, with 80% fine sand, 20% clay, some black and orange staining.	SC			1115	14/19/20	
8			25		1130	24/24/30	OVA 13 ppm in borehole
9	Moderate yellowish brown well graded SAND with clay and gravel (SW-SC), 10 YR 5/4, medium dense, moist, with 30% fine sand, 30% medium sand, 30% coarse gravel, 10% clay. Change at 9 feet to olive gray, 5 Y 4/1, very dense, wet.	SW-SC			1145	60/60-3"	
10				SO-007			Saturated at 10 feet.
11	Change at 10 1/2 feet to dark yellowish brown, 10 YR 4/2; change in gravel content to 20% fine gravel.					29/24/15	
12	Moderate yellowish brown clayey poorly graded SAND (SC), 10 YR 5/4, medium dense, wet, with 80% fine sand, 20% clay	SC			1150		

= Lab Sample

END BORING AT 12 FEET. INITIAL WATER ENCOUNTERED AT 10 FEET.

TRC

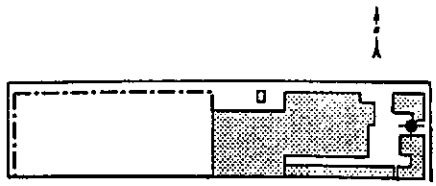
BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 1	
Borehole Number: B-5	Borehole Diameter: 7"	
Elev. & Datum:	Total Depth (Feet): 11 1/2'	
Drilling Co: West Hazmat	Depth to Water: 10 1/2'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information: Backfilled with Portland cement and bentonite.	
Driller: Mickey		
Helper: Darrin		

Depth (Feet)	Description	Lithology	OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	Remarks (= Lab Sample)
	Gravel and sand paving.						Drilled through gravel paving; too much gravel for environmental sample.
1	Moderate yellowish brown silty SAND (SM), 10 YR 5/4, loose, moist, with 40% medium sand, 30% fine sand, 10% coarse gravel, 10% silt, 10% clay.	SM		SO-012	1615	7/7/10	
2							
3	Moderate yellowish brown silty CLAY (CL), 10 YR 5/4, medium stiff, moist, with 75% clay, 20% silt, 5% fine sand.	CL				3/6/9	
4	Changes at 4 feet to light olive gray, 5 Y 6/1, hard, no sand, with 5% black and white coarse sand-sized nodules.				1630	27/34/40	
5			ND in borehole	SO-013			
6					1640	9/14/21	
	Dark yellowish orange poorly graded SAND (SP), 10 YR 6/6, very stiff, moist, with 70% fine sand, 20% coarse gravel-sized chunks of clay, 10% coarse gravel.	SP					
7						35/46/46	
8	Moderate yellowish brown silty CLAY (CL), 10 YR 5/4, hard, moist, with 63% clay, 20% silt, 10% black nodules, 5% fine sand, 2% fine gravel.	CL					
9	Dark yellowish brown clayey SAND with gravel (SC), 10 YR 4/2, medium dense, moist, with 60% medium sand, 20% fine gravel, 20% clay.	SC	16		1650	17/27/5	
10	Color changes at 9 feet to light olive gray, 5 Y 6/1, with patchy orange staining. Staining is pervasive at 10 feet, so that overall color is moderate yellowish brown, 10 YR 5/4.					50/68-6"	
11	Wet at 10 1/2 feet.			SO-014			Saturated at 10 1/2 feet.
					1710		
12	END BORING AT 11 1/2 FEET.						

INITAL WATER ENCOUNTERED AT 10 1/2 FEET.

BOREHOLE/COMPLETION LOG

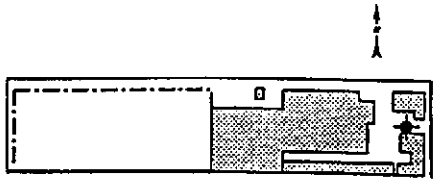
Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: W-1	Borehole Diameter: 7"	
Elev. & Datum: 41.40'	Total Depth (Feet): 25'	
Drilling Co: West Hazmat	Depth to Water: 10'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

Depth (Feet)	Description	Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
1	Asphalt paving. Concrete paving and bricks. Intermixed lenses of: greenish gray, brownish black & moderate yellowish brown poorly graded SAND (SP), 5 GY 6/1, 5 YR 2/1 & 10 YR 5/4, medium dense, moist, 100% medium sand.	SP			0750	12/23/11	
2		CL					
3	Olive black CLAY (CL), 5 Y 2/1, medium stiff, moist, with 90% clay, 10% silt.					3/5/6	
4	Greenish gray, silty CLAY (CL),5 GY 6/1, mediumstiff, moist, with 76% clay, 20% silt, 2% fine gravel, 2% orange coarse sand-sized nodules.			SO-015		3/4/5	
5	Change at 4 feet to olive black, 5 Y 2/1, soft, no nodules.		20				
6	Dark yellowish orange clayey SILT (ML), 10 YR 6/6, very stiff, moist, with 48% silt, 30% clay, 10% medium sand, 10% fine gravel, 2% black coarse sand-sized nodules.	ML	52	SO-016	0800	7/14/22	OVA 100 ppm in borehole
7							
8	Greenish gray CLAY (CL), 5 GY 6/1, very stiff, moist, with 90% clay, 10% silt, orange mottling.	CL	6		0805	11/14/21	OVA 6 ppm in borehole
9					0815	7/11/21	Pause to repair equipment, 0815 to 0825
10	Sand/fine gravel zone at 9 1/2 to 10 feet. Color change at 10 feet to moderate yellowish brown, 10 YR 5/4.		20			9/20/26	Saturated at 10 feet. OVA 7 ppm in borehole.
11	Moderate yellowish brown silty clayey GRAVEL with sand (GM/SC), 10 YR 5/4, medium dense, moist, with 35% fine gravel, 15% coarse gravel, 20% medium sand, 15% silt, 15% clay.	GM/GC	18	SO-017	0840	13/13/25	OVA 3 ppm in borehole
12							

TRC

BOREHOLE/COMPLETION LOG

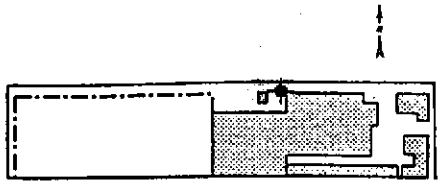
Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: W-1	Borehole Diameter: 7"	
Elev. & Datum: 41.40'	Total Depth (Feet): 25'	
Drilling Co: West Hazmat	Depth to Water: 10'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		



Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
13	END CORE SAMPLING AT 13 FEET.	GM/GC					
14							
15							
16	Cuttings are moderate yellowish brown CLAY with silt (CL), 10 YR 5/4, wet, with 70% clay, 15% medium sand, 10% silt, 5% coarse gravel.	CL					
17							
18							
19							
20							
21							
22							
25	END BORING AT 25 FEET. INITIAL WATER ENCOUNTERED AT 10 FEET.				0910		OVA 7 ppm in borehole

TRC

BOREHOLE/COMPLETION LOG

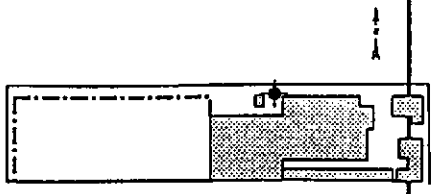
Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: MW-2	Borehole Diameter: 7"	
Elev. & Datum: 36.91'	Total Depth (Feet): 15'	
Drilling Co: West Hazmat	Depth to Water: 9 1/2'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

Depth (Feet)	Description	Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
	Asphalt						
1	Olive black silty CLAY (CL), 5 Y 2/1, very stiff, moist, with 78% clay, 20% silt, 2% green coarse sand-sized nodules. 5% fine gravel layer at 1/2 foot.	CL		SO-024	1510	22/16/26	Strong hydrocarbon odor
2	Change at 2 feet to olive gray, 5 Y 4/1, with ~2% orange and black coarse sand-sized nodules.					7/12/17	
3							
4	Change at 3 1/2 feet to light olive gray, 5 Y 5/2, with some thin (to 2 cm) pebbly zones.					15/18/20	
5							
6	Medium olive gray poorly graded SAND (SP), 5 Y 5/1, medium dense, moist, with 95% medium sand, 5% clay.	SP	30	SO-025	1520	8/16/20	OVA >1000 ppm in borehole; some hydrocarbon odor.
	2% fine gravel at 6 1/2 feet.		20			7/12/16	OVA 80 ppm in borehole
7							
8			78		1535	7/16/12	OVA 48 ppm in borehole
9							
10	Fine sand content increases to 20% and fine gravel content increases to 20% at 9 feet.		50	SO-026		15/29/33	Saturated at 9 1/2 feet. OVA 70 ppm in borehole
11	Change at 9 1/2 feet to moderate olive brown, 5 Y 4/4, with 10% of sand fine grained, wet. END CORE SAMPLING AT 11 FEET.				1550		
12	INITIAL WATER ENCOUNTERED AT 9 1/2 FEET.						

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: W-2	Borehole Diameter: 7"	
Elev. & Datum: 36.91'	Total Depth (Feet): 15'	
Drilling Co: West Hazmat	Depth to Water: 9 1/2'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

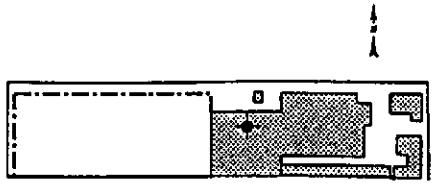


Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
	See page 1	SP					
13	Cuttings: medium olive gray sandy CLAY (CL), 5 Y 4/2, very moist, with 80% clay, 20% fine sand.	CL					
14							
15					1610		
	END BORING AT 15 FEET. INITIAL WATER ENCOUNTERED AT 9 1/2 FEET.						

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/31/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: W-3	Borehole Diameter: 7"	
Elev. & Datum: 39.55' - Floor	Total Depth (Feet): 16'	
Drilling Co: West Hazmat	Depth to Water: 3 - 5'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information: See Well Completion Worksheet	
Driller: Mickey	NOTE: Ground level approximately 3 feet below floor.	
Helper: Darrin	Borehole measurements made from ground level.	

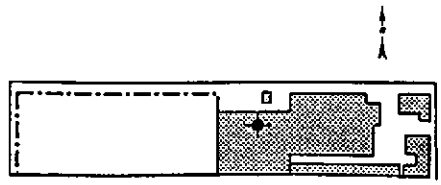


Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
1	Medium yellowish brown poorly graded SAND (SP), 10 YR 5/2, medium dense, dry, with 60% medium sand, 30% fine sand, 10% coarse gravel	SP		SO-029	0925	15/10/9	Little sample available for lithology. Only environmental sampling for W-3.
2	Olive black silty CLAY (CL), 5 Y 2/1, stiff, moist, with 68% clay, 20% silt, 5% fine sand, <5% coarse gravel, 2% orange coarse sand-sized nodules.	CL					
3							
4							Saturated
5							
6	Medium greenish gray poorly graded SAND with clay, 5 GY 5/1, medium dense, wet, with 83% medium sand, 10% clay, 5% fine gravel, 2% coarse gravel.	SP		SO-030		12/18/25	
7							
8							
9							
10	Change to moderate yellowish brown, 10 YR 5/2, with zones (3 cm thick) of 40% pebbles.				0955	17/15/16	
11				SO-031			
12	END CORE SAMPLING AT 12 FEET.						

TRC

BOREHOLE/COMPLETION LOG

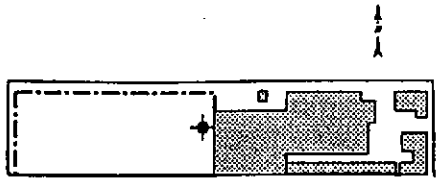
Project Name: Myers - Oakland	Date: 10/31/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: W-3	Borehole Diameter: 7"	
Elev. & Datum: 39.55' - Floor	Total Depth (Feet): 16'	
Drilling Co: West Hazmat	Depth to Water: 3 - 5'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		



Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
13	See page 1	SP					
14	Cuttings: medium yellowish brown clayey SAND (SC), 10 YR 5/2, wet, with 80% medium sand, 20% clay.	SC					
15							
16					1015		
	END BORING AT 16 FEET BELOW GRADE. INITIAL WATER ENCOUNTERED BETWEEN 3 & 5 FEET BELOW GRADE.						

TRC

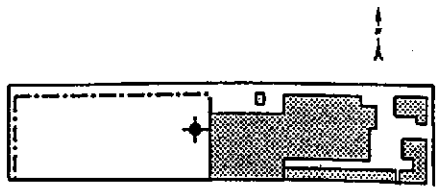
BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: MW-4	Borehole Diameter: 7"	
Elev. & Datum: 34.85'	Total Depth (Feet): 15'	
Drilling Co: West Hazmat	Depth to Water: 8 1/2'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

Depth (Feet)	Description	Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	Remarks (| = Lab Sample)
1	Moderate yellowish brown sandy GRAVEL (GP), 10 YR 5/4, dry, with 70% coarse gravel, 30% medium sand.	GP			1145		Too much gravel for an environmental sample. Drilled through to 2'.
2	Brownish black CLAY (CL), 5 YR 2/1, stiff, slightly moist, with 86% clay, 10% silt, 2% medium sand, 2% fine gravel. Change at 3 feet to dark greenish gray, 5 GY 4/1. Interbedded with 2 - 5 inch thick sand and gravel layers.	CL	9	SO-021	1150	10/10/15	OVA 18 ppm in borehole. Strong hydrocarbon odor in black clay.
4			9			11/11/16	OVA 20 ppm in borehole
5			28		1200	5/21/23	OVA 60 ppm in borehole
6				SO-022			
7			12		1210	15/15/25	OVA 3 ppm in borehole
8							Hydrocarbon odor.
			7			10/17/20	OVA 4 ppm in borehole. Saturated, strong hydrocarbon odor at 8 1/2 feet.
9	Wet, with a metallic gray, possibly hydrocarbon, sheen to soil at 8 1/2 to 10 feet.						
10	Gravelly zone, 9 1/2 to 10 feet		3		1220	8/21/25	OVA 14 ppm in borehole. Strong hydrocarbon odor.
11	Moderate yellowish brown clayey SAND (SC), 10 YR 5/4, medium dense, moist, with 70% fine sand, 20% clay, 10% fine gravel.	SC		SO-023			
	END CORE SAMPLING AT 11 1/2 FEET.						
12							

TRC

BOREHOLE/COMPLETION LOG

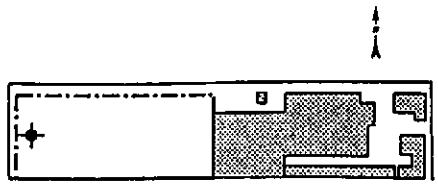
Project Name: Myers - Oakland	Date: 10/30/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: MW-4	Borehole Diameter: 7"	
Elev. & Datum: 34.85'	Total Depth (Feet): 15'	
Drilling Co: West Hazmat	Depth to Water: 8 1/2'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
	See page 1	SC					
13	Cuttings: moderate yellowish brown silty CLAY, 10 YR 5/4, moist, with 70% clay, 10% silt, 10% fine sand, 10% fine gravel.	CL					
14							OVA 40 ppm in borehole.
					1245		
15	END BORING AT 15 FEET. INITIAL WATER ENCOUNTERED AT 8 1/2 FEET.						

TRC

BOREHOLE/COMPLETION LOG

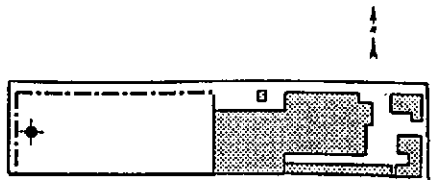
Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location:
Project No: 8807-Q210-02	Sheet: 1 of: 2	
Borehole Number: W-5	Borehole Diameter: 7"	
Elev. & Datum: 34.00'	Total Depth (Feet): 18'	
Drilling Co: West Hazmat	Depth to Water: 10'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		



Depth (Feet)	Description	Lithology	OVA (ppm)	Samples: Number	Time	Blow Count	= Lab Sample / Remarks
1	Pale yellowish brown well graded SAND with gravel (SW), 10 YR 6/2, medium dense, dry, with 50% fine sand, 30% medium sand, 20% coarse gravel.	SW		SO-001	0900	44/33/20	
2	Brownish black clayey SILT (ML), 5 YR 2/1, loose, moist, with 80% silt, 20% clay.	ML / CL				12/7/6	
3	Olive black CLAY with silt (CL), 5 Y 2/1, medium stiff, moist, with 80% clay, 10% silt, 5% medium sand, 5% fine gravel.	CL				10/6/6	
4	Gradational color change at 3 feet to olive gray, 5 Y 4/1,with pebble content increasing to 10%.						
5	Stiff at 4 1/2 feet.				0920	5/10/15	Poor sample recovery at 4 1/2 to 6 feet.
6				SO-002	0930	16/17/18	
7	Olive gray well graded SAND with gravel (SW), 5 Y 4/1, medium dense, moist, with 40% fine sand, 30% medium sand, 30% fine gravel, orange staining.	SW					
8	Moderate yellowish brown CLAY (CL), 10 YR 5/4, very stiff, moist, with 95% clay, 5% silt, some black streaking. Scattered sand & fine gravel-rich layers begin at 8 feet.	CL	>100			6/17/21	
9	Changes at 9 feet to moderate brown CLAY (CL), 5 YR 4/4, medium stiff, wet at 10 feet, with 78% clay, 10% silt, 10% fine sand, 2% fine gravel.					8/10/17	
10				SO-003			Saturated at 10 feet.
11						4/5/6	
12							

TRC

BOREHOLE/COMPLETION LOG

Project Name: Myers - Oakland	Date: 10/29/90	Drilling Location: 
Project No: 8807-Q210-02	Sheet: 2 of: 2	
Borehole Number: MW-5	Borehole Diameter: 7"	
Elev. & Datum: 34.00'	Total Depth (Feet): 18'	
Drilling Co: West Hazmat	Depth to Water: 10'	
Drilling Equip: Soil Master 50	Logged By: LKD	
Sampler Type: California Split Spoon	Checked By: CAH	
Drilling Method: HSA	Completion Information:	
Driller: Mickey	See Well Completion Worksheet	
Helper: Darrin		

Depth (Feet)	Description	Samples: Lithology	Samples: OVA (ppm)	Samples: Number	Samples: Time	Samples: Blow Count	= Lab Sample / Remarks
13	NO CORE SAMPLING 12 TO 15 FEET. See page 1	CL					
14							
15						7/7/8	
16							
17							
18					1000		Highest OVA reading at borehole 200 ppm
	END BORING AT 18 FEET. INITIAL WATER ENCOUNTERED AT 10 FEET						

TRC

WELL COMPLETION WORKSHEET

Project Name: Myers Container, Oakland

Project No: 8807-Q210-02

Well Location: Parking area at east end of property

Well Number: MW-1 | Date: 10/30/90

Logged By: LKD

Checked By: CAH

Comments:

Drilling Co: West Hazmat

Drilling Equipment: Soil Master 50

[X] 7 Inch Hollow Stem Auger

[ ] ____ Inch Rotary Wash

Start Time: 0750 | End Time: 0910

Method Of Decon: Triple Wash

Driller: Mickey | Helper: Darrin

DEVELOPMENT | Date: 11/06/90

Method of Development: Hand Pump

Yield: GPM | Time:

Yield: GPM | Time:

Total Water Pumped: 33 Gallons

Description of Turbidity After Development:

[ ] Clear [X] Slightly Cloudy

[ ] Moderate Turbidity [ ] Very Muddy

Odor of Water: None

Depth of Water After Development: 13.82 Feet

Water Discharged To:

[ ] Ground Surface [ ] Tank Truck

[ ] Storm Sewer [ ] Storage Tank

[X] 1 Drums [ ] Other:

MATERIALS USED | Date: 10/30/90

2.5 Sacks of #2/16 Sand

2 Sacks of Portland Cement

- Gallons of Grout Used

0.1 Sacks of Bentonite Chips

25 Pounds of Bentonite Pellets

8.54 Feet of 2 Inch SS Blank Casing

10.0 Feet of 2 Inch Slotted Screen

- Bags of Asphalt Patch Used

- Cubic Yards of Cement/Sand Ordered

- Cubic Yards of Cement/Sand Used

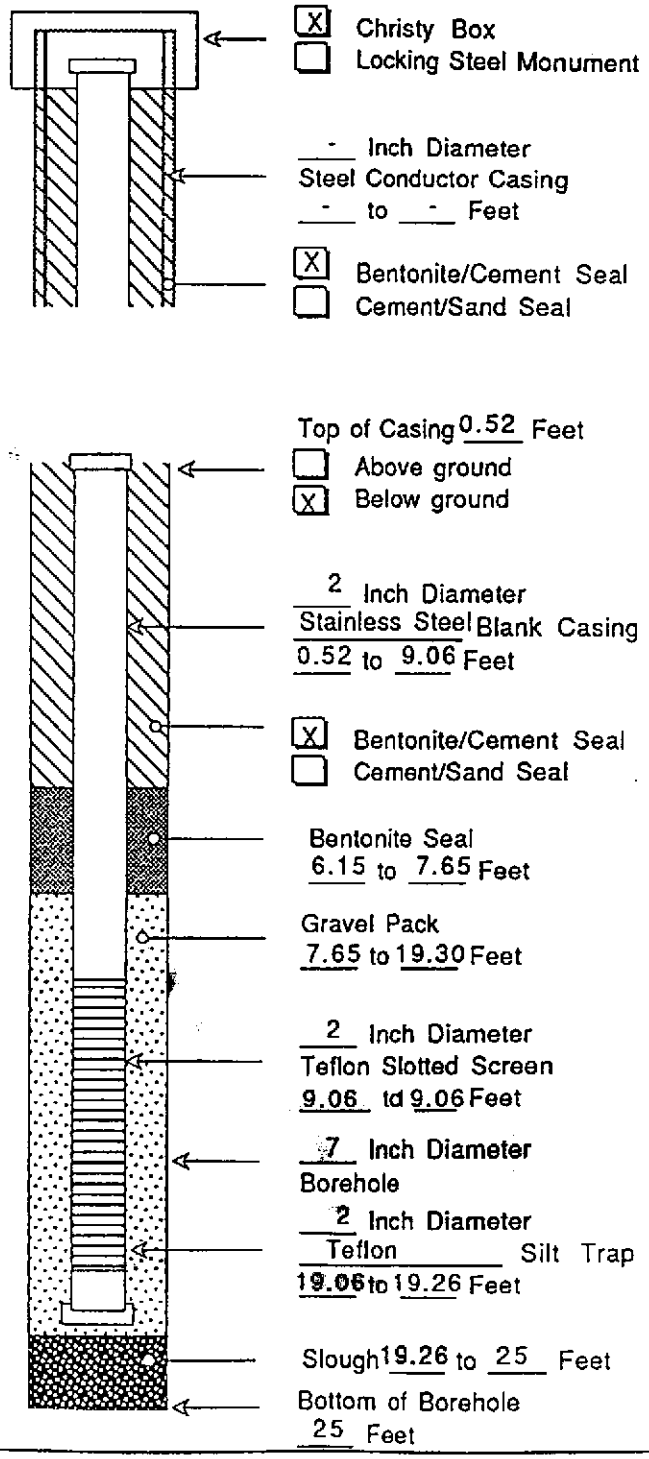
Well Cover Used:

[ ] Locking Steel Cover [X] Christy Box

Silt Trap Used? [X] Yes [ ] No

Concrete Pumper Used? [ ] Yes [X] No

Name: Bill Shofner



TRC

WELL COMPLETION WORKSHEET

Project Name: Myers Container, Oakland

Project No: 8807-Q210-02

Well Location: North side of property near dispatch office

Well Number: W-2 | Date: 10/30/90

Logged By: LKD

Checked By: CAH

Comments:

Drilling Co: West Hazmat

Drilling Equipment: Soil Master 50

[X] 7 Inch Hollow Stem Auger

[ ] ____ Inch Rotary Wash

Start Time: 1510 | End Time: 1610

Method Of Decon: Triple Wash

Driller: Mickey | Helper: Darrin

DEVELOPMENT

Date: 11/06/90

Method of Development: Hand Bailing

Yield: GPM | Time:

Yield: GPM | Time:

Total Water Pumped: 14.5 Gallons

Description of Turbidity After Development:

[ ] Clear [X] Slightly Cloudy

[ ] Moderate Turbidity [ ] Very Muddy

Odor of Water: None Noted

Depth of Water After Development: 11.15 Feet

Water Discharged To:

[ ] Ground Surface [ ] Tank Truck

[ ] Storm Sewer [ ] Storage Tank

[X] 1 Drums [ ] Other:

MATERIALS USED

Date: 10/30/90

2	Sacks of #2/16	Sand
2	Sacks of Portland	Cement
-	Gallons of Grout Used	
0.1	Sacks of Bentonite Chips	
40	Pounds of Bentonite Pellets	
8.46	Feet of 2	Inch SS Blank Casing
5.0	Feet of 2	Inch Slotted Screen
-	Bags of Asphalt Patch Used	
-	Cubic Yards of Cement/Sand Ordered	
-	Cubic Yards of Cement/Sand Used	

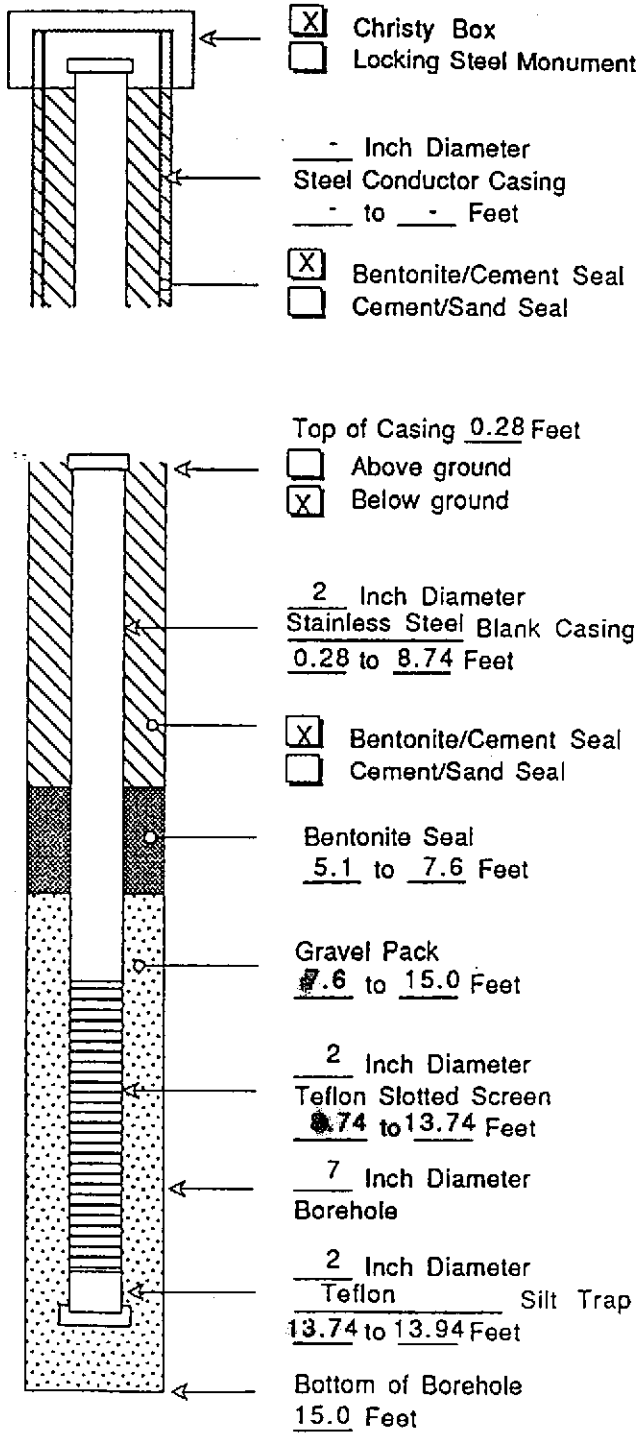
Well Cover Used:

[ ] Locking Steel Cover [X] Christy Box

Silt Trap Used? [X] Yes [ ] No

Concrete Pumper Used? [ ] Yes [X] No

Name: Bill Shofner



TRC

WELL COMPLETION WORKSHEET

Project Name: Myers Container, Oakland	Drilling Co: West Hazmat
Project No: 8807-Q210-02	Drilling Equipment: Soil Master 50
Well Location: Inside warehouse, on loading dock	[X] 7 Inch Hollow Stem Auger
Well Number: # W-3 / Date: 10/31/90	[ ] ____ Inch Rotary Wash
Logged By: LKD	Start Time: 0925 / End Time: 1015
Checked By: CAH	Method Of Decon: Triple Wash
Comments:	Driller: Mickey / Helper: Darrin

DEVELOPMENT Date: 11/07/90

Method of Development: Hand Bailing

Yield: ____ GPM Time: ____

Yield: ____ GPM Time: ____

Total Water Pumped: 28 Gallons

Description of Turbidity After Development:

[ ] Clear [X] Slightly Cloudy

[ ] Moderate Turbidity [ ] Very Muddy

Odor of Water: None Noted

Depth of Water After Development: 13.62 Feet

Water Discharged To:

[ ] Ground Surface [ ] Tank Truck

[ ] Storm Sewer [ ] Storage Tank

[X] 1 Drums [ ] Other:

MATERIALS USED Date: 10/31/90

2.5	Sacks of	#2/16	Sand
2	Sacks of	Portland	Cement
-	Gallons of Grout Used		
0.1	Sacks of Bentonite Chips		
35	Pounds of Bentonite Pellets		
6.98	Feet of	2	Inch SS Blank Casing
10	Feet of	2	Inch Slotted Screen
-	Bags of Asphalt Patch Used		
-	Cubic Yards of Cement/Sand Ordered		
-	Cubic Yards of Cement/Sand Used		

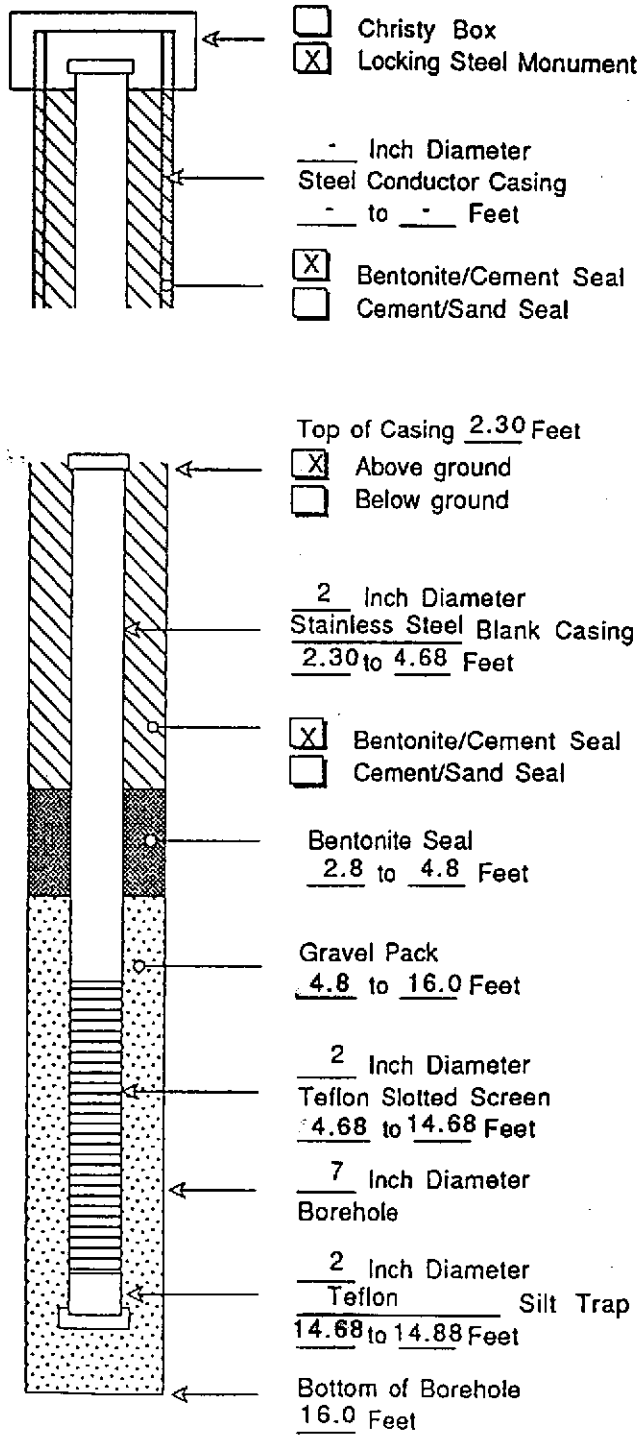
Well Cover Used:

[X] Locking Steel Cover [ ] Christy Box

Silt Trap Used? [X] Yes [ ] No

Concrete Pumper Used? [ ] Yes [X] No

Name: Scott Armstrong



TRC

WELL COMPLETION WORKSHEET

Project Name: Myers Container, Oakland

Project No: 8807-Q210-02

Well Location: West side of warehouse, near fuel pump

Well Number: W-4 | Date: 10/30/90

Logged By: LKD

Checked By: CAH

Comments:

Drilling Co: West Hazmat

Drilling Equipment: Soil Master 50

[X] 7 Inch Hollow Stem Auger

[ ] ____ Inch Rotary Wash

Start Time: 1145 | End Time: 1245

Method Of Decon: Triple Wash

Driller: Mickey | Helper: Darrin

DEVELOPMENT | Date: 11/06/90

Method of Development: Hand Bailing

Yield: GPM | Time:

Yield: GPM | Time:

Total Water Pumped: 7 Gallons

Description of Turbidity After Development:

[ ] Clear [X] Slightly Cloudy

[ ] Moderate Turbidity [ ] Very Muddy

Odor of Water: None Noted

Depth of Water After Development: 10.07 Feet

Water Discharged To:

[ ] Ground Surface [ ] Tank Truck

[ ] Storm Sewer [ ] Storage Tank

[X] 1 Drums [ ] Other:

MATERIALS USED | Date: 10/30/90

1.5	Sacks of	#2/16	Sand
2	Sacks of	Portland	Cement
-	Gallons of Grout Used		
0.1	Sacks of Bentonite Chips		
25	Pounds of Bentonite Pellets		
9.58	Feet of	2	Inch SS Blank Casing
5.0	Feet of	2	Inch Slotted Screen
-	Bags of Asphalt Patch Used		
-	Cubic Yards of Cement/Sand Ordered		
-	Cubic Yards of Cement/Sand Used		

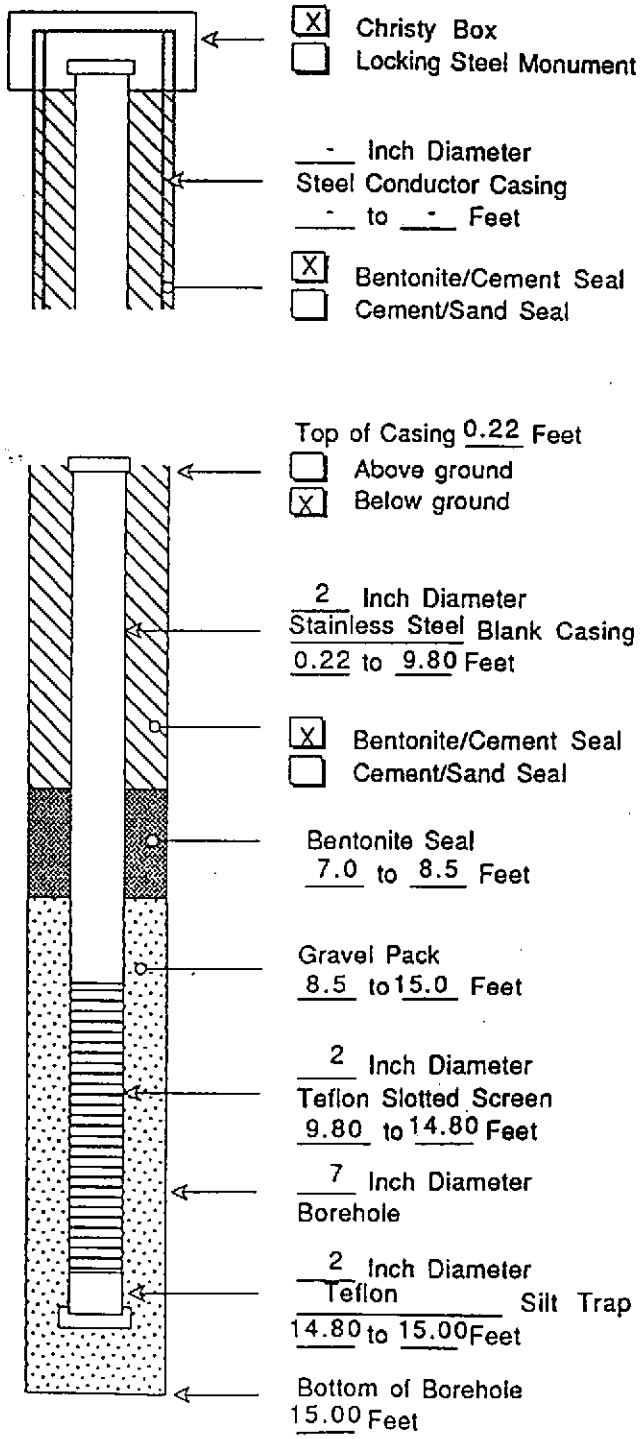
Well Cover Used:

[ ] Locking Steel Cover [X] Christy Box

Silt Trap Used? [X] Yes [ ] No

Concrete Pumper Used? [ ] Yes [X] No

Name: Bill Shofner



TRC

WELL COMPLETION WORKSHEET

Project Name: Myers Container, Oakland

Project No: 8807-Q210-02

Well Location: West end of property

Well Number: W-5 | Date: 10/29/90

Logged By: LKD

Checked By: CAH

Comments:

Drilling Co: West Hazmat

Drilling Equipment: Soil Master 50

[X] 7 Inch Hollow Stem Auger

[ ] ____ Inch Rotary Wash

Start Time: | End Time:

Method Of Decon: Triple Wash

Driller: Mickey | Helper: Darrin

DEVELOPMENT

Date: 11/06/90

Method of Development: Hand Pump

Yield: GPM | Time:

Yield: GPM | Time:

Total Water Pumped: 5.5 Gallons

Description of Turbidity After Development:

[ ] Clear [X] Slightly Cloudy

[ ] Moderate Turbidity [ ] Very Muddy

Odor of Water: None

Depth of Water After Development: 7.74 Feet

Water Discharged To:

[ ] Ground Surface [ ] Tank Truck

[ ] Storm Sewer [ ] Storage Tank

[X] 1 Drums [ ] Other:

MATERIALS USED

Date: 10/29/90

1.5	Sacks of	#2/16	Sand
1	Sacks of	Portland	Cement
-	Gallons of Grout Used		
0.1	Sacks of Bentonite Chips		
25	Pounds of Bentonite Pellets		
10.19	Feet of	2	Inch SS Blank Casing
5.0	Feet of	2	Inch Slotted Screen
-	Bags of Asphalt Patch Used		
-	Cubic Yards of Cement/Sand Ordered		
-	Cubic Yards of Cement/Sand Used		

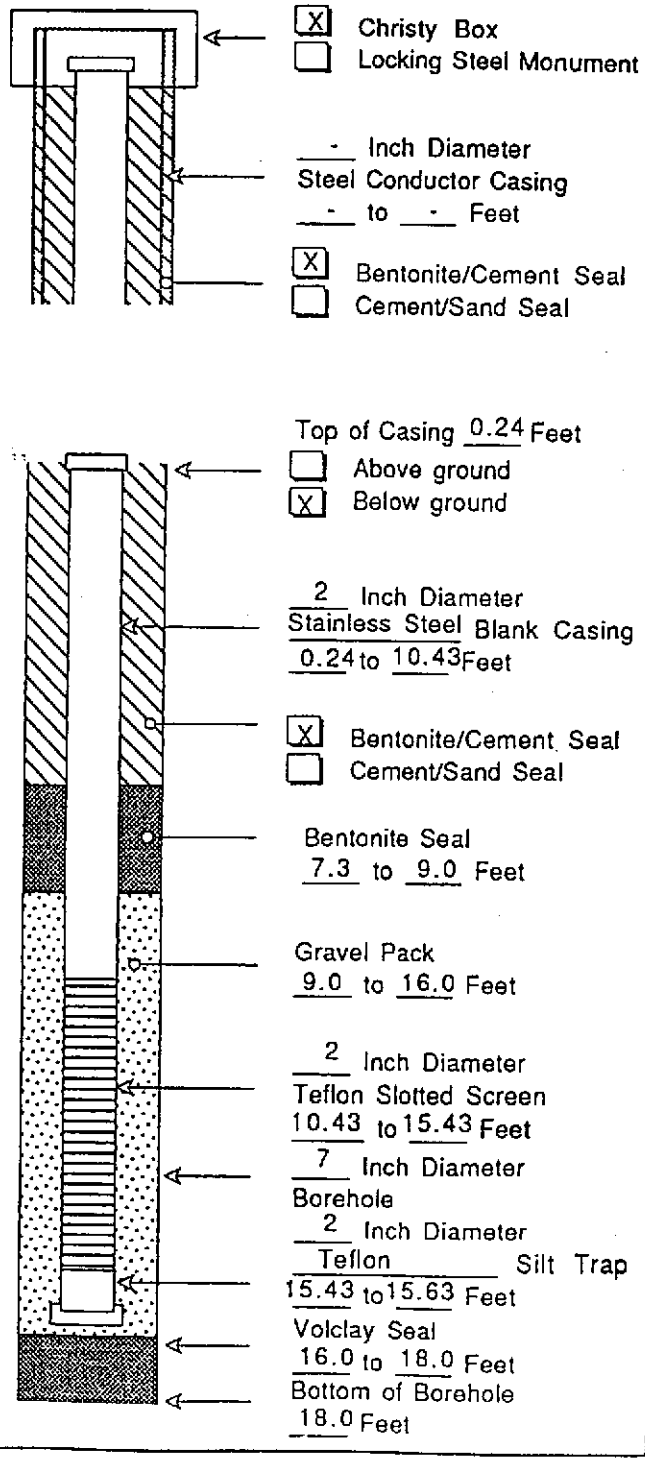
Well Cover Used:

[ ] Locking Steel Cover [X] Christy Box

Silt Trap Used? [X] Yes [ ] No

Concrete Pumper Used? [ ] Yes [X] No

Name: Bill Shofner



TRC

Appendix D

DOWNHOLE GEOPHYSICS REPORT

TRC

COLOG INC. **BOREHOLE GEOPHYSICS** 1310 ROSS ST. PETALUMA, CALIF. 94954 PHONE: (707) 769-9091 FAX:767-1909	GAMMA SP SPR CALIPER WELL: W-1

PROJECT: MEYERS DRUM — DATE: 10-30-90

CLIENT: TRC ENVIRONMENTAL — COLOG ID NO:

LOCATION: SAN PABLO AVE., OAKLAND

STATE: CA — COUNTY: ALAMEDA — ELEV: — DEPTH REF: GROUND

BOREHOLE DATA

DRILLING CONTRACTOR: HAZMAT WEST

CUSTOMER ID: 25 — COLOG ID: 25

RUN	BIT RECORD			CASING RECORD		
NO.	Bit Size	From	To	Size/Wgt/Thk.	From	To
1	6.0	0	26			
2						
3						
4						

HOLE MEDIUM: FORMATION WATER — DRILL METHOD: AUGER

MUD TYPE: NONE — TIME SINCE CIRC:

VISCOSITY: — WEIGHT: — Rm: — at — Deg

GENERAL DATA

INSTRUMENTATION: COLOG MT. SOPRIS SERIES 4 — UNIT/TRUCK NO 2

LOGGING ENGINEER: W J HEINRICH

CLIENT REP: SCOTT

OTHER SERVICES:

LOGGING DATA

LOG FUNCTION	RUN NO.	PROBE	[illegible]	[illegible]	[illegible]	[illegible]	DETECTOR TYPE	[illegible]	[illegible]	SOURCE TYPE	[illegible]	FROM	TO	INT. [illegible]
GAMMA	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						[illegible]	[illegible]	[illegible]
SP SPR	1	[illegible]	[illegible]	47	0.1	[illegible]						[illegible]	[illegible]	[illegible]
CALIPER	[illegible]	[illegible]	[illegible]	23	0.1	[illegible]						[illegible]	[illegible]	[illegible]

CALIBRATION FACTOR(S):

DIGITAL FILE NAME(S): [illegible]

REMARKS:

MUD PLUG PLACED IN BOREHOLE JUST BELOW WATER LEVEL WHICH WAS AT 15' BELOW GROUND SURFACE.

GND FILE [illegible]