# ENVIRONMENTAL SITE INVESTIGATION REPORT
# GENERAL TIRE OAKLAND FACILITY
# GENERAL TIRE, INC.
# 1201 14TH AVENUE
# OAKLAND, CALIFORNIA

February 16, 1994

Report Prepared for:

General Tire, Inc.
One General Street
Akron, Ohio 44329-0001

**ENVIRONMENTAL SITE INVESTIGATION REPORT**
**GENERAL TIRE, INC.**
**1201 14TH AVENUE**
**OAKLAND, CALIFORNIA**

Jonas & Associates Inc. Job No. GT-211

Prepared by

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**EXECUTIVE SUMMARY**
ENVIRONMENTAL SITE INVESTIGATION REPORT
GENERAL TIRE OAKLAND FACILITY

During a Phase I and II Environmental Site Assessment of General Tire's Oakland facility, groundwater contamination was identified. To address the groundwater contamination at the subject site, General Tire, Inc., retained Jonas & Associates Inc., (J&A) to conduct an environmental site investigation.

The objectives of the site investigation were to: 1) determine if soil beneath the site has been contaminated; 2) identify the groundwater gradient; and 3) determine the quality of groundwater entering the General Tire Oakland facility. To meet the objectives, three boreholes were drilled, and soil samples were collected and tested for various parameters. Two of the boreholes were converted to groundwater monitoring wells. The wells were developed. Later they were purged and groundwater samples were collected from the two new and one existing monitoring wells. The samples were analyzed for various suspected chemicals. Well elevations were surveyed to Mean Sea Level and their locations tied to City of Oakland Monuments. The groundwater gradient has been determined to be towards south/southeasterly direction.

The chemicals of concern are halogenated organic compounds (VOCs). VOCs have been detected in both groundwater and soil samples collected from the upgradient well MW-2. VOCs have been detected in the downgradient monitoring well MW-1. However, detected chemicals in the upgradient well are higher in concentrations than the downgradient well.

According to General Tire, Inc., the detected VOCs have not been used at the subject facility when it was active. There are no known underground storage tanks at the facility.

Based on the information assembled during this investigation, at the General Tire Oakland facility, it appears that the existing contamination probably originated off-site and proceeded to migrate beneath the subject site. Of the seven halogenated organic compounds detected, five may be due to the degradation of parent compound PCE, which it is typically used in dry cleaning operations.

Therefore, General Tire, Inc., would like to request that Alameda County Health Care Services identify other Potential Responsible Parties (PRP); and relieve General Tire, Inc., of any further environmental investigations at this site. Sites undergoing environmental investigations located within a one-half mile radius of General Tire Oakland facility were identified and presented in an Environmental Site Investigation Work Plan dated June 4, 1993. This Work Plan was submitted to the Alameda County Health Care Services in June 1993.

SITE INVESTIGATION REPORT
GENERAL TIRE OAKLAND FACILITY
1201 14th Avenue, Oakland, California

## 1.0 INTRODUCTION

### 1.1 SITE DESCRIPTION

The General Tire Oakland facility is located at 1201 14th Avenue, in the City of Oakland, County of Alameda, California. On the property is a single story, irregularly shaped building of approximately 9,400 square feet. It was built in 1960 and is situated along the north edge of a triangular shaped lot with dimensions of approximately 126' by 248' by 279'. Currently the facility is vacant. When active, the business was primarily tire repair and sales with some minor auto repair (EMG 1990).

The facility is in a mixed commercial and residential area. A dry cleaner with on-site dry cleaning is adjacent to the facility to the north. Across 14th Avenue to the south is a restaurant located in what appears to have been a gas station. To the west are several sets of railroad tracks and the Nimitz Freeway; beyond the freeway is the Port of Oakland. To the east, on the corner of East 12th Street and 14th Avenue, is Armstrong Tire, which appears to operate a business similar to General Tire, Inc. Figure 1-1 is a regional site location map. Figure 1-2 is a facility map. In the remaining portion of the report, the General Tire Oakland facility will also be referred to as the subject site or facility.

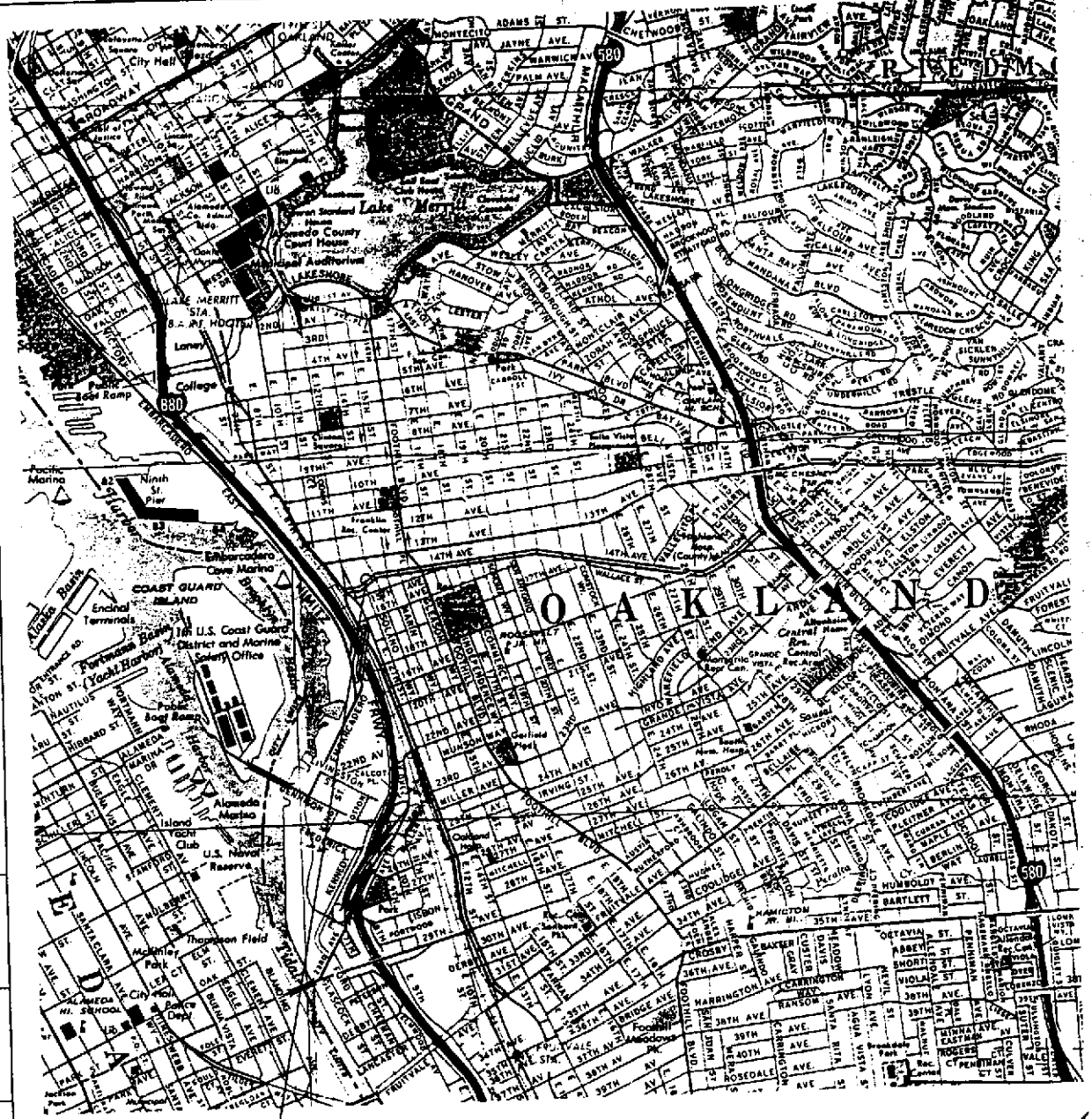
### 1.2 BACKGROUND

A Phase I Environmental Site Assessment was performed by Environmental Mitigation Group (EMG), in 1990. EMG found that hydraulic fluid was used at that facility. Hydraulic fluid (which was stored below ground) was used to operate two post lifts. During EMG's site visit, the two post lifts were said to be inoperable. Liquid was also reported to have been present in the pits between the posts.

The facility was placed for sale in 1991. In March of 1992, a prospective buyer retained $H^+GCL$ to perform a Phase II Investigation of the property. The purpose of the Phase II Investigation, as identified by $H^+GCL$, was to determine if groundwater and hydraulic fluid on the site contained polychlorinated biphenyls (PCBs), chlorinated solvents, or petroleum hydrocarbons and to determine whether asbestos containing material was present on the site. $H^+GCL$ made the following recommendations:

Figure 1-1

Drawing Number GT211-10/92-FI-1




Regional Location

GENERAL TIRE, INC.

1201 14th Avenue

Oakland, California

Prepared by

JONAS & ASSOCIATES INC.

| Drawn by | M.J. |
|---|---|
| | 10-20-1992 |

| Date: 10-20-1992 | Figure 1-1 | Drawing Number GT211-10/92-FI-1 |
|---|---|---|

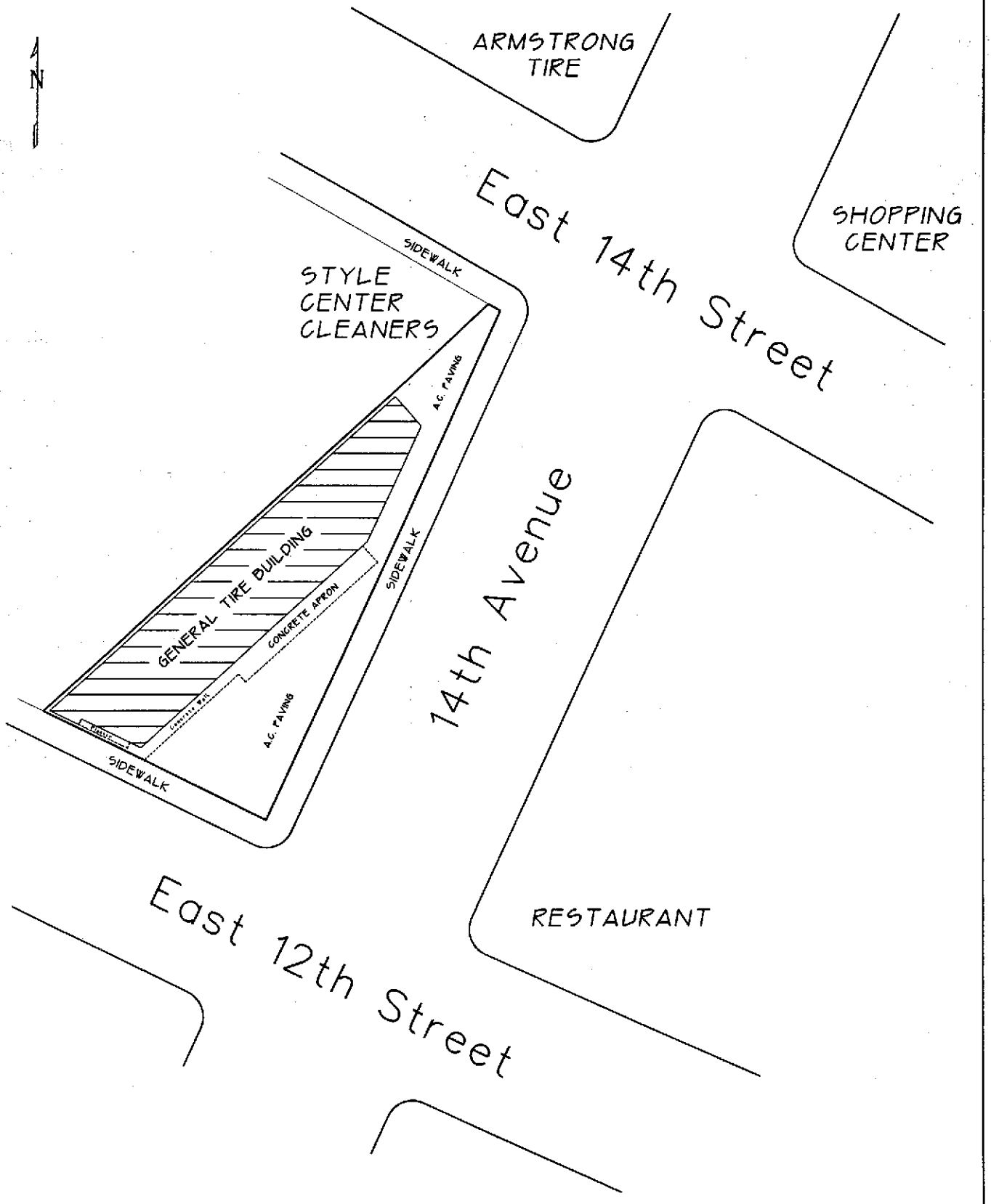



Figure 1-2

Drawning Number GT213-10/93:F1-2

Drawn by M.J. 10-30-1993

## Facility & Area Map
## General Tire, Inc.
## 1201 14th Avenue
## Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Scale
35 0 35 70 Feet

Date: 10-30-1993
Locations Approx.

Figure 1-2

Drawing Number
GT213-10/93:F1-2

1. Installation of a groundwater monitoring well on the property, and sampling and analysis of the groundwater for PCBs, chlorinated solvents, and petroleum hydrocarbons.

2. Sampling and analysis of the hydraulic fluid reservoirs on the property for PCBs.

3. Sampling of suspect asbestos-containing materials present on the site.

1992 Monitoring Well Installation and Groundwater Sampling and Analysis

In March of 1992, the prospective buyer requested H⁺GCL install a monitoring well in front of the building to assess groundwater quality. The monitoring well was constructed of 2.0 inch inner diameter, flush jointed, Schedule 40 PVC risers attached to factory perforated 0.020 inch slotted PVC well screen sections. A groundwater sample was obtained from the well and analyzed for the presence of pesticides and PCBs by EPA Method 3510/3520, volatile halogenated organic compounds by EPA Method 8010, and total petroleum hydrocarbons as diesel by modified EPA Method 8015. Table 1-1 presents the analytical results.

Table 1-1
March 1992 Groundwater Results for MW-1

| Sample | Analysis | Constituent | Results (ppm)[1] |
|---|---|---|---|
| MW-1 | TPH[2] | diesel | 0.190 ppm |
| | VOCs[3] | 1,1-dichloroethane | 0.015 ppm |
| | | cis-1,2-dichloroethene | 0.019 ppm |
| | | trans-1,2-dichloroethene | 0.004 ppm |
| | | 1,1,1-trichloroethane | 0.003 ppm |
| | | trichloroethylene | 0.012 ppm |

[1] ppm = parts per million
[2] TPH = Total petroleum hydrocarbons (EPA Method 8015)
[3] VOCs = Volatile halogenated organic compounds (EPA Method 8010)

1992 Sampling and Analysis of Hydraulic Fluid Reservoirs

Samples were also collected by H⁺GCL from two of the six hydraulic fluid reservoirs located in the garage area of the building on the site. These samples were analyzed for PCBs, by EPA Method 3580/8080. Table 1-2 presents the oil analytical results for hydraulic reservoirs.

Table 1-2
March 1992 Oil Analytical Results for Hydraulic Reservoirs

| Sample | Analysis | Constituent | Results |
|---|---|---|---|
| 01-Oil | PCBs 8080/3580 | Aroclor 1232 | 6.4 ppm[1] |
| 02-Oil | PCBs 8080/3580 | PCBs | ND[2] |

[1] ppm = parts per million.
[2] ND = Not detected above the method detection limit.

## 1.3 SCOPE OF WORK, OBJECTIVES, AND REPORT ORGANIZATION

### 1.3.1 Scope of Work

To address the suspected groundwater contamination at the subject site, General Tire, Inc., retained Jonas & Associates Inc., (J&A) to perform the following tasks:

Task 1 Assist in regulatory notification
Task 2 Perform a historical review of records/files on surrounding sites of concern
Task 3 Prepare a site investigation work plan
Task 4 Conduct site investigation and prepare a site investigation report

Tasks 1, 2, and 3 have been completed. A notification report was submitted to the Alameda County Health Care Agency (ACHCA) on February 5, 1993. Results of the Task 2 study are presented in an Environmental Site Investigation Work Plan, dated June 4, 1993. This Work Plan was submitted to the ACHCA. In a correspondence dated July 12, 1993, ACHCA requested that General Tire, Inc., incorporate additional tasks in the Work Plan. On July 19, 1993, as an addendum to the Work Plan, J&A, on behalf of General Tire, Inc., addressed and incorporated ACHCA's request for an expanded scope of work. The Work Plan and its addendum were approved by ACHCA (verbal approval in August 1993). In September 1993, J&A initiated Task 4 (site investigation and report preparation) of the scope of work. This report completes Task 4 of the investigation.

### 1.3.2 Objectives of the Site Investigation

The objectives of the site investigation were to: 1) determine if soil beneath the site has been contaminated; 2) identify the groundwater gradient; and 3) determine the quality of groundwater entering the General Tire Oakland facility. To meet the objectives, three boreholes were drilled, and soil samples were collected and tested for various parameters. Two of the boreholes were converted to groundwater monitoring wells.

The recent site investigation results have been evaluated. Environmental settings, and a detailed discussion of the site investigation are discussed in the remaining portion of this report.

1.3.3 Report Organization

This Environmental Site Investigation Report contains the following six sections and five appendices:

Section 1.0 Introduction, provides a site description; background; objectives of the site investigation; and report organization.

Section 2.0 Environmental Settings, presents geography; climate; regional geology; regional hydrogeology; and surface water.

Section 3.0 Field Investigation Procedures, includes requirements prior to drilling; soil sampling and monitoring wells installation, sampling, and analysis; quality control samples; decontaminations and post-sampling procedures; sample documentation; sample shipment; and monitoring wells survey.

Section 4.0 Data Analysis, presents soil and groundwater sampling results.

Section 5.0 Conclusions and Recommendations, provides a summary of conclusions and recommendations for future actions.

Section 6.0 References, presents list of documents used in preparation of this report.

Appendices A through E include water well driller's reports, permits and well logs for monitoring wells MW-2 and MW-3; non-hazardous waste transport forms; laboratory analytical reports and chain-of-custody forms; elevation survey results; and summary tables of 1993 Groundwater and soil samples analytical results.

## 2.0 ENVIRONMENTAL SETTING

### 2.1 GEOGRAPHY

The site is located at 1201 14th Avenue, Oakland, California, in the northwest portion of Alameda County. Local land use includes commercial, light industrial, and residential. The general topography in the area of the site is relatively flat.

### 2.2 CLIMATE

The climatic pattern in the San Francisco Bay Area is characterized by partly cloudy moderate summers without significant precipitation, and mild winters with precipitation from passing storms.

Temperatures at the site area are moderated by San Francisco Bay. Average mean monthly temperatures range from approximately 43° F to 70° F. The warmest month tends to be September and the coolest is January.

Average annual precipitation south of the site at the Oakland airport is 18.7 inches. Approximately 95 percent of regional precipitation occurs October through April, and is primarily associated with storm system moving eastward. Morning drizzle is relatively common during the summer. Snowfall is rare.

### 2.3 REGIONAL GEOLOGY

Oakland is located in the Coast Ranges geomorphic province, at an average elevation of 70 feet. The area is tectonically active being situated between the Hayward Fault on the east and the San Andreas Fault on the west. The underlying bedrock consists of Mesozoic volcanic and meta-volcanic rocks found throughout the Coast Ranges.

Geologically, the depositional history within the San Francisco Bay Area is relatively young (less than two to three million years old). Deposition along the flanks of local uplands was largely controlled by repeated variations in sea level and precipitation. Changes in sea level were caused by the cyclic advance and retreat of continental ice during the last ice age, which ended approximately 10,000 years ago. During the last Pleistocene glacial period, sea level was 300 to 400 feet lower than what it is today (Halley et al. 1979). A 400 foot lowering of sea level would have San Francisco Bay receding beyond the Golden Gate. During the ice age, local climate was probably wetter. All of these events contributed to changing sedimentation patterns, with a possible coarsening of clastics downslope due to a lowering of the hydraulic base-level during the ice age and increased precipitation. Alternatively, during periods of high sea level the San Francisco Bay rose into the valleys, and finer-grained estuarine sediments were deposited. Generally, alluvial deposits are coarser in the uplands and fine downslope. In the San Francisco Bay Area alluvial fan sediments

interface with estuarine marsh deposits along the border of the current and prehistoric Bay.

Dominant processes depositing local sediments were probably alluvial, fluvial, and estuarine. Superimposed on the alluvial, fluvial, and estuarine processes was cyclic Pleistocene glaciation, causing the dramatic changes in sea level and significant variation in regional precipitation. This depositional history probably has resulted in a complex sedimentary sequence characterized by irregular interbedding and interfingering of coarse- and fine-grained deposits. Because the site is located close to San Francisco Bay, many of the more recent and shallow sediment are probably fine-grained and characteristic of lower fan deposits and estuarine marshes. Coarser sediments may have been deposited in the ancestral drainage.

## 2.4 REGIONAL HYDROGEOLOGY

The hydrogeology of the region is quite complex, with the upper 15 to 25 feet consisting of fill deposited during the dredging operations that created the Brooklyn Basin. Dark organic mud is dominant, but lenses of sand and silt occur at various elevations. Water bearing zones in the fill material have been reported to be continuous across the area. Groundwater level at this area is encountered at depths varying between six and ten feet below the ground surface dependent on tide and seasonal conditions. Data from various nearby sites indicate the groundwater flow direction beneath the Oakland estuary fringe varies greatly. The regional variance of the flow direction may be attributable to the complex, anisotropic stratigraphy beneath the estuary fringe (ERM-West, 1989).

## 2.5 SURFACE WATER

The facility is located approximately 1,000 feet northeast of Brooklyn Basin, which connects with San Francisco Bay through the Oakland Inner Harbor. No ponds are located on or adjacent to the subject property. Lake Merritt is located approximately one mile northwest of the facility. The closest stream course is Sausal Creek, which is located approximately 1.2 miles east of the property.

## 3.0 FIELD INVESTIGATION PROCEDURES

The scope of work for this project included drilling, soil sampling, installation and development of two groundwater monitoring wells; sampling and analysis of soil from a borehole adjacent to MW-1; and sampling and analysis of the existing groundwater monitoring well. This section of the report presents procedures used for drilling, soil sampling, well installation, and groundwater sampling and analysis.

### 3.1 REQUIREMENTS PRIOR TO DRILLING

The locations of existing underground utility lines were determined prior to drilling activities. This determination was made through discussions with the facility owner and through consultation with the utility district. Approval to install the monitoring wells was obtained from the County. Appendix A contains water well driller's reports and permits for monitoring wells MW-2 and MW-3.

### 3.2 SOIL SAMPLING AND MONITORING WELLS INSTALLATION, SAMPLING, AND ANALYSIS

#### 3.2.1 Soil Sampling and Analysis

On September 7, 1993, Advance Drilling Co., Inc., drilled three boreholes to a depth of 16.5 feet below ground surface (bgs). Two of the boreholes were constructed as groundwater monitoring wells. The other borehole was only used for collection of soil samples. Figure 3-1 shows the borehole locations. Three soil samples were collected from each borehole, at depths of 5', 10', and 15' feet bgs. Soil samples were collected using a modified California split spoon drive sampler fitted with clean 2-inch diameter brass tubes. Samples were submitted to ChromaLab, Inc., (ChromaLab) for laboratory analysis. Soil sample numbers, depths and analyses performed are summarized in Table 3-1.

Two of the boreholes (MW-2 and MW-3) were converted to groundwater monitoring wells. The boreholes were drilled utilizing a hollow-stem auger. Hollow-stem auger drilling is accomplished through use of a hollow central shaft with an attached spiral scroll. Each section of the auger is aligned so that a continuous scroll is formed. A bit is attached at the bottom of the first auger flight. Cuttings created by the bit are removed by the scroll as the auger stem is turned. This method is suitable for relatively shallow drilling in unconsolidated formations. The cuttings were collected in 55-gallon drums, labeled and later transported to B&J Landfill, 6426 Hay Road, Vacaville, California for land disposal. Non-Hazardous Waste Transport Forms are included in Appendix B.

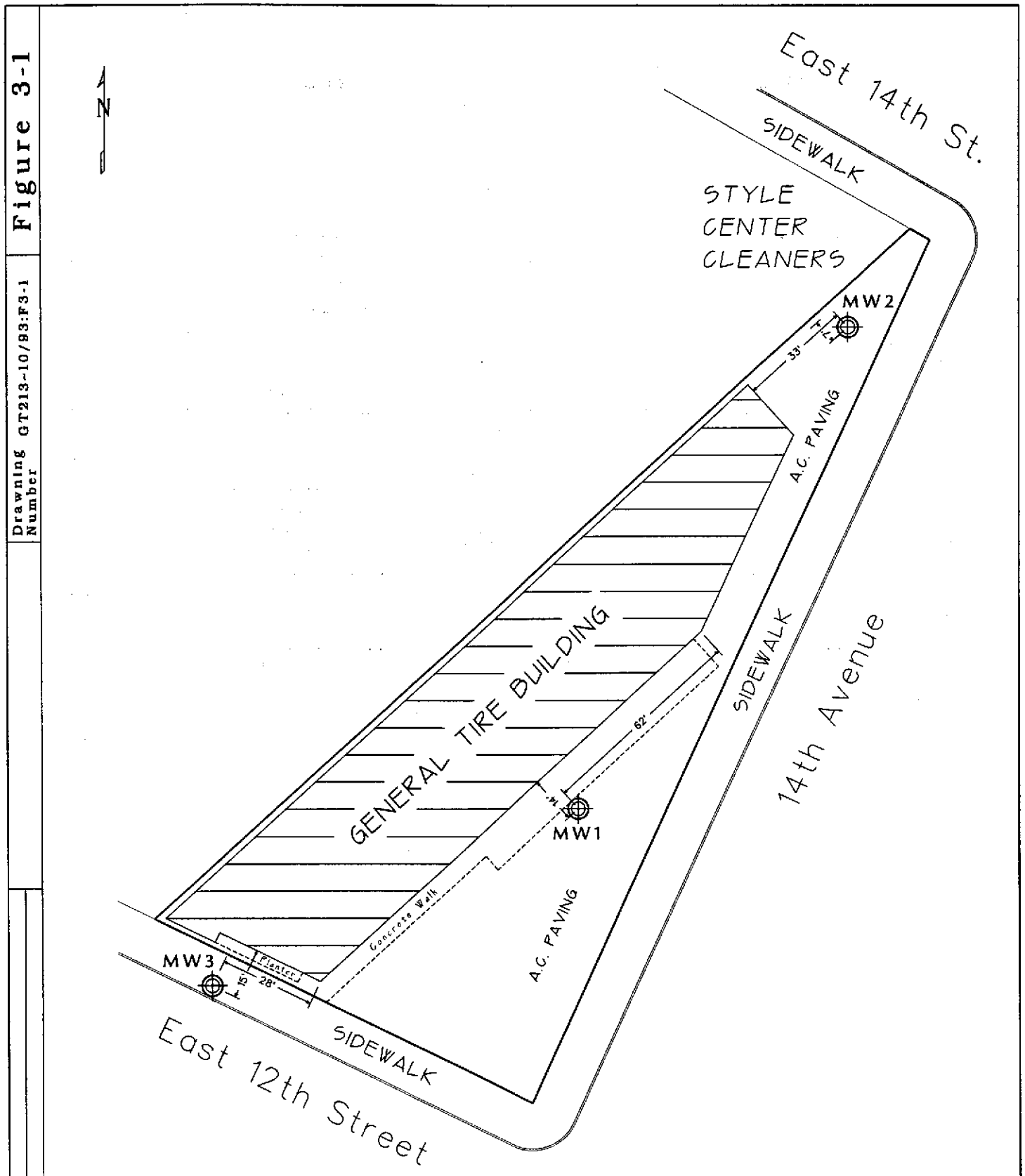



Figure 3-1

Drawning Number GT213-10/93:F3-1

M.J. 10-25-1993

Drawn by

**LEGEND:**

MW1
⊕ Monitoring Well

Scale
20 0 20 40 Feet

**Locations of Groundwater Monitoring Wells**

**General Tire, Inc.**
**1201 14th Avenue**
**Oakland, California**

Prepared by
*JONAS & ASSOCIATES INC.*

| Date: 10-25-1993 Locations Approx. | Figure 3-1 | Drawing Number GT213-10/93:F3-1 |
|---|---|---|

Table 3-1
September 1993 Soil Sample Laboratory Analyses
General Tire Oakland
Oakland, California

| Sample Number | Date Sampled | Sample Depth (feet) | Sample Analysis |
|---|---|---|---|
| B1-5'<br>B1-10'<br>B1-15' | 9/7/93<br>9/7/93<br>9/7/93 | 5'<br>10'<br>15' | PCBs (EPA Method: 8080) |
| MW2-5'<br>MW2-10'<br>MW2-15' | 9/7/93<br>9/7/93<br>9/7/93 | 5'<br>10'<br>15' | Total extractable petroleum hydrocarbons as diesel, kerosene, motor oil (TEPH-d,k,mo) - EPA Methods 3510/8015; Total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethyl benzene and total xylenes (BTEX) - EPA Method 5030/8015/8020; and Volatile Halogenated Organic Compounds (VOCs) - EPA Method 8010 |
| MW3-5'<br>MW3-10'<br>MW3-15' | 9/7/93<br>9/7/93<br>9/7/93 | 5'<br>10'<br>15' | TEPH-d,k,mo; TPH-g; BTEX; and VOCs |

### 3.2.2 Groundwater Monitoring Wells Construction, Development, Sampling and Analysis

The two groundwater monitoring wells were completed with a 10-foot long PVC screen, 4 inches in diameter, with a 0.02-inch slot size. The screen was connected to a section of 5-foot long PVC riser pipe. In order to anticipate the possibility of floating product, the screen was extended approximately 2 feet above the water table. All joints were flush threaded and no solvents or cements were used on the PVC. Well logs are presented in Appendix A. A filter pack consisting of silica #3 sand was placed in the annular space at the well screen and carried 2 feet above the top of the screen. A bentonite seal, ½ foot thick and composed of one-half inch pellets, was placed above the sand pack, and the remaining annular space was filled with a neat cement-bentonite grout. Frequent measurements with a steel tape were made during placement of materials to ensure that proper amounts of material were placed and that seals were properly positioned. The grout consisted of neat Portland cement modified with bentonite to reduce shrinkage. The ratio of cement to bentonite was approximately 20:1 on a weight basis. The grout was tamped regularly to avoid

formation of voids. Table 3-2 summarizes well construction details for the two new wells and the existing well which was installed by a previous consultant in 1992.

Table 3-2
Well Construction Details
General Tire Oakland
Oakland, California

| Well Number | Date Completed | Casing Diameter | ~Depth in feet bgs | | | | | Borehole Diameter |
|---|---|---|---|---|---|---|---|---|
| | | | Screen {0.020"} | Sand Pack | Bentonite Seal | Portland Cement[1] | Borehole | |
| MW-1 | 3/1992 | 2" | 5'5" - 15' 6" | 3'5" - 16' 5" | 2'- 3'5" | ¼ - 2' | 16'5" | 8 |
| MW-2 | 9/7/1993 | 4" | 5½ - 15½ | 5 - 16½ | 4½ - 5 | ¼ - 4½ | 16½ | 8½" |
| MW-3 | 9/7/1993 | 4" | 5½ - 15½ | 5 - 16½ | 4½ - 5 | ¼ - 4½ | 16½ | 8½" |

note: 1) Portland Cement mixed with ~5% bentonite for plasticity.
2) bgs = below ground surface.

When constructing the wells, maximum effort was made to avoid contamination of the well construction materials. The PVC construction materials were assumed to be procured clean from the fabricators. The procedures listed below were followed to prevent contamination:

- Clean screens and casings were utilized;
- All filter-pack material were added directly from the bag (spilled material was not taken from the ground and placed in the boring);
- The steel tape used to sound for depth during installation was steam-cleaned prior to boring installation;
- No foreign material was allowed to enter the well casing during construction;
- Frequent sounding were made when placing the filter pack, bentonite, and grout into the annular space; and
- Recorded all final measurements, problems, and comments in the field log book.

3.2.2.1 Well Development

When well construction was complete and the grout column was cured for a minimum of 24 hours, well development was performed by use of a submersible pump. Well development was initiated by lowering a submersible pump into the well. The pump was placed in the center of the well screen. Approximately five well volumes were removed during development. Well volume was calculated using the formula:

$$V = \pi(h/4)\ \{D_c^2(1-n) + nD_p^2\}$$

where
- $V$ = volume of standing water in borehole and well, $ft^3$
- $\pi$ = 3.14
- $D_p$ = diameter of boring, ft
- $D_c$ = diameter of well casing, ft
- $n$ = porosity of the filter pack, decimal fraction
- $h$ = height of standing water in well, ft

The variable h is determined by subtracting the depth to water from the total well depth. The value for n is assumed at 0.3. To convert the well volume to gallons, V is multiplied by 7.48 gallons per cubic feet. Water level is measured with an electronic sounding device.

To develop the monitoring wells they were pumped until the discharge was relatively clear, colorless, and free of particulates. Water from equipment steam-cleaning and development were stored in 55-gallon drums, labeled and later transported to Gibson Environmental for treatment. Appendix B contains the Water Transport Form from Gibson Environmental.

3.2.2.2 Sample Collection Procedures and Analysis

On September 14, 1993, the monitoring wells MW-2 and MW-3 were developed by Advance Drilling Co., Inc. On October 5, 1993 the three groundwater monitoring wells were purged by Jonas & Associates Inc. Prior to purging, a clear bailer was used to collect a sample from each monitoring well. The sample was inspected in the field for floating product, odor, and sheen. Free product was not observed in any of the wells.

After checking for free product, the wells were then purged using a bailer. At least three saturated well volumes of water was removed. During purging, field measurements of the groundwater temperature, conductivity, and pH was made and

recorded periodically. Water samples for laboratory analysis were not collected until temperature, conductivity, and pH stabilized. Table 3-3 includes groundwater levels and free product measurements.

Table 3-3
September 1993 Groundwater Levels and Free Product Measurements
General Tire Oakland
Oakland, California

| Date | Well ID | Water Level from Top of Casing: Depth | Elevation | Free Product |
|---|---|---|---|---|
| 10/5/93 | MW-1 | 8.73' | 9.56' | no free product |
| 10/5/93 | MW-2 | 6.80' | 13.38' | no free product |
| 10/5/93 | MW-3 | 10.5' | 9.05' | no free product |

Notes - » Elevation with respect to Mean Sea Level (M.S.L.) and Kier & Wright survey.

After purging the standing water from the wells, they were then sampled with a bailer. One sample per well was collected and submitted for chemical analysis. A duplicate sample was collected from monitoring well MW-2 for laboratory analysis. Samples were collected in glass vials, specifically designed to prevent the loss of volatile constituents from the samples. The glass vials were carefully filled and checked to insure that no head space existed in sample containers. Presence of head space would result in volatilization of volatile constituents. All bottles were labeled before filling to prevent misidentification. Once filled, samples were placed in an ice chest with ice packs. Each cooler contained sufficient ice packs to ensure that proper temperature of 4° Celsius was maintained and were packed in a manner to prevent damage to sample containers. Field Chain-of-Custody records, completed at the time of sample collection, accompanied the samples inside the cooler for shipment to ChromaLab, a State-certified analytical laboratory located in San Ramon, California. All coolers were picked-up by a representative from Chromalab within 24 hours after sampling.

Four groundwater samples submitted to ChromaLab were analyzed for Total TPH-d (EPA Methods 3510 and 8015), and VOCs (EPA Method 601). Appendix C includes all the raw laboratory analytical data.

## 3.3 QUALITY CONTROL SAMPLES

For quality control, one duplicate groundwater sample was collected from monitoring well MW-2 and submitted for laboratory analysis. In addition, the

laboratory also performed a matrix spike. Both the duplicate and the matrix spike samples were analyzed for the entire suite of parameters listed in Section 3.2.2.2, "Sample Collection Procedures and Analysis". Table 3-4 presents detected analytical results for both of MW-2's groundwater samples.

Table 3-4
Comparison of Analytical Results of
Field Duplicate Samples
General Tire Oakland

| Detected Chemical Constituent | Chemical Concentrations (ppm)[1] Sample MW-2 | Chemical Concentrations (ppm) Sample Number MW-d |
|---|---|---|
| kerosene | 0.49 | 0.11 |
| motor oil | 0.7 | ND<0.5[2] |
| vinyl chloride | 0.0015 | ND<0.0005 |
| 1,1-dichloroethene | 0.001 | 0.0009 |
| cis-1,2-dichloroethene | 0.031 | 0.029 |
| trichloroethene | 0.046 | 0.041 |
| tetrachloroethene | 0.040 | 0.040 |

[1] ppm = parts per million.
[2] ND<0.5 = Not detected above the method detection limit of 0.5 ppm.

## 3.4 DECONTAMINATION AND POST-SAMPLING PROCEDURES

Decontamination of equipment took place in a specific decontamination zone designated at the site. Drilling and sample equipment were decontaminated prior to initial use and at the completion of sampling activities. All non-disposable equipment were decontaminated according to the procedures summarized below:

- Manual scrub with non-phosphate soap solution plus tap water wash;
- Fresh water rinse;
- Distilled/deionized water rinse;
- Air dry; and
- Distilled/deionized water rinse.

## 3.5 SAMPLE DOCUMENTATION

Sample documentation included field logbooks, sample labels, and Chain-of-Custody records. All field documentation was written legibly in waterproof ink. Errors were crossed out with a single line, initialed, and dated; they were not obliterated. Each sample was assigned a unique identification number that allows retrieval of information regarding the sample.

## 3.6 SAMPLE SHIPMENT

The J&A Technical Manager notified the Sales Manager at ChromaLab a week before sampling was scheduled to begin, so that the laboratory could prepare and ship the necessary coolers and sample bottles to the field team in advance. The samples were received by ChromaLab within 24 hours of sampling.

Samples were packaged for shipment in a cooler chilled with bags of ice. Foam padding was used to protect sample containers. The original Chain-of-Custody record was placed in a plastic pouch affixed to the inside lid of the cooler. The Field Manager retained a copy of the form. When possession of the samples was transferred, the individuals relinquishing and accepting custody wrote their names, the names of their organizations, and the time and date of custody transfer on the Chain-of-Custody record. Appendix C contains the laboratory analytical reports and Chain-of-Custody records.

## 3.7 MONITORING WELLS SURVEY

On November 22, 1993 all three monitoring wells (MW-1 through MW-3) were surveyed by Kier & Wright Civil Engineers & Surveyors, Inc. Appendix D of this report presents the documentation associated with the results of the survey. The locations of the wells were identified using the City of Oakland Benchmark No. 1521, 15th Avenue and 14th Street. Table 3-5 provides a summary of the well survey data.

Table 3-5
Monitoring Well Survey Data
General Tire Oakland
Oakland, California

| Well | Easting | Northing | M.S.L.[1] Elevation |
|---|---|---|---|
| MW-1 | 1495579.17 | 474023.22 | Top PVC[2]: 18.29'<br>rim[3]: 18.58' |
| MW-2 | 1495664.73 | 474169.72 | Top PVC: 20.18'<br>rim: 20.77' |
| MW-3 | 1495474.96 | 473977.93 | Top PVC: 19.55'<br>rim: 19.99' |

[1] M.S.L. = Mean Sea Level.
[2] Top PVC = Top north edge of PVC casing.
[3] rim = North rim of box.

## 4.0 DATA ANALYSIS

### 4.1 SOIL SAMPLING RESULTS

As stated previously three soil samples were collected from three boreholes. Samples were collected from depths of 5, 10, and 15 feet below ground surface (bgs). The samples from the monitoring well boreholes were analyzed for TPH-g; TEPH-d,k,mo; BTEX; and VOCs. Appendix E includes summary tables of all the laboratory analytical results. Table 4-1 includes chemicals detected in the soil samples analyzed.

Figure 4-1 shows the borehole locations and detected chemical concentrations. As illustrated in Figure 4-1, PCBs were not detected in the three soil samples collected from borehole B1. This borehole was drilled adjacent to MW-1 for the purpose of determining if the soil may have been impacted by any potential leaks from the hydraulic lifts. This analysis was performed at ACHCS' request.

Two of the soil samples (MW2-5' and MW2-10') collected from the borehole of MW-2 contained cis-1,2-DCE (0.0059 mg/kg - 0.24 mg/kg); TCE (0.0066 mg/kg - 0.36 mg/kg); and PCE (0.073 mg/kg - 0.11 mg/kg). As shown in Table 4-1, these detected chemical concentrations were higher in the deeper sample (MW2-10') than the shallower one (MW2-5'). In addition, in MW2-10', trans-1,2-DCE (0.0087 mg/kg) and TEPH-mo (18 mg/kg) were also detected. These parameters were not detected in MW2-5'. Soil sample MW2-15' did not contain any analyzed chemicals.

Soil samples collected from MW-3 borehole did not contain any VOCs. TEPH-mo at a concentration of 18 mg/kg was detected in the shallow MW3-5' soil sample.

As illustrated in Table 3-3, minimum and maximum depths to the groundwater were measured at 6.9 feet bgs in MW-2 and 10.5 feet bgs in MW-3. It should be noted that the soil samples with detected chemicals were collected from depths immediately above the water table (depth of 10 feet bgs). Chemicals were not detected in the soil samples collected below the water table (depth of 15 feet).

### 4.2 GROUNDWATER SAMPLING RESULTS

As stated previously, three groundwater samples from monitoring wells MW-1 through MW-3 were collected and analyzed for TPH-d, and VOCs. Appendix E includes summary tables of all the analytical results. Table 4-2 presents a summary of detected chemicals.

Table 4-1
September 1993 Soil Results
General Tire Oakland
Oakland, California

| Sample I.D. | Analysis | Constituent | Results (mg/kg) |
|---|---|---|---|
| B1-5' | PCBs | PCBs | ND[1] |
| B1-10' | Same as B1-5' | Same as B1-5' | ND |
| B1-15' | Same as B1-5' | Same as B1-5' | ND |
| MW2-5' | VOCs<br>TEPH-d,k, mo<br>TPH-g | cis-1,2-DCE<br>TCE<br>PCE<br>All other parameters tested for | 0.0059 mg/kg<br>0.0066 mg/kg<br>0.073 mg/kg<br>ND |
| MW2-10' | Same as MW2-5' | cis-1,2-DCE<br>TCE<br>PCE<br>trans-1,2-DCE<br>TEPH-mo<br>All other parameters tested for | 0.24 mg/kg<br>0.36 mg/kg<br>0.11 mg/kg<br>0.0087 mg/kg<br>18 mg/kg<br>ND |
| MW2-15' | Same as MW2-5' | All parameters tested for | ND |
| MW3-5' | Same as MW2-5' | TEPH-mo<br>All other parameters tested for | 18 mg/kg<br>ND |
| MW3-10' | Same as MW2-5' | All parameters tested for | ND |
| MW3-15' | Same as MW2-5' | All parameters tested for | ND |

note: TEPH-d, k, mo = Total Extractable Petroleum Hydrocarbons as diesel, kerosene and motor oil (3550/8015)
VOCs = Volatile Halogenated Organic Compounds (EPA Method 8010)
cis-1,2-DCE = cis-1,2-Dichloroethene
TCE: Trichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
ND[1] = Not detected above the method detection limit.

Figure 4-2 presents the well locations, detected chemicals and their concentration levels. Figure 4-3 shows the groundwater elevations and gradient. As illustrated in Figure 4-3, groundwater flows in the south/southeasterly direction. MW-1 is considered a downgradient well, and MW-2 an upgradient well. Cis-1,2-DCE was detected in both MW-1 and MW-2; with concentrations being higher in MW-2 than

Figure 4-1

Drawing Number GT213-10/93:F4-1

## MW2 Borehole (mg/Kg)

*September 7, 1993 sampling results:*

| | MW2-5' | MW2-10' | MW2-15' |
|---|---|---|---|
| TPH-Gasoline | ND(1.0) | ND(1.0) | ND(1.0) |
| Benzene | ND(0.005) | ND(0.005) | ND(0.005) |
| Toluene | ND(0.005) | ND(0.005) | ND(0.005) |
| Ethyl Benzene | ND(0.005) | ND(0.005) | ND(0.005) |
| Total Xylenes | ND(0.005) | ND(0.005) | ND(0.005) |
| TEPH-Diesel | ND(1.0) | ND(1.0) | ND(1.0) |
| -Kerosene | ND(1.0) | ND(1.0) | ND(1.0) |
| -Motor Oil | ND(10.0) | 18 | ND(10.0) |
| VOCs (8010) | | | |
| cis 1,2-DCE | 0.0059 | 0.240 | ND(0.005) |
| trans 1,2-DCE | ND(0.005) | 0.0087 | ND(0.005) |
| TCE | 0.0066 | 0.360 | ND(0.005) |
| PCE | 0.073 | 0.110 | ND(0.005) |
| other VOCs | ND | ND | ND |

## MW3 Borehole (mg/Kg)

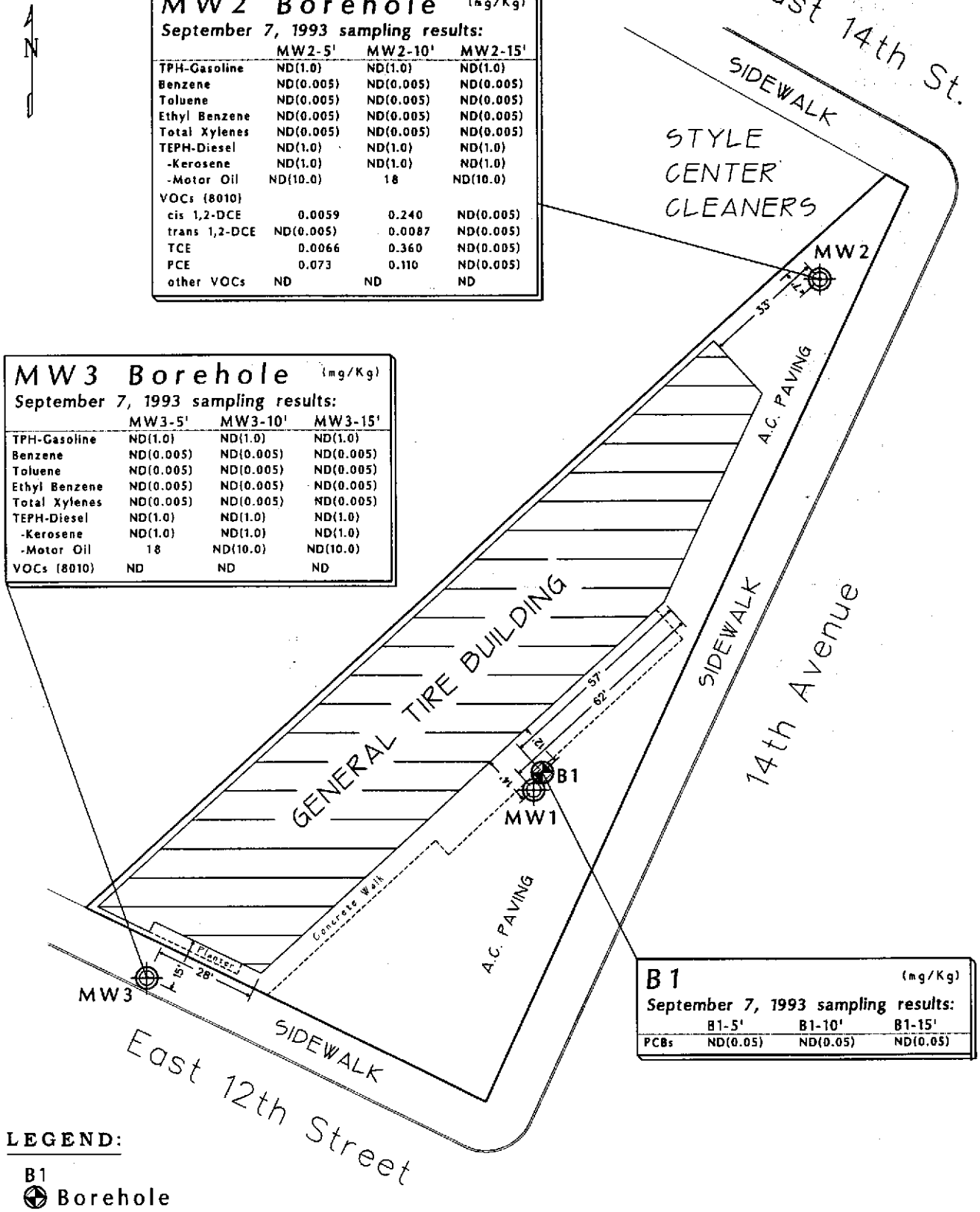
*September 7, 1993 sampling results:*

| | MW3-5' | MW3-10' | MW3-15' |
|---|---|---|---|
| TPH-Gasoline | ND(1.0) | ND(1.0) | ND(1.0) |
| Benzene | ND(0.005) | ND(0.005) | ND(0.005) |
| Toluene | ND(0.005) | ND(0.005) | ND(0.005) |
| Ethyl Benzene | ND(0.005) | ND(0.005) | ND(0.005) |
| Total Xylenes | ND(0.005) | ND(0.005) | ND(0.005) |
| TEPH-Diesel | ND(1.0) | ND(1.0) | ND(1.0) |
| -Kerosene | ND(1.0) | ND(1.0) | ND(1.0) |
| -Motor Oil | 18 | ND(10.0) | ND(10.0) |
| VOCs (8010) | ND | ND | ND |

## B1 (mg/Kg)

*September 7, 1993 sampling results:*

| | B1-5' | B1-10' | B1-15' |
|---|---|---|---|
| PCBs | ND(0.05) | ND(0.05) | ND(0.05) |




**LEGEND:**

B1
Borehole

MW1
Monitoring Well Borehole

ND(0.05) = Not Detected at or above limit in parentheses.

Scale
20 0 20 40 Feet

# Soil Sampling Results

## General Tire, Inc.
## 1201 14th Avenue
## Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Drawn by M.J. 10-25-1993

Date: 10-25-1993
Locations Approx.

Figure 4-1

Drawing Number GT213-10/93:F4-1

MW-1. 1,1-DCA was only detected in MW-1. VC, TCE, PCE, TEPH-k, and TEPH-mo were only detected in MW-2. None of the chemicals tested for were detected in MW-3.

Table 4-2
September 1993 Groundwater Results
General Tire Oakland
Oakland, California

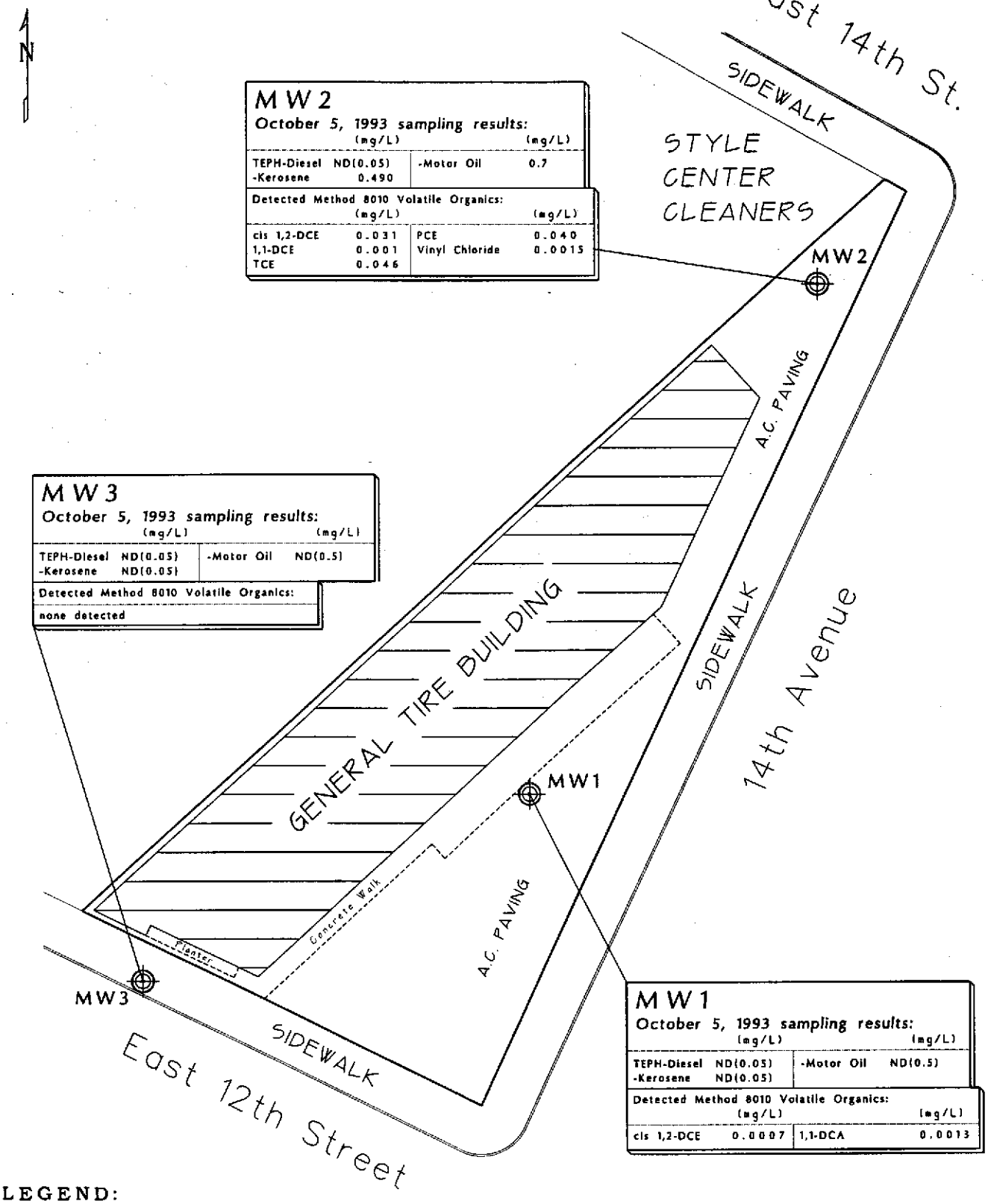
| Sample I.D. | Analysis | Constituent | Results (ppm) |
|---|---|---|---|
| MW-1 | VOCs<br>TEPH-d,k, mo | cis-1,2-DCE<br>1,1-DCA<br>All other parameters tested for | 0.007<br>0.0013<br>ND[1] |
| MW-2 | Same as MW-1 | cis-1,2-DCE<br>1,1-DCE<br>TCE<br>PCE<br>VC<br>TEPH-mo<br>TEPH-k<br>All other parameters tested for | 0.031<br>0.001<br>0.046<br>0.040<br>0.0015<br>0.7<br>0.490<br>ND |
| Mw-3 | Same as MW-1 | All the parameters tested for | ND |

notes: TEPH-d, k, mo = Total Extractable Petroleum Hydrocarbons as diesel, kerosene and motor oil (3550/8015)
VOCs = Volatile Halogenated Organic Compounds (EPA Method 8010)
cis-1,2-DCE = cis-1,2-Dichloroethene
TCE; Trichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
VC = Vinyl Chloride
DCA = 1,1-Dichloroethane
ND[1] = Not detected above the method detection limit.

## 4.3 QUALITATIVE ANALYSIS OF POTENTIAL CONTAMINANT SOURCES AND MOVEMENT

Table 4-3 lists the detected analytes in the soil and groundwater and their concentration ranges. According to General Tire, Inc., none of the solvents detected were used on-site.

As presented in Section 4.1 of this report, with the exception of 1,1-DCA, all the detected parameters were observed in the soil and groundwater samples collected




**MW 2**
*October 5, 1993 sampling results:*

| | (mg/L) | | (mg/L) |
|---|---|---|---|
| TEPH-Diesel | ND(0.05) | -Motor Oil | 0.7 |
| -Kerosene | 0.490 | | |

Detected Method 8010 Volatile Organics:

| | (mg/L) | | (mg/L) |
|---|---|---|---|
| cis 1,2-DCE | 0.031 | PCE | 0.040 |
| 1,1-DCE | 0.001 | Vinyl Chloride | 0.0015 |
| TCE | 0.046 | | |

**MW 3**
*October 5, 1993 sampling results:*

| | (mg/L) | | (mg/L) |
|---|---|---|---|
| TEPH-Diesel | ND(0.05) | -Motor Oil | ND(0.5) |
| -Kerosene | ND(0.05) | | |

Detected Method 8010 Volatile Organics:

none detected

**MW 1**
*October 5, 1993 sampling results:*

| | (mg/L) | | (mg/L) |
|---|---|---|---|
| TEPH-Diesel | ND(0.05) | -Motor Oil | ND(0.5) |
| -Kerosene | ND(0.05) | | |

Detected Method 8010 Volatile Organics:

| | (mg/L) | | (mg/L) |
|---|---|---|---|
| cis 1,2-DCE | 0.0007 | 1,1-DCA | 0.0013 |

**LEGEND:**

MW1
⊕ Monitoring Well

ND(0.05) = Not Detected at or above limit in parentheses.

Scale
20 0 20 40 Feet

# Groundwater Sampling Results
## General Tire, Inc.
## 1201 14th Avenue
## Oakland, California

Prepared by
*JONAS & ASSOCIATES INC.*

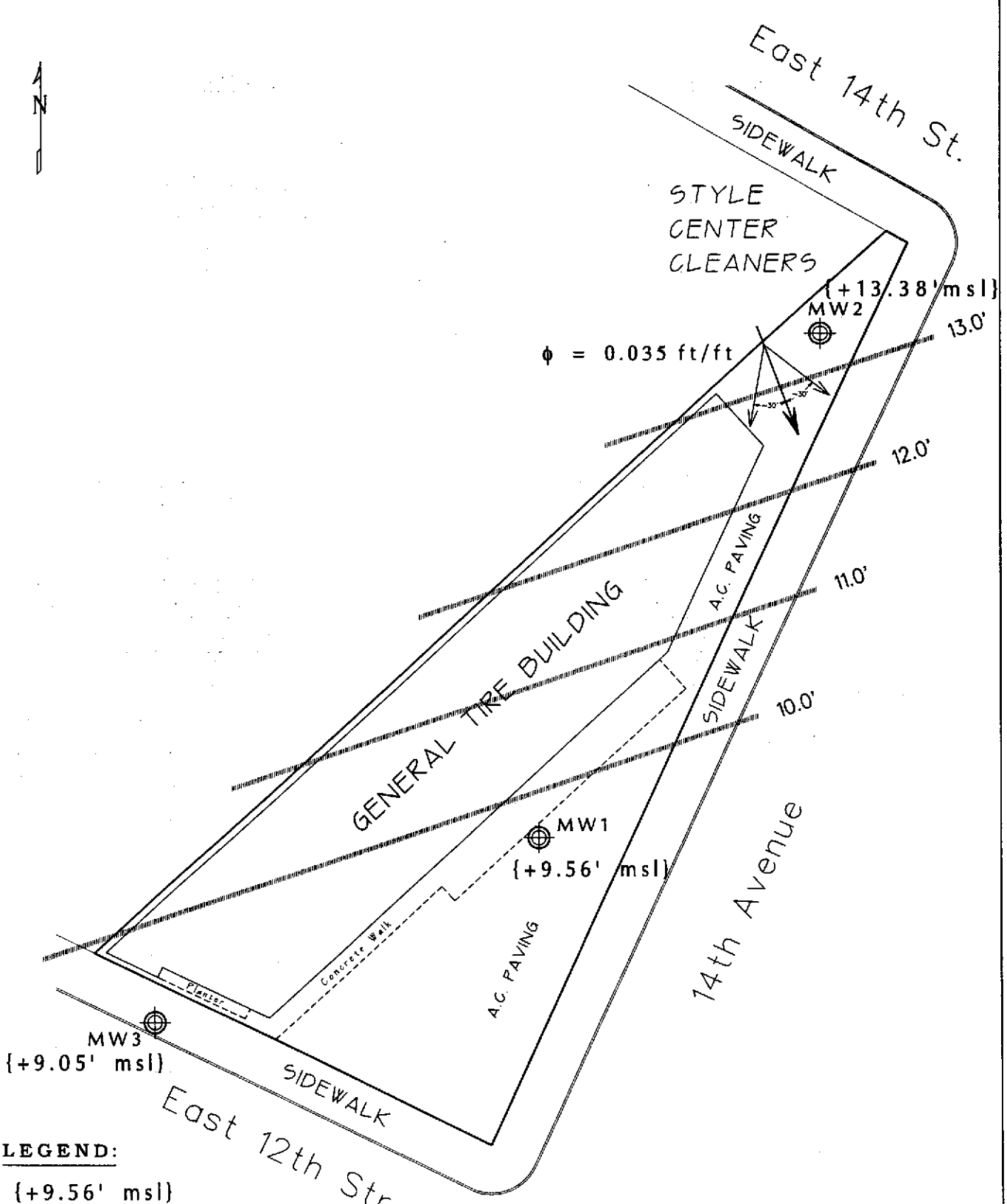
Figure 4-2

Date: 10-25-1993
Locations Approx.

Drawing Number
GT213-10/93:F4-2

Drawing Number GT213-10/93:F4-2

Drawn by M.J. 10-25-1993




**LEGEND:**

{+9.56' msl}
MW1 Monitoring Well w/ Well Water Elevation Feet Mean Sea Level (msl)

ϕ = 0.035 ft/ft
Potentiometric Gradient

10.0'
Equipotential Line

Scale
20 0 20 40 Feet

# Groundwater Elevations & Gradient on October 5, 1993

General Tire, Inc.
1201 14th Avenue
Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Figure 4-3

Drawning Number GT213-10/93:F4-3

Drawn by M.J. 10-25-1993

Date: 10-25-1993
Locations Approx.

Figure 4-3

Drawing Number GT213-10/93:F4-3

from monitoring well MW-2. MW-2 is considered an upgradient well; therefore, it appears that contaminants may be coming from off-site sources. With the exception of TEPH-k, TEPH-mo, and possibly 1,1-DCA, all of the compounds detected may be potential degradation products of PCE.

Table 4-3
1993 Soil and Groundwater
Sampling Results
Detected Chemicals and Concentration Ranges
General Tire Oakland Facility
General Tire Oakland

| Detected Chemical Constituent | Detected Concentration Ranges in Soil (ppm)[1] | Detected Concentration Ranges in Groundwater (ppm) | Detected Location |
|---|---|---|---|
| cis-1,2-DCE | 0.0059 - 0.240 | 0.0007 - 0.031 | MW-1 & MW-2 |
| 1,1-DCE | ND[2] | 0.001 | MW-2 |
| trans-1,2-DCE | 0.0087 | ND | MW-2 |
| 1,1-DCA | ND | 0.0013 | MW-1 |
| PCE | 0.073 - 0.110 | 0.040 | MW-2 |
| TCE | 0.0066 - 0.360 | 0.046 | MW-2 |
| VC | ND | 0.0015 | MW-2 |
| TEPH-k | ND | 0.490 | MW-2 |
| TEPH-mo | 18 | 0.7 | MW-2 & MW-3 |

[1] ppm = parts per million.
[2] ND = Not detected above the method detection limit.

The degradation pathways of chlorinated aliphatic compounds may be through a combination of abiotic and biotic steps (Vogel, et al., 1987). The exact micro environment necessary for each individual step is still a topic open to on-going research. Biotic steps require microorganisms, whereas abiotic steps do not require microbes. Abiotic processes take place on mineral surfaces or in solution where proper conditions exist. Both biotic and abiotic steps take place under aerobic and anaerobic conditions. As examples applicable to this site, there are two possible degradation pathways of chlorinated aliphatic compounds which may explain the occurrence of certain compounds found in the soil and groundwater beneath the site.

The relationship for the chlorinated ethenes at the site is summarized as:

(1) PCE →TCE →1,1-DCE or cis-1,2-DCE or trans-1,2-DCE →VC

An alternative pathway which can produce chlorinated ethenes from ethanes can be summarized as:

(2) 1,1,1-TCA →1,1-DCA →cis-1,2-DCE →trans-1,2-DCE →chloroethane(CE) →VC

Of the seven halogenated organic compounds detected in 1993, five may be due to the degradation of parent compound PCE. PCE is typically used in dry cleaning fluid; degreasing and drying metals and other solids; solvent for waxes, greases, fats, oils, gums; manufacturing printing inks and paint removers; preparation of fluorocarbons and trichloroacetic acid; vermifuge; heat-transfer medium; and organic synthesis (Montgomery, 1991).

1,1-DCA was detected only in groundwater sample from MW-1, and it was not detected in any of the soil samples. The sources of 1,1-DCA is currently unknown. However, as presented above, 1,1-DCA may be degradation product of a parent compound 1,1,1-TCA. 1,1,1-TCA was detected in MW-1 during the 1992 groundwater sampling event. During the 1993 sampling round, 1,1,1-TCA was not detected above the reported detection limit. Typical uses of 1,1,1-TCA are: organic synthesis; solvent for metal cleaning of precision instruments; textile processing; aerosol propellants; and pesticide (Montgomery, 1991).

As stated previously, according to General Tire, Inc., these chemicals have not been used at the subject facility. Based on the information assembled during this investigation, at the General Tire Oakland facility, it appears that the existing contamination probably originated off-site and proceeded to migrate beneath the subject site. Possible pathways for off-site source(s) to impact General Tire's facility are:

- groundwater transport;
- transport through capillary fringe;
- vapor transport from groundwater to vadose zone; and
- neighboring vadose zone source(s) spreading onto General Tire's facility.

TEPH-mo was detected at a concentration of 18 mg/kg in two of the soil samples collected from MW-2 and MW-3 from a depth of 10 feet and 5 feet, respectively. Typically TEPH-mo concentrations detected in soil below 100 mg/kg are not considered significant. TEPH-mo and -k were detected in the upgradient well MW-2 and not in the downgradient well MW-1 or MW-3. Therefore, it may also be possible that these chemicals are also migrating underneath the General Tire Oakland facility from upgradient, off-site sources.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

September 1993 Soil Investigation Results:

1. Volatile halogenated organic compounds have been detected in two of the soil samples collected from the MW-2 borehole only. Detected concentrations were higher in the deeper sample than the shallower one.

2. TEPH-mo has been detected at a concentration of 18 mg/kg in two of the soil samples collected from MW-2 and MW-3 from a depth of 10 feet and 5 feet, respectively. Typically in soil, TEPH-mo concentrations less than 100 ppm are not considered significant.

3. Soil contamination was not detected in any of the soil samples collected from the depth of 15 feet bgs.

4. PCBs were not detected above the method detection limits in any of the three soil samples collected from borehole B1.

September 1993 Groundwater Investigation Results:

1. Volatile halogenated organic compounds have been detected in groundwater monitoring wells MW-1 and MW-2.

2. TEPH-k and TEPH-mo were detected in MW-2.

3. None of the chemicals tested for were detected in MW-3.

4. Water level elevations with respect to M.S.L. were between 9.05 feet (MW-1) and 13.38 feet (MW-2).

5. Minimum and maximum depths to the groundwater were measured at 6.9 feet bgs in MW-2 and 10.5 feet bgs in MW-3.

6. Groundwater gradient appears to be toward south/southeasterly direction.

7. MW-2 appears to be the upgradient and MW-1 the downgradient wells.

8. MW-2 is located adjacent to Style Center Cleaners, a dry cleaning operation.

As reported by General Tire, Inc., the detected volatile halogenated organic compounds were not used at the subject facility while it was active. Based on the readily available documents reviewed there seems to be no underground fuel storage tanks at the subject site.

Based on the information assembled during this investigation at the General Tire Oakland facility, it appears that the existing contamination probably originated off-site and proceeded to migrate beneath the subject site via any of the following potential pathways: groundwater transport, transport through capillary fringe, vapor transport from groundwater to vadose zone, and neighboring vadose zone source spreading on the subject site.

Of the seven halogenated organic compounds detected, five may be due to the degradation of parent compound PCE, which it is typically used in dry cleaning operations.

Based on the results of this investigation, General Tire, Inc., would like to request that Alameda County Health Care Services identify other Potential Responsible Parties (PRP); and relieve General Tire, Inc., of any further environmental investigations at this site.

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# Appendix A
Drilling Permit, Water Well Driller's Reports and Well Logs for
Monitoring Wells MW-2 and MW-3
General Tire Oakland Facility

# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1201 14th Avenue
Oakland, CA 94606
MW-2 & MW-3

CLIENT
Name General Tire Inc.
Address One General Street Voice
City Akron, Ohio Zip 216-798-2537 Phone
33329-001 ZIP

APPLICANT
Name Jonas & Associates Inc.
1056 Dale Place Fax 510-680-6511
Address Voice
City Concord, CA Zip 94518

TYPE OF PROJECT

| Well Construction | | Geotechnical Investigation | |
|---|---|---|---|
| Cathodic Protection | | General | |
| Water Supply | | Contamination | |
| Monitoring | X | Well Destruction | |

PROPOSED WATER SUPPLY WELL USE
Domestic Industrial Other Monitoring
Municipal Irrigation
MW-2

DRILLING METHOD:
Mud Rotary Air Rotary Auger X
Cable Other

DRILLER'S LICENSE NO. 607458 (C-57)

WELL PROJECTS
Drill Hole Diameter 8.5 in. Maximum
Casing Diameter 4 in. Depth 20 ft.
Surface Seal Depth 4 ft. Number 2

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

ESTIMATED STARTING DATE 9/7/93
ESTIMATED COMPLETION DATE 9/7/93

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

APPLICANT'S SIGNATURE Rosemary Jonas Date 9/9/93

FOR OFFICE USE

PERMIT NUMBER 93509
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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

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

E. WELL DESTRUCTION. See attached.

APPROVED Wyman Hong Date
Wyman Hong

# CONFIDENTIAL

## STATE OF CALIFORNIA DWR
## WELL COMPLETION REPORT
## (WELL LOGS)

# REMOVED

# CONFIDENTIAL

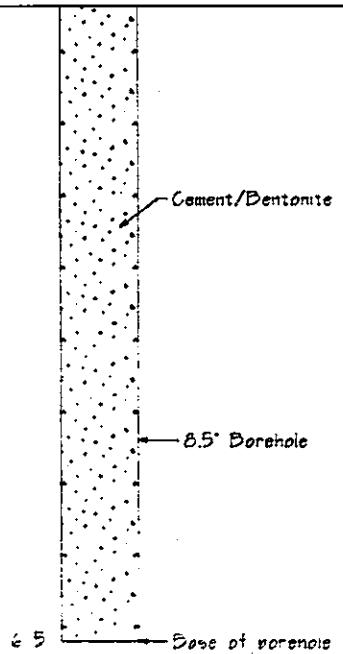
## STATE OF CALIFORNIA DWR
## WELL COMPLETION REPORT
## (WELL LOGS)

# REMOVED

# DRILLING LOG

**Borehole #: B 1**
**Site: General Tire Oakland (GT-213)**
**Sheet: 1 of 1**

Driller: Advance Drilling Co. Inc. Rig: CME-75 Method: Hollow Stem Auger
Started: September 7, 1993 Finished: September 7, 1993 Location: ~5' NE of MW1
Surface Elev.: @MW1 18.58' msl Boring Depth: 16.5 feet bgs Screen Depth: no screen
Field Supervisor: Romena Jonas Supervising Engineer/Geologist: Dr. Jeff Sullivan, R.G.
Note: Borehole located approximately 5 feet northeast of MW1.

| Construction Details | Depth Below Surface (ft.) | Sample Depth Interval (ft.) | Lab. Sample I.D. # | Soil Description & Classification | Notes |
|---|---|---|---|---|---|
|  | 5' | | B1-5' | 0-4': ASPHALT, surface.<br>4'-5': SANDY SILTY CLAY (CL), ~30% very fine sand to coarse sand, with ~70% moderatre brown (5YR 3/4) silt and clay.<br>5'-5.5': SANDY SILTY CLAY (CL), ~30% very fine sand to coarse sand, with ~70% olive black (5Y 2/1) silt and clay. | |
| | 10' | | B1-10' | 10'-10.5' SILTY CLAY (CL), moist, moderate yellowish brown (10YR 5/4) ~40% coarse silt and ~60% clay, with minor (<5%) subrounded gravel. | |
| | 15' | | B1-15' | 15'-15.5' SILTY CLAY (CL), olive balck (5Y 2/1) silt and clay, with minor (<5%) very fine sand and subrounded gravel | |
| | 20' | | | | |



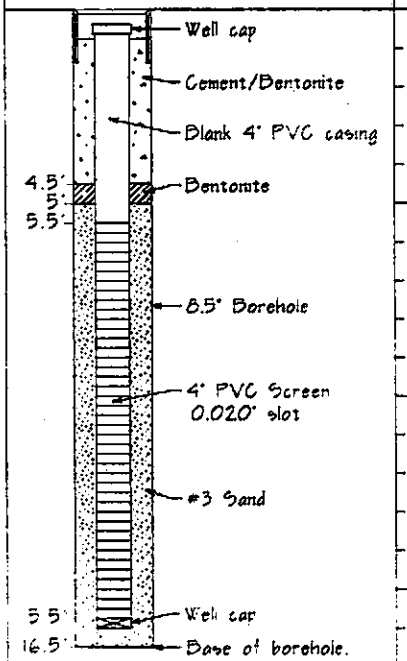
B1 Boring Log

Figure B1

# DRILLING & CONSTRUCTION WELL LOG

Well #: MW2
Site: General Tire Oakland (GT-213)
Sheet: 1 of 1

Driller: Advance Drilling Co. Inc. Rig: CME-75 Method: Hollow Stem Auger
Started: September 7, 1993 Finished: September 7, 1993 Location: north of building
Surface Elev.: TopPVC:20.18';Lid/gs:20.77' Boring Depth: 16.5' bgs Screen Depth: 5.5'-15.5' bgs
Field Supervisor: Romena Jonas Supervising Engineer/Geologist: Dr. Jeff Sullivan, R.G.
Note:




| Depth Below Surface (ft.) | Sample Depth Interval (ft.) | Lab. Sample I.D. # | G.W. Depth ▽ drilling ▽ w/casing | Graphic Log | Soil Description & Classification | Notes |
|---|---|---|---|---|---|---|
| | | | | | 0-4": ASPHALT, surface. | |
| | | | | | 4"-5': SANDY SILTY CLAY (CL), ~30% very fine sand to coarse sand, with ~70% moderate brown (5YR 3/4) silt and clay | |
| 5' | | MW2-5' | ▽ | | 5'-5.5': SILTY SANDY GRAVEL (GM), ~60% subangular gravel, ~40% very coarse sand, and olive black (10G 4/2) silt, with minor (<5%) clay. | 6.80' Well water depth on 10/5/93 |
| 10' | | MW2-10' | ▽ | | 10'-10.5': SANDY SILTY CLAY (CL), moist, moderate yellowish brown (10YR 5/4) and grayish green (10G 4/2) ~35% coarse silt, ~55% clay, and ~10% very fine sand. | 12'T First Water on 9/7/93 |
| 15' | | MW2-15' | | | 15'-15.5': SILTY CLAY (CL), moist, olive black (5Y 2/1) silt and clay, with minor (<5%) very fine sand. Some wood chips | |
| 20' | | | | | Base of borehole 16.5' | |

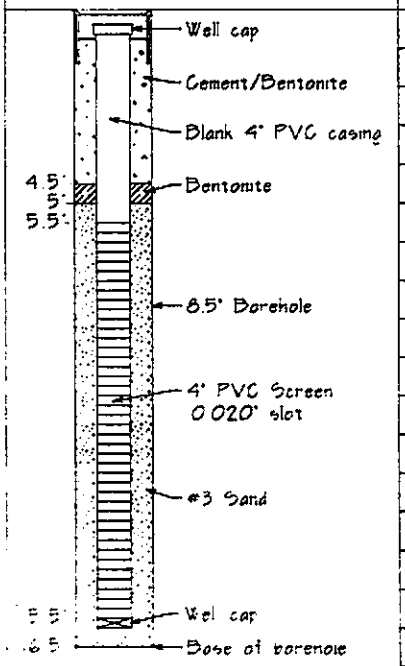
MW2 Well Log

Figure MW2

# DRILLING & CONSTRUCTION WELL LOG

**Well #: MW3**
**Site: General Tire Oakland (GT-213)**
**Sheet: 1 of 1**

Driller: Advance Drilling Co. Inc. Rig: CME-75 Method: Hollow Stem Auger
Started: September 7, 1993 Finished: September 7, 1993 Location: south of building
Surface Elev.: TopPVC:19.55';Lid/gs:19.99' Boring Depth: 16.5' bgs Screen Depth: 5.5'-15.5' bgs
Field Supervisor: Romena Jonas Supervising Engineer/Geologist: Dr. Jeff Sullivan, R.G.
Note:




| Depth Below Surface (ft.) | Sample Depth Interval (ft.) | Lab. Sample I.D. # | G.W. Depth ▽ drilling ▼ w/casing | Graphic Log | Soil Description & Classification | Notes |
|---|---|---|---|---|---|---|
| | | | | | 0-4": ASPHALT, surface | |
| | | | | | 4"-5": SANDY SILTY CLAY (CL), ~30% very fine sand to coarse sand, with ~70% moderate brown (5YR 3/4) silt and clay | |
| 5' | | MW3-5' | | | 5'-5.5': CLAYEY SAND (SC), moist, ~90% subangular to subrounded sand, ~10% light brown (5YR 5/6) clay | |
| 10' | | MW3-10' | ▼ | | 10'-10.5' SILTY CLAY (CL) olive black (5Y 2/1) silt and clay, with minor (5%) very fine sand and subrounded gravel | 10.51' Wel water depth on 10/5/93 |
| 15' | | MW3-15' | | | 15'-15.5 SILTY CLAY (CL), moist, ~45% coarse silt and ~55% dark yellowish brown (10YR 4/2) clay | |
| 20' | | | | | Base of borenole at 5 | |

MW3 Well Log

Figure MW3

# Appendix B
# Non-Hazardous Waste Transport Forms

BWL 1

TF NUMBER: 93-1001-1

# NON-HAZARDOUS WASTE TRANSPORT FORM

## GENERATOR INFORMATION

NAME: GENERAL TIRE INC.

ADDRESS: ONE GENERAL ST.

CITY,STATE,ZIP: AKRON, OHIO 33329 PHONE #:

DESCRIPTION OF SOIL: SOIL GENERATED DURING TRENCHING, DRILLING, OR EXCAVATION EVENT.

THE GENERATOR CERTIFIES THAT THIS SOIL AS DESCRIBED IS NON-HAZARDOUS

(X) Michael McNally 12/17/93
(Typed or printed full name & signature) (Date)

## SITE INFORMATION

| | STA # | IWM JOB # | ADDRESS | CY |
|---|---|---|---|---|
| 1 | 1201-14TH | 30904-DS | 1201 14TH AVE., OAKLAND, CA | .75 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| | | | TOTAL CU. YARDS: | .75 |

## TRANSPORTER INFORMATION

NAME: INTEGRATED WASTESTREAM MANAGEMENT, INC.

ADDRESS: 950 AMES AVE.

CITY,STATE,ZIP: MILPITAS, CA 95035 PHONE #: (408) 942-8955

TRUCK ID #: 51 Dump Hunsche / Ward 1-12-94
(Typed or printed full name & signature) (Date)

## TSD FACILITY INFORMATION

NAME: B & J LANDFILL

ADDRESS: 6426 HAY RD.

CITY,STATE,ZIP: VACAVILLE, CA 95687 PHONE #: (707) 448-2945

BILL TO: IWM, INC.

APPROVAL #: 01168

MR / Boscek 1-12-94
(Typed or printed full name & signature) (Date)

(TF )

TF NUMBER: 4402-N

# WATER TRANSPORT FORM

## GENERATOR INFORMATION

NAME: GENERAL TIRE INC.

ADDRESS: ONE GENERAL ST.

CITY,STATE,ZIP: AKRON, OHIO 33329 PHONE #:

DESCRIPTION OF WATER: PURGE WATER GENERATED DURING SAMPLING OR DEVELOPMENT OF MONITORING WELLS. AUGER RINSATE GENERATED DURING THE INSTALLATION OF MONITORING WELLS. GROUND WATER FROM AQUIFER PERFORMANCE TEST. WATER MAY CONTAIN DISSOLVED HYDROCARBONS.

THE GENERATOR CERTIFIES THAT THIS WATER AS DESCRIBED IS NON-HAZARDOUS

(X) Michael McNally 12/17/93
(Typed or printed full name & signature) (Date)

## SITE INFORMATION

| | STA # | IWM JOB# | ADDRESS | GALS |
|---|---|---|---|---|
| 1 | 1201-14TH | 30903-DW | 1201 14TH AVE., OAKLAND, CA | 70 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |

TOTAL GALLONS: 70

## TRANSPORTER INFORMATION

NAME: INTEGRATED WASTESTREAM MANAGEMENT, INC.

ADDRESS: 950 AMES AVE.

CITY,STATE,ZIP: MILPITAS, CA 95035 PHONE #: (408) 942-8955

TRUCK ID #: 102 Pete Thurman Wade Gibson 1-11-94
(Typed or printed full name & signature) (Date)

## TSD FACILITY INFORMATION

NAME: GIBSON ENVIRONMENTAL

ADDRESS: 475 SEAPORT BLVD

CITY,STATE,ZIP: REDWOOD CITY, CA 94063 PHONE #: (415) 368-5511

RELEASE #: 13374 JONATHAN H. McBRIDE 1-11-94
(Typed or printed full name & signature) (Date)

GC# 46 56

Appendix C
Laboratory Analytical Reports and Chain-of-Custody Forms
General Tire Oakland Facility

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW2-5'** *Matrix:* SOIL
*Lab #:* 14854-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 5.9 | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | 6.6 | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | 73 | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW2-10'** *Matrix:* SOIL
*Lab #:* 14855-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | 8.7 | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 240 | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | 360 | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | 110 | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW2-15'** *Matrix:* SOIL
*Lab #:* 14856-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

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Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW3-5'** *Matrix:* SOIL
*Lab #:* 14851-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW3-10'** *Matrix:* SOIL
*Lab #:* 14852-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **MW3-15'** *Matrix:* SOIL
*Lab #:* 14853-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140197

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **DRUM-MW3** *Matrix:* SOIL
*Lab #:* 14861-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 13, 1993 ChromaLab File No.: 9309091

JONAS & ASSOCIATES, INC.

Attn: Romena Jonas

RE: Four soil samples for PCB analysis

Project Name: GENERAL TIRE-OAKLAND
Project Number: GT-213
Date Sampled: September 7, 1993 Date Submitted: September 7, 1993
Date Extracted: September 13, 1993 Date Analyzed: September 13, 1993

RESULTS:

| Sample I.D. | PCB (mg/Kg) |
|---|---|
| B1-5' | N.D. |
| B1-10' | N.D. |
| B1-15' | N.D. |
| DRUM B1 | N.D. |
| BLANK | N.D. |
| DETECTION LIMIT | 0.05 |
| METHOD OF ANALYSIS | 8080 |

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

9309091

# CHROMALAB, INC.

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

## Chain of Custody

DATE 9/7/93 PAGE 2 OF 2

PROJ MGR Romena Jonas
COMPANY Jonas & Associates Inc.
ADDRESS 1056 Dale Place
Concord, CA 94518
SAMPLERS (SIGNATURE) (PHONE NO.)
Romena Jonas (510) 676-8554

| SAMPLE ID. | DATE | TIME | MATRIX | LAB ID. | TPH - Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 3015) w/BTEX (EPA 602, 3020) | TPH - Diesel (EPA 3510/3550, 3015) | PURGEABLE AROMATICS BTEX (EPA 602, 3020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520 E&F) | PESTICIDES/PCB (EPA 608, 8080) | PHENOLS (EPA 604, 8040) | TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1) | | METALS: Cd, Cr, Pb, Zn, Ni | CAM METALS (17) | PRIORITY POLLUTANT METALS (13) | EXTRACTION (TCLP, STLC) | TEPH-d,k,MO | purgeable halocarbons 8010 | TPH-g/BTEX | PCBs 8080 | NUMBER OF CONTAINERS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Drum-MW3 | 9/7/93 | 12:35 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | — | | 1 |
| Drum-B1 | " | 12:45 | " | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| Drum-MW2 | " | 12:50 | " | | | | | | | | | | | | | | | | | | 1 | 1 | — | | 1 |

### PROJECT INFORMATION

PROJECT NAME: General Tire-Oakland
PROJECT NUMBER: GT-213
SHIPPING INFO: Pick-up
VIA: ChromaLab, Inc.
SPECIAL INSTRUCTIONS/COMMENTS:

### SAMPLE RECEIPT

| | |
|---|---|
| TOTAL NO. OF CONTAINERS | 3 |
| CHAIN OF CUSTODY SEALS | |
| RECD GOOD CONDITION/COLD | |
| CONFORMS TO RECORD | |

(LAB NO.)

| RELINQUISHED BY 1. | RELINQUISHED BY 2. | RELINQUISHED BY 3. |
|---|---|---|
| Romena Jonas 4:45 (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | (SIGNATURE) (TIME) |
| Romena Jonas 9/7/93 (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) |
| Jonas & Associates Inc. (COMPANY) | (COMPANY) | (COMPANY) |
| **RECEIVED BY 1.** | **RECEIVED BY 2.** | **RECEIVED BY (LABORATORY) 3.** |
| (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | B. Moore 6:15 (SIGNATURE) (TIME) |
| (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | B. Moore 9-7-93 (PRINTED NAME) (DATE) |
| | | ChromaLab (COMPANY) |

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File No.: 9309091

JONAS & ASSOCIATES, INC.

Attn: Romena Jonas

RE: Eight soil samples for Gasoline and BTEX analysis

Project Name: GENERAL TIRE-OAKLAND
Project Number: GT-213
Date Sampled: Sept. 7, 1993 Date Submitted: Sept. 7, 1993
Date Analyzed: Sept. 13, 1993

RESULTS:

| Sample I.D. | Gasoline (mg/Kg) | Benzene (µg/Kg) | Toluene (µg/Kg) | Ethyl Benzene (µg/Kg) | Total Xylenes (µg/Kg) |
|---|---|---|---|---|---|
| MW2-5' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW2-10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW2-15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW3-5' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW3-10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW3-15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| DRUM-MW2 | N.D. | N.D. | N.D. | N.D. | N.D. |
| DRUM-MW3 | N.D. | N.D. | N.D. | N.D. | N.D. |
| BLANK | N.D. | N.D. | N.D. | N.D. | N.D. |
| SPIKE RECOVERY | 108% | 97% | 98% | 95% | 95% |
| DUP SPIKE RECOVERY | ---- | 100% | 101% | 100% | 99% |
| DETECTION LIMIT | 1.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| METHOD OF ANALYSIS | 5030/8015 | 8020 | 8020 | 8020 | 8020 |

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

cc

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File No.: 9309091

JONAS & ASSOCIATES, INC.

Attn: Romena Jonas

RE: Eight soil samples for TEPH analysis

Project Name: GENERAL TIRE-OAKLAND
Project Number: GT-213
Date Sampled: Sept. 7, 1993 Date Submitted: Sept. 7, 1993
Date Extracted: Sept. 11, 1993 Date Analyzed: Sept. 11, 1993

RESULTS:

| Sample I.D. | Kerosene (mg/Kg) | Diesel (mg/Kg) | Motor Oil (mg/Kg) |
|---|---|---|---|
| MW2-5' | N.D. | N.D. | N.D. |
| MW2-10' | N.D. | N.D. | 18 |
| MW2-15' | N.D. | N.D. | N.D. |
| MW3-5' | N.D. | N.D. | 18 |
| MW3-10' | N.D. | N.D. | N.D. |
| MW3-15' | N.D. | N.D. | N.D. |
| DRUM-MW2 | N.D. | N.D. | N.D. |
| DRUM-MW3 | N.D. | 9.3 | 50 |
| BLANK | N.D. | N.D. | N.D. |
| SPIKE RECOVERY | ---- | 95% | ---- |
| DUP SPIKE RECOVERY | ---- | 95% | ---- |
| DETECTION LIMIT | 1.0 | 1.0 | 10.0 |
| METHOD OF ANALYSIS | 3550/8015 | 3550/8015 | 3550/8015 |

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

cc

2239 Omega Road #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 14, 1993 ChromaLab File#: 9309091

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** September 7, 1993

**re:** One sample for Volatile Halogenated Organics analysis.

*Sample:* **DRUM-MW2** *Matrix:* SOIL
*Lab #:* 14862-761 *Sampled:* September 7, 1993 *Analyzed:* September 8, 1993
*Method:* EPA 8010

| ANALYTE | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5 | N.D. | 108 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 14 | 5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CHLOROFORM | N.D. | 5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TRICHLOROETHENE | 12 | 5 | N.D. | 94 |
| 1,2-DICHLOROPROPANE | N.D. | 5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 5 | N.D. | -- |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5 | N.D. | -- |
| TETRACHLOROETHENE | 75 | 5 | N.D. | 97 |
| DIBROMOCHLOROMETHANE | N.D. | 5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5 | N.D. | -- |
| BROMOFORM | N.D. | 5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5 | N.D. | 103 |
| 1,3-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5 | N.D. | -- |
| FREON 113 | N.D. | 5 | N.D. | -- |

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140183

# CHROMALAB, INC.

SUB#: 9309091
CLIENT: JONAS
DATE: 09/14/93
2239 C REF: 13185

Order # 13185

## Chain of Custody

DATE 9/7/93 PAGE 1 OF 2

PROJ. MGR. Romena Jonas
COMPANY Jonas & Associates Inc.
ADDRESS 1056 Dale Place
Concord, CA 94518
SAMPLERS (SIGNATURE) (PHONE NO.)
Romena Jonas (510) 676-8554

**ANALYSIS REPORT**

| SAMPLE ID. | DATE | TIME | MATRIX | LAB ID. | TPH - Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 8015) MBTEX (EPA 602,8020) | TPH - Diesel (EPA 3510/3550, 8015) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 525/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520 E&F) | PESTICIDES/PCB (EPA 608, 8080) | PHENOLS (EPA 604, 8040) | TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1) | | METALS: Cd, Cr, Pb, Zn, Ni | CAM METALS (17) | PRIORITY POLLUTANT METALS (13) | EXTRACTION (TCLP, STLC) | TPH-d, K, MO | purgeable hydrocarbons (8010) | TPH-g/BTEX | PCBs 8080 | NUMBER OF CONTAINERS Brass sleeves |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW3-5' | 9/7/93 | 9:00 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| MW3-10' | 9/7/93 | 9:06 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| MW3-15' | 9/7/93 | 9:15 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| MW2-5' | 9/7/93 | 10:10 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| MW2-10' | 9/7/93 | 10:20 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| MW2-15' | 9/7/93 | 10:30 | Soil | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 |
| B1-5' | 9/7/93 | 11:45 | Soil | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| B1-10' | 9/7/93 | 11:50 | Soil | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| B1-15' | 9/7/93 | 11:55 | Soil | | | | | | | | | | | | | | | | | | | | | 1 | 1 |

**PROJECT INFORMATION**

PROJECT NAME: General Tire - Oakland
PROJECT NUMBER: GT-213
SHIPPING NO.: Pick-up
VIA: Chromalab, Inc.
SPECIAL INSTRUCTIONS/COMMENTS:

**SAMPLE RECEIPT**

| | |
|---|---|
| TOTAL NO. OF CONTAINERS | 9 |
| CHAIN OF CUSTODY SEALS | |
| RECD GOOD CONDITION/COLD | |
| CONFORMS TO RECORD | |

| RELINQUISHED BY 1. | RELINQUISHED BY 2. | RELINQUISHED BY 3. |
|---|---|---|
| Romena Jonas 4:45 (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | (SIGNATURE) (TIME) |
| Romena Jonas 9/7/93 (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) |
| Jonas & Associates Inc. (COMPANY) | (COMPANY) | (COMPANY) |
| **RECEIVED BY 1.** | **RECEIVED BY 2.** | **RECEIVED BY (LABORATORY) 3.** |
| (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | R. Morrow 16:57 (SIGNATURE) (TIME) |
| (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | R. Morrow 9-7-93 (PRINTED NAME) (DATE) |
| | | Chromalab |

**CHROMALAB, INC.**

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 13, 1993 ChromaLab File No.: 9310075

JONAS & ASSOCIATES, INC.

Attn: Romena Jonas

RE: Four water samples for TEPH analysis

Project Name: GENERAL TIRE-OAKLAND
Project Number: GT-213
Date Sampled: October 5, 1993 Date Submitted: October 6, 1993
Date Extracted: October 8, 1993 Date Analyzed: October 8, 1993

RESULTS:

| Sample I.D. | Kerosene (µg/L) | Diesel (µg/L) | Motor Oil (mg/L) |
|---|---|---|---|
| MW-1 | N.D. | N.D. | N.D. |
| MW-2 | 490* | N.D. | 0.7 |
| MW-3 | N.D. | N.D. | N.D. |
| MW-D | 110* | N.D. | N.D. |
| BLANK | N.D. | N.D. | N.D. |
| SPIKE RECOVERY | ---- | 123% | ---- |
| DUP SPIKE RECOVERY | ---- | 115% | ---- |
| DETECTION LIMIT | 50 | 50 | 0.5 |
| METHOD OF ANALYSIS | 3510/8015 | 3510/8015 | 3510/8015 |

*Unknown hydrocarbon found in early Kerosene quantified as Kerosene.

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

cc

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Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 13, 1993 ChromaLab File#: 9310075

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** October 6, 1993

**re:** One sample for Volatile Halogenated Compounds analysis.

*Sample:* **MW1-10593** *Matrix:* WATER
*Lab #:* 24248-1116 *Sampled:* October 5, 1993 *Analyzed:* October 12, 1993
*Method:* EPA 601

| ANALYTE | RESULT (ug/L ) | REPORTING LIMIT (ug/L ) | BLANK RESULT (ug/L ) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 0.5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 0.5 | N.D. | 118 |
| METHYLENE CHLORIDE | N.D. | 20 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 0.70 | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHANE | 1.3 | 0.5 | N.D. | -- |
| CHLOROFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 0.5 | N.D. | 101 |
| 1,2-DICHLOROPROPANE | N.D. | 0.5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 2-CHLOROETHYLVINYL ETHER | N.D. | 0.5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 0.5 | N.D. | 106 |
| DIBROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| BROMOFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.5 | N.D. | 104 |
| 1,3-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| FREON 113 | N.D. | 0.5 | N.D. | -- |

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
Laboratory Director

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# CHROMALAB, INC.

Environmental Laboratory (1094)


5 DAYS TURNAROUND

October 13, 1993 ChromaLab File#: 9310075

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** October 6, 1993

**re:** One sample for Volatile Halogenated Compounds analysis.

*Sample:* **MW2-10593** *Matrix:* WATER
*Lab #:* 24249-1116 *Sampled:* October 5, 1993 *Analyzed:* October 12, 1993
*Method:* EPA 601

| ANALYTE | RESULT (ug/L ) | REPORTING LIMIT (ug/L ) | BLANK RESULT (ug/L ) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| VINYL CHLORIDE | 1.5 | 0.5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHENE | 1.0 | 0.5 | N.D. | 118 |
| METHYLENE CHLORIDE | N.D. | 20 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 31 | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROETHENE | 46 | 0.5 | N.D. | 101 |
| 1,2-DICHLOROPROPANE | N.D. | 0.5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 2-CHLOROETHYLVINYL ETHER | N.D. | 0.5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TETRACHLOROETHENE | 40 | 0.5 | N.D. | 106 |
| DIBROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| BROMOFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.5 | N.D. | 104 |
| 1,3-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| FREON 113 | N.D. | 0.5 | N.D. | -- |

ChromaLab, Inc.

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# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 13, 1993 ChromaLab File#: 9310075

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** October 6, 1993

**re:** One sample for Volatile Halogenated Compounds analysis.

*Sample:* **MW3-10593** *Matrix:* WATER
*Lab #:* 24250-1116 *Sampled:* October 5, 1993 *Analyzed:* October 12, 1993
*Method:* EPA 601

| ANALYTE | RESULT (ug/L ) | REPORTING LIMIT (ug/L ) | BLANK RESULT (ug/L ) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 0.5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 0.5 | N.D. | 118 |
| METHYLENE CHLORIDE | N.D. | 20 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | N.D. | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 0.5 | N.D. | 101 |
| 1,2-DICHLOROPROPANE | N.D. | 0.5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 2-CHLOROETHYLVINYL ETHER | N.D. | 0.5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 0.5 | N.D. | 106 |
| DIBROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| BROMOFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.5 | N.D. | 104 |
| 1,3-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| FREON 113 | N.D. | 0.5 | N.D. | -- |

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
Laboratory Director

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# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 13, 1993 ChromaLab File#: 9310075

JONAS & ASSOCIATES, INC.

**Atten:** Romena Jonas

**Project:** GENERAL TIRE-OAKLAND **Project#:** GT-213
**Submitted:** October 6, 1993

**re:** One sample for Volatile Halogenated Compounds analysis.

*Sample:* **MWd-10593** *Matrix:* WATER
*Lab #:* 24251-1116 *Sampled:* October 5, 1993 *Analyzed:* October 12, 1993
*Method:* EPA 601

| ANALYTE | RESULT (ug/L ) | REPORTING LIMIT (ug/L ) | BLANK RESULT (ug/L ) | BLANK SPIKE RESULT (%) |
|---|---|---|---|---|
| CHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 0.5 | N.D. | -- |
| BROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROFLUOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHENE | 0.90 | 0.5 | N.D. | 118 |
| METHYLENE CHLORIDE | N.D. | 20 | N.D. | -- |
| TRANS-1,2-DICHLOROETHENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,2-DICHLOROETHENE | 29 | 0.5 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TRICHLOROETHENE | 41 | 0.5 | N.D. | 101 |
| 1,2-DICHLOROPROPANE | N.D. | 0.5 | N.D. | -- |
| BROMODICHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| 2-CHLOROETHYLVINYL ETHER | N.D. | 0.5 | N.D. | -- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.5 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.5 | N.D. | -- |
| TETRACHLOROETHENE | 40 | 0.5 | N.D. | 106 |
| DIBROMOCHLOROMETHANE | N.D. | 0.5 | N.D. | -- |
| CHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| BROMOFORM | N.D. | 0.5 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.5 | N.D. | 104 |
| 1,3-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 0.5 | N.D. | -- |
| FREON 113 | N.D. | 0.5 | N.D. | -- |

ChromaLab, Inc.

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# CHROMALAB, INC.

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510/831-1788 • Facsimile 510/831-8798

Cider # 13609

## Chain of Custody

75/24248-24251

DATE 10/05/93 PAGE 1 OF 1

PROJ. MGR. Romena Jonas
COMPANY JONAS & ASSOCIATES INC.
ADDRESS 1056 Dale Place
Concord, California 94518

SAMPLERS (SIGNATURE) (PHONE NO.)
Jonas & Associates Inc. (510) 676-8554

SUBM #: 9310075
CLIENT: JONAS
DUE: 10/13/93
REF: 13609

ANALYSIS RE

| SAMPLE ID. | DATE | TIME | MATRIX | LAB ID. | TPH - Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 8015) w/BTeX (EPA 602,8020) | TPH - Diesel (EPA 3510/3550, 8015) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520 E&F) | PESTICIDES/PCB (EPA 608, 8080) | PHENOLS (EPA 604, 8040) | TOTAL RECOVERABLE HYDROCARBONS | | METALS: Cd, Cr | CAM METALS (1 | PRIORITY POLLUTANT METALS (13) | EXTRACTION (TCLP, STLC) | | | | | NUMBER OF CO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | | Water | | | | X | | X | | | | | | | | | | | | | | | | 4 |
| MW2-10593 | 10/5/93 | 12:20 | Water | | | | X | | X | | | | | | | | | | | | | | | | 4 |
| MW3-10593 | 10/5/93 | 10:50 | Water | | | | X | | X | | | | | | | | | | | | | | | | 4 |
| MWd-10593 | 10/5/93 | 12:25 | Water | | | | X | | X | | | | | | | | | | | | | | | | 4 |

### PROJECT INFORMATION

PROJECT NAME: General Tire - Oakland
PROJECT NUMBER: GT-213
SHIPPING ID. NO.: Pick-up
VIA: ChromaLab
SPECIAL INSTRUCTIONS/COMMENTS:

### SAMPLE RECEIPT

| | |
|---|---|
| TOTAL NO. OF CONTAINERS | 16 |
| CHAIN OF CUSTODY SEALS | |
| REC'D GOOD CONDITION/COLD | |
| CONFORMS TO RECORD | |
| LAB NO. | |

| RELINQUISHED BY 1. | RELINQUISHED BY 2 | RELINQUISHED BY 3 |
|---|---|---|
| Romena Jonas 11:39 (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | (SIGNATURE) (TIME) |
| Romena Jonas 10/6/93 (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) |
| Jonas & Associates Inc. (COMPANY) | (COMPANY) | (COMPANY) |
| **RECEIVED BY 1** | **RECEIVED BY 2** | **RECEIVED BY (LABORATORY) 3** |
| (SIGNATURE) (TIME) | (SIGNATURE) (TIME) | (SIGNATURE) 11:44 (TIME) |
| (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) | P. Hamm 10/6/93 (PRINTED NAME) (DATE) |
| (COMPANY) | (COMPANY) | Chromalab, Inc. (LAB) |

Appendix D
Elevation Survey Results
Kier & Wright Civil Engineers & Surveyors, Inc.
November 22, 1993
General Tire Oakland Facility

KIER & WRIGHT
Civil Engineers & Surveyors, Inc.

November 22, 1993
Job No. 93586

Mr. Romena Jonas
Jonas & Associates, Inc.
Environmental Consultants
1056 Dale Place
Concord, CA 94518

RE: GENERAL TIRE FACILITY

Dear Romena:

As you have requested we have surveyed the 3 monitoring wells at the General Tire Facility in Oakland. The elevations were surveyed to Mean Seal Level and their locations tied to City of Oakland Monuments.

If we can be of further service or if you have any questions, please do not hesitate to give us a call.

Sincerely,

KIER & WRIGHT

Ken Porter

KRP/rl

Enclosure

5680 West Las Positas Boulevard, Suite 34 • Pleasanton, California 94588 • (510) 734-8060 • FAX (510) 734-8064

November 22, 1993
Job No. 93586

Table of Elevations & Coordinates on Monitoring Wells
General Tire, Inc.
1201 14th Avenue
Oakland, California

| Well No. | Northing | Easting | Elevation |
|---|---|---|---|
| MW-1 | 474023.22 | 1495579.17 | 18.58 at punch on N. rim of box<br>18.29 at notch in PVC casing |
| MW-2 | 474169.72 | 1495664.73 | 20.77 at punch on N. rim of box<br>20.18 at notch in PVC casing |
| MW-3 | 473977.93 | 1495474.96 | 19.99 at punch on N. rim of box<br>19.55 at notch on in PVC casing |

Benchmark: City of Oakland Benchmark No. 1521, 15th Avenue and 14th Street. Cut square at concrete curb centerline at return Northeast corner of East 14th Street and 15th Avenue.

Elevation = 32.84 M.S.L.

Basis of Bearings and Coordinates:

The bearing South 51° 55' 03" East taken on the monument line of East 12th Street between the City of Oakland Monument located 11 feet North of the centerline of East 12th Street and 11 feet West of the centerline of 14th Avenue (coordinate values North 473900.35 / East 1495592.99) and the City of Oakland Monument located 11 feet North of the centerline of East 12th Street and 11 feet West of the centerline of 16th Avenue (coordinate values North 473520.89 / East 1496077.24) was taken as the basis of all bearings and coordinates shown hereon.

# Appendix E
# Summary Tables of 1993 Groundwater and Soil Samples Analytical Results
# General Tire Oakland Facility

GENERAL TIRE OAKLAND FACILITY
SOIL ANALYTICAL RESULTS
SEPTEMBER 1993

Table S1
GENERAL TIRE OAKLAND
SOIL ANALYTICAL RESULTS
PETROLEUM HYDROCARBONS - METHOD: 5030/8015/8020/3550
{milligrams chemical per kilogram soil}

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | TPH Gasoline | Benzene | Toluene | Ethyl Benzene | Total Xylenes | TEPH Diesel | TEPH Kerosene | TEPH Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW2-5' | 9/7/93 | 5' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | ND(10.0) |
| MW2-10' | 9/7/93 | 10' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | **18** |
| MW2-15' | 9/7/93 | 15' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | ND(10.0) |
| MW3-5' | 9/7/93 | 5' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | **18** |
| MW3-10' | 9/7/93 | 10' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | ND(10.0) |
| MW3-15' | 9/7/93 | 15' | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | ND(10.0) |
| Drum-MW2 | 9/7/93 | Composite | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(1.0) | ND(1.0) | ND(10.0) |
| Drum-MW3 | 9/7/93 | Composite | soil | CrLab | ND(1.0) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | **9.3** | ND(1.0) | **50** |

notes: CrLab: Chromalab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.
NA = Not Analyzed.
TPH: Total Petroleum Hydrocarbons
TEPH: Total Extractable Petroleum Hydrocarbons

Table S2
GENERAL TIRE OAKLAND FACILITY
SOIL ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
(milligrams chemical per kilogram soil)

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | Bromodichloro-methane | Bromoform | Bromo-chloromethane | Carbon Tetrachloride | Chloro-benzene | Chloro-ethane | 2-Chloroethyl Vinyl Ether | Chloroform | Chloro-methane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW2-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW2 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW3 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: ChromaLab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.

Table S2[con't]
GENERAL TIRE OAKLAND FACILITY
SOIL ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{milligrams chemical per kilogram soil}

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | Dibromo-chloromethane | 1,2-Dichloro-benzene | 1,3-Dichloro-benzene | 1,4-Dichloro-benzene | 1,1-Dichloro-ethane | 1,2-Dichloro-ethane | 1,1-Dichloro-ethene | 1,2-Dichloro-propane | cis-1,3-Di-chloropropene | trans-1,3-Di-chloropropene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW2-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW2 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW3 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: Chromalab Inc.
ND(0.004) = Not Detected above the laboratory detection limit in parentheses.

Table S2con't
GENERAL TIRE OAKLAND FACILITY
SOIL ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
(milligrams chemical per kilogram soil)

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | Freon | Methylene Chloride | 1,1,2,2-Tetra-chloroethane | Tetra-chloroethene | 1,1,1-Tri-chloroethane | 1,1,2-Tri-chloroethane | Tri-chloroethene | Trichlorofluoro-methane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW2-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | **0.073** | ND(0.005) | ND(0.005) | **0.0066** | ND(0.005) |
| MW2-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | **0.110** | ND(0.005) | ND(0.005) | **0.360** | ND(0.005) |
| MW2-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW2 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | **0.075** | ND(0.005) | ND(0.005) | **0.012** | ND(0.005) |
| DRUM-MW3 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: Chromalab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.

Table S2[con't]
GENERAL TIRE OAKLAND FACILITY
SOIL ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{milligrams chemical per kilogram soil}

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | Vinyl Chloride | Trans-1,2-Dichloro-ethene | Cis-1,2-Dichloro-ethene |
|---|---|---|---|---|---|---|---|
| MW2-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | **0.0059** |
| MW2-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | **0.0087** | **0.240** |
| MW2-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-5' | 9/7/93 | 5' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10' | 9/7/93 | 10' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-15' | 9/7/93 | 15' | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |
| DRUM-MW2 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | **0.014** |
| DRUM-MW3 | 9/7/93 | Composite | soil | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: Chromalab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.

Table S3
GENERAL TIRE OAKLAND FACILITY
SOIL SAMPLE RESULTS
PCBs - METHOD: 8080
{milligrams chemical per kilogram soil}

| Sample I.D. | Sampling Date | Depth (feet) | Matrix | Lab | PCBs |
|---|---|---|---|---|---|
| B1-5' | 9/7/93 | 5' | soil | CrLab | ND(0.05) |
| B1-10' | 9/7/93 | 10' | soil | CrLab | ND(0.05) |
| B1-15' | 9/7/93 | 15' | soil | CrLab | ND(0.05) |
| DRUM B1 | 9/7/93 | Composite | soil | CrLab | ND(0.05) |

notes: CrLab: Chromalab Inc.
ND(0.05) = Not Detected above the laboratory detection limit in parentheses.

GENERAL TIRE OAKLAND FACILITY
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 1993

Table GW1
GENERAL TIRE OAKLAND
GROUNDWATER ANALYTICAL RESULTS
PETROLEUM HYDROCARBONS - METHOD: 3510/8015
{parts per million}

| Sample I.D. | Sampling Date | Water Elevation (feet) | Matrix | Lab | TEPH Diesel | TEPH Kerosene | TEPH Motor Oil |
|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | 9.56' | water | CrLab | ND(0.05) | ND(0.05) | ND(0.5) |
| MW2-10593 | 10/5/93 | 13.38' | water | CrLab | ND(0.05) | **0.490** | **0.7** |
| MW3-10593 | 10/5/93 | 9.05' | water | CrLab | ND(0.05) | ND(0.05) | ND(0.5) |
| MWd-10593 | 10/5/93 | -- | water | CrLab | ND(0.05) | **0.110** | ND(0.5) |

notes: CrLab: Chromalab Inc.
ND(0.05) = Not Detected above the laboratory detection limit in parentheses.
TEPH = total extractable petroleum hydrocarbon

Table GW2
GENERAL TIRE OAKLAND FACILITY
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{parts per million}

Water

| Sample I.D. | Sampling Date | Elevation (feet) | Matrix | Lab | Bromodichloro-methane | Bromoform | Bromo-chloromethane | Carbon Tetrachloride | Chloro-benzene | Chloro-ethane | 2-Chloroethyl Vinyl Ether | Chloroform | Chloro-methane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | 9.56' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-10593 | 10/5/93 | 13.38' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10593 | 10/5/93 | 9.04' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MWd-10593 | 10/5/93 | -- | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: ChromaLab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.

Table GW2[con't]
GENERAL TIRE OAKLAND FACILITY
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{parts per million}

| Sample I.D. | Sampling Date | Water Elevation (feet) | Matrix | Lab | Dibromo-chloromethane | 1,2-Dichloro-benzene | 1,3-Dichloro-benzene | 1,4-Dichloro-benzene | 1,1-Dichloro-ethane | 1,2-Dichloro-ethane | 1,1-Dichloro-ethene | 1,2-Dichloro-propane | cis-1,3-Di-chloropropene | trans-1,3-Di-chloropropene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | 9.56' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | **0.0013** | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-10593 | 10/5/93 | 13.38' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | **0.001** | ND(0.005) | ND(0.005) | ND(0.005) |
| MW3-10593 | 10/5/93 | 9.04' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MWd-10593 | 10/5/93 | -- | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | **0.0009** | ND(0.005) | ND(0.005) | ND(0.005) |

notes: CrLab: Chromalab Inc.
ND(0.004) = Not Detected above the laboratory detection limit in parentheses.

Table GW2con't
GENERAL TIRE OAKLAND FACILITY
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{parts per million}

| Sample I.D. | Sampling Date | Water Elevation (feet) | Matrix | Lab | Freon | Methylene Chloride | 1,1,2,2-Tetra-chloroethane | Tetra-chloroethene | 1,1,1-Tri-chloroethane | 1,1,2-Tri-chloroethane | Tri-chloroethene | Trichlorofluoro-methane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | 9.56' | water | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MW2-10593 | 10/5/93 | 13.38' | water | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | **0.040** | ND(0.005) | ND(0.005) | **0.046** | ND(0.005) |
| MW3-10593 | 10/5/93 | 9.04' | water | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005) |
| MWd-10593 | 10/5/93 | -- | water | CrLab | ND(0.005) | ND(0.1) | ND(0.005) | **0.040** | ND(0.005) | ND(0.005) | **0.041** | ND(0.005) |

notes: CrLab: Chromalab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.

Table GW2con't
GENERAL TIRE OAKLAND FACILITY
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANICS - METHOD: 8010
{parts per million}

| Sample I.D. | Sampling Date | Water Elevation (feet) | Matrix | Lab | Vinyl Chloride | Trans-1,2-Dichloro-ethene | Cis-1,2-Dichloro-ethene |
|---|---|---|---|---|---|---|---|
| MW1-10593 | 10/5/93 | 9.56' | water | CrLab | ND(0.005) | ND(0.005) | **0.0007** |
| MW2-10593 | 10/5/93 | 13.38' | water | CrLab | **0.0015** | ND(0.005) | **0.031** |
| MW3-10593 | 10/5/93 | 9.04' | water | CrLab | ND(0.005) | ND(0.005) | ND(0.005) |
| MWd-10593 | 10/5/93 | -- | water | CrLab | ND(0.005) | ND(0.005) | **0.029** |

notes: CrLab: Chromalab Inc.
ND(0.005) = Not Detected above the laboratory detection limit in parentheses.