WORK PLAN FOR PHASE I INVESTIGATION TARGET STORE T-328 DUBLIN, CALIFORNIA

**FEBRUARY 5, 1991** 

Prepared for Target Stores, Inc. 33 South Sixth Street Minneapolis, Minnesota 55440

PREPARED BY:
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February 5, 1991

Dr. Ravi Arulanantham Alameda County Health Agency Department of Environmental Health Division of Hazardous Materials 80 Swan Way, Room 200 Oakland, California 94621

Dear Dr. Arulanantham:

Enclosed is the work plan for a Phase 1 Investigation at Target Store T-328 located in Dublin, California. This work plan was submitted for your review, at your request.

Work will begin as outlined in the work plan, after approval of the work plan. Field work has been scheduled to begin on February 19, 1991. At this time soil borings and monitor wells will be constructed.

February 7, ..., 521-5200.

When I want of the second of t A copy of the Health and Safety Plan for this site will be sent to you on February 7, 1991.

If you have any questions or comments, please call me at (415) 521-5200.

Sincerely,

suppell Med. Campbell McLeod Senior Geologist

Enclosure

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#### 1.0 INTRODUCTION

This work plan to conduct a Phase I subsurface investigation at the former Target Store T-328 Service Station has been prepared by McLaren/Hart, and is being submitted at the request of Target Stores, Inc. (TSI). The work will be performed to aid in the determination of the vertical and lateral extent of petroleum hydrocarbons in unsaturated soils adjacent to the location of the former underground tanks and to evaluate the potential impact of these compounds on groundwater. The groundwater quality and flow direction will be determined adjacent to the former underground fuel tanks. The site is a former retail service station located at 7608 Amador Valley Boulevard in Dublin, California. Figure 1 illustrates the location of the site. Figure 2 shows: 1) the location of the former underground tanks and 2) the locations and analytical results of soil samples collected during tank removals.

This work plan is to be submitted to the Alameda County Department of Environmental Health, which is representing the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) for this site. The work plan conforms to the recommended work plan format for initial subsurface investigation provided in Appendix A of "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Site", dated August 10, 1990.

#### SCOPE OF WORK

This investigation of subsurface conditions will include project management (Task 1), research of chemical usages and land uses at adjacent properties (Task 2), a soil investigation to characterize soil conditions in the vicinity of the former underground tanks (Task 3), and the installation, development, and sampling of four groundwater monitoring wells (Task 4). Findings and recommendations from this investigation will be presented in a Phase I data report (Task 5).

#### SITE DESCRIPTION

The former Target Store T-328 retail service station property is approximately 100 feet by 150 feet and is situated north of the Amador Plaza along Amador Valley Boulevard, in a commercial shopping district. Residential neighborhoods are located north of Amador Valley Boulevard. The property had one cashier building and two service islands with overhangs. As shown on Figure 2, four underground fuel tanks were located on the southern side of the property. All four tanks were removed in September 1990, along with all associated piping, pump islands, and overhangs. Currently, there are no structures on the site. A fence surrounding approximately 160 cubic yards of soil generated during the excavation of the tanks is all that remains on site.

#### SITE HISTORY

The subject site was a gas station from 1970 to 1989. Prior to the construction of a gas station at the property, it was undeveloped farm land. Four underground fuel storage tanks and their associated piping were removed from the site between September 20 and 24, 1990. In addition the pump islands and overhangs were demolished. The four tanks consisted of two unleaded, one leaded and one diesel fuel tanks. These tanks each had a capacity of approximately 12,000 gallons. The excavation was backfilled shortly after the tanks were removed because the clay-rich soils along the edges of the excavation were caving in. The Alameda County Department of Environmental Health approved the closure plan for this site and had an inspector on site during tank removal. A geotechnical report was prepared by BSK Associates for the backfilling of the excavation and was submitted to the city of Dublin. McLaren/Hart prepared a report detailing the closure entitled "Facility Closure and Underground Fuel Tank Removal Report for Target Store T-328 Located in Dublin California" dated December 4, 1990.

#### Tank Removal

A total of four tanks were removed by Decon Environmental Services, Inc. on September 24, 1990. These included two 12,000 gallon unleaded fuel tanks, one 12,000-gallon leaded fuel tank and one 12,000-gallon diesel fuel tank. Groundwater was encountered at eight feet below grade and contained a floating petroleum product. Due to the presence of product in the excavation an Underground Storage Tank Unauthorized Release form was completed and submitted to the inspector from Alameda County Department of Health Services. Approximately 3,000 gallons of groundwater and petroleum product was extracted from the excavation during the, course of the tank removal and shipped under manifest to Refinery Services, Inc. Patterson, California.

#### Condition of Tanks

The four underground fuel storage tanks were inspected upon removal for the presence of perforations. Because of the thick, irregular tar coating on the tanks, no perforations were readily observed in any of the tanks. However, while rinsate was being evacuated from the super unleaded tank of the facility, groundwater was observed flowing into the tank, indicating the presence of possible perforations in this tank.

#### Soil Sample Results

Soil samples were collected by McLaren/Hart on September 27, 1990 and October 1, 1990. The samples collected were analyzed for total petroleum hydrocarbon (TPH) as gasoline and diesel, and for benzene, toluene, ethylbenzene, and xylenes (BTEX). Soil sample locations are shown on Figure 2. Soil samples collected near the leaded gasoline tank were also analyzed for lead. The analytical results are presented in Table 1.

During the initial soil sampling, performed in conjunction with the tank removals, one soil sample was collected from the north end of the super unleaded tank and adjacent to the super unleaded and diesel tanks. Two soil samples were collected beneath and at the ends of each of the three other tanks (Samples A through F, I and J). Because of access problems a sample was not collected at the south end of the super unleaded gasoline tank. Soil samples were subsequently collected following the soil excavation from the stockpiled backfill, and beneath the north and south piping joints. Samples were collected at 6.0 feet below the ground surface. Groundwater was encountered during the excavation at approximately 7.0 feet below grade.

Soil collected beneath the leaded and unleaded gasoline tanks samples were analyzed for total petroleum hydrocarbons as gasoline (TPH/G) using the LUFT Manual Method, and for benzene, toluene, xylenes, and ethylbenzene (BTEX) using EPA Method 8020. Additionally, samples A, B, and J collected beneath the diesel tank were analyzed for TPH as diesel (TPH/D). Soil samples collected near the leaded gasoline tank were analyzed for lead using EPA Method 7420.

Soils collected at the excavation site were found to contain gasoline hydrocarbon concentrations of 80 to 600 ug/g (ppm) and diesel hydrocarbon concentrations of 10 to 30 ug/g. Benzene concentrations in these soils ranged from <0.01 to 0.50 ug/g. Toluene concentrations ranged from 0.2 to 13 ug/g. Ethylbenzene concentrations ranged from <0.01 to 14 ug/g. Xylene concentrations ranged from 0.02 to 74 ug/g. Soil samples were collected in the coarse grained backfill material around the south piping joint. TPH/G and TPH/D were reported at this location at 6,500 ug/g and 50 ug/g respectively. The backfill material is underlain by a clay.

## **Groundwater Sample Results**

After the 10 foot deep excavation filled with groundwater to a depth of approximately 8 feet below ground level, a layer of floating petroleum was observed. The water was purged twice from the excavation by vacuum truck before water samples were collected. The water samples collected were analyzed for TPH/G and TPH/D by LUFT Methods and for benzene, toluene, ethylbenzene, and xylenes using EPA Method 602. Groundwater was also analyzed for lead content using EPA Method 7420. Analytical results are presented in Table 1.

Gasoline and diesel chemicals were present in the groundwater at the site. A gasoline concentration of 28,000 ug/L (ppb) and a diesel concentration of 2000 ug/L were detected in groundwater samples collected from the excavation. Benzene, toluene, ethylbenzene, and xylene groundwater concentrations were determined to be: 1500, 2700, 50, and 3940 ug/L respectively. California Department of Health Services Maximum Contaminant Levels for drinking water are benzene, ethylbenzene and xylenes at 1.0, 680, and 1750 ug/L, respectively, and the action level for toluene is 100 ug/L.

#### 2.0 WORK PLAN

The proposed investigation will be conducted using a phased approach. This work plan is for a Phase 1 or preliminary investigation and subsequent phases may involve product recovery and quarterly monitoring.

Task 1, project management, includes preparation of Health and Safety Plan, subcontracts and correspondence as required by the project, discussions with Target, and project tracking. Task 2, environmental history of adjacent properties, will also include local hydrogeology research. Task 3 includes all work associated with the drilling and sampling of 5 on-site soil borings. Task 4 is the construction of four on-site monitoring wells. Both Tasks 3 and 4 will be performed in one field effort. Task 5 is the preparation of a data report, summarizing the results of Task 2 through 4. Recommendations for any further on-site and off-site investigations deemed necessary will be included in the Phase I report prepared in Task 5.

## TASK 1 - PROJECT MANAGEMENT

Work to be performed under this task will include the preparation of permits and correspondence as required by the project. Project management will also include project status and budget tracking. Also included will be the preparation of a Health and Safety Plan and the selection and scheduling of subcontractors.

# TASK 2 - HISTORICAL ENVIRONMENTAL RESEARCH OF SUBJECT AND ADJACENT PROPERTIES AND PREDRILLING ACTIVITIES

This work will involve a review of agency records at the Alameda County Health Department, the City of Alameda Fire Department, and the Regional Water Quality Control Board, to discover any past history of chemical and/or land usage at properties adjacent to the site, and obtain information on wells in the vicinity of this subject property. If possible, this information will be used to determine the groundwater flow direction in the vicinity of the site. The site will be visited with the purpose of selection soil boring and monitor well locations. A utility clearance will then be performed before drilling begins.

#### TASK 3 - DRILL AND SAMPLE FIVE SOIL BORINGS

A total of five soil borings will be drilled at the site, to aid in the determination of the lateral and vertical extent of petroleum hydrocarbons in the soil surrounding the excavation, as shown in Figure 2. Figure 3 shows the proposed locations of the soil borings. Their locations are within 10 feet of previous borings that reported petroleum hydrocarbons.

Soil boring (SB-3) will be drilled at the south piping joint. One soil boring (SB-4) will be drilled in the vicinity of the former diesel fuel tank. Two borings (SB-1 and SB-2) will be drilled at the southern ends of the leaded and unleaded gasoline tanks where soil samples collected by McLaren/Hart showed concentrations of TPH/g at 600 ppm and 300 ppm. One soil boring (SB-5) will be drilled at the northern end of the unleaded gasoline tank. Soil boring SB-2, located south of the leaded gasoline tank, will be completed as a 4-inch diameter groundwater monitoring well.

#### **Drilling Method**

The soil borings will be drilled with a drill rig equipped with 8-inch hollow-stem augers. Soil samples will be collected continuously beginning at five feet below ground level. Each soil boring will be advanced approximately three feet beyond first water encountered, which is at approximately 8 feet. The soil samples will be logged and classified using the Unified Soil Classification System (USCS). Munsell color, estimated percentages of lithologic constituents, and moisture content will be noted for each sample. Soil samples will be collected using an 18-inch California modified split spoon-sampler lined with 2 x 6-inch brass tubes.

A minimum of one brass tube from each boring will be saved for laboratory analysis. Field monitoring equipment will be used to select the sample from each boring for analysis. The brass tubes will be sealed on each end with teflon tape, a plastic cap, and duct tape. A uniquely numbered identification label will be assigned to each brass tube. Each brass tube will then be placed in a sealable plastic bag and into a cooler filled with ice. Soil samples will be monitored for organic vapors by placing approximately 400 grams of soil into a sealable plastic bag for an equilibrium time of approximately five minutes, and then the head space in the bag will be monitored with a photoionization detector (PID). Field headspace measurements will be recorded on the drilling logs and be used to determine which unsaturated soil sample will be analyzed at each boring.

The depth to groundwater will be noted for each soil boring. Each boring will be backfilled with a neat cement and five percent bentonite mix.

All drilling equipment will be steam-cleaned prior to entering the site to remove any residual oils, chemicals, and soil. The process will be repeated between borings to eliminate any possibility of cross contamination between boreholes. The split-spoon sampler will be decontaminated between sample points by washing it in a solution of trisodium phosphate (TSP) and distilled water, and rinsing with distilled water.

#### Sample Analyses

A minimum of one sample per boring will be submitted for laboratory analysis. Soil samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH/G) at borings SB-1, SB-2 and SB-5. A soil sample from boring SB-4 will be analyzed for total petroleum

hydrocarbons as diesel (TPH/D) according to the LUFT Manual Method. The soil sample collected at SB-3 will be analyzed for both TPH/G and TPH/D. Analyses for benzene, toluene, ethylbenzene, and xylenes(BTEX), will be performed by EPA Method 8020 on samples analyzed for TPH/g.

Soil samples selected for analysis will be shipped under chain-of-custody via an overnight delivery service to McLaren/Hart Analytical Laboratory (MAL), a State of California-certified analytical laboratory. All brass tubes will be placed in an ice chest to keep them cold until delivery to the laboratory, where they will be stored under refrigeration.

The holding times for the analyses stated above for soils are fourteen days. The analyses will be performed within this time frame and analytical results will be received within three weeks from the time of delivery to the laboratory.

#### TASK 4 - INSTALL AND SAMPLE FOUR GROUNDWATER MONITORING WELLS

McLaren/Hart will select locations of the four 4-inch diameter groundwater monitoring wells based on field observations made during Task 2.0. Purposed well locations are shown on Figure 3. The purpose of these wells is to determine the groundwater quality in the uppermost water-bearing zone, and to define the groundwater flow direction. The monitor well (MW-4) constructed adjacent to the former underground fuel tank excavation may be used for future interim remediation if groundwater quality warrants it. Continuous soil samples will be collected for lithologic description. Soil samples will be collected from the water bearing zone for field sieve analysis.

The wells will be screened in the uppermost flow zone as determined by the soil lithology. Design and construction specifications for the monitoring wells will be determined based upon location-specific lithology encountered in the selected well completion zone. The screened interval will extend three to five feet above the first encountered groundwater and 10 feet below the water table. This will ensure that the water level is within the screened interval. The wells are expected to extend a maximum of 20 feet below the ground surface.

Groundwater samples will be collected and analyzed for TPH/G and TPH/D, BTEX, and for lead to determine the potential presence of these compounds in groundwater beneath the site.

#### **Subtask 4A - Well Installation**

The wells will be installed under permits from the Alameda County Flood Control and Water Conservation District -- Zone 7. A McLaren/Hart soil scientist, will be present throughout the drilling operation, and will prepare a detailed lithologic log of the borings and the well construction as-builts.

The wells will be drilled with a drill rig using 10-inch hollow stem augers. After the screened interval has been determined, a well will be constructed inside the hollow stem augers. Figure 4 provides a diagram of the planned wells. Unless a field sieve analysis dictates other wise, all wells will be constructed of 4-inch diameter, flush-threaded, schedule 40 PVC casing and 4-inch diameter, 0.020-inch slot PVC well screen. The annular space of each well will be backfilled with filter pack material, extending one foot above the top of the well screen. A one to two-foot bridge of granular bentonite, will be installed, followed by cement with 5 percent bentonite to the ground surface. Each well will be constructed with a traffic-rated vault box, approximately 1/2-inch above grade. A water-tight locking cap will be placed on each well.

Field sieve analysis will be performed on undisturbed soil samples collected from the monitoring wells to determine the appropriate filter material for the particular lithology encountered in the interval chosen for well completion. To provide a conservative determination of the appropriate well screen and filter pack material for a well, a sample will be collected from the finest-grained saturated material found within the interval selected for screening.

## Well Development

All wells will be developed following construction using a bailer and surge block to remove a minimum of 10 casing volumes of water. The surge block will be used to flush water in and out of the filter pack and break up any material which could inhibit the flow of water into the well. A bailer will be used to remove sediment-laden water. After bailing, a centrifugal pump will be used to purge water and complete development. Well development will continue until the turbidity is less than 100 NTUs. Well development parameters, including volume of water removed, pH, electric conductivity, temperature, turbidity, and flow rate will be recorded and reported.

## Surveying

The top-of-casing elevations for the newly-constructed monitoring wells will be surveyed to a common benchmark, with a datum elevation referenced to mean seal level (msl). The surveying will be performed by a licensed surveyor.

## Subtask 4B - Groundwater Sampling

### Groundwater Sample Collection

Once within two weeks of installation, each new well will be sampled and the water levels will be sounded. Samples from all wells will be analyzed for TPH/G and TPH/D according to the LUFT Manual Method, BTEX using EPA Method 602, and for lead content using EPA Method 7020.

During the sampling round, a travel blank will be collected and analyzed for TPH/G and BTEX. All samples will be submitted to McLaren/Hart Analytical laboratory for analysis.

Before a sample is collected, careful consideration is given to the type of analytical testing that will be required. All due precautions are taken to prevent loss or contamination of the sample and to preserve the sample for subsequent analysis.

The objective of groundwater sampling is to obtain a volume of water that will be as chemically close to the water in the aquifer as possible. In order to meet this objective, the following minimum criteria will be observed.

- All stagnant water from the casing will be removed so that fresh water from the aquifer will enter the well at the time of sample collection.
- The sample will be extracted from the well with as little disturbance and as little exposure to the atmosphere as possible.
- The sample will not be allowed to come into contact with any materials which may adsorb or leach constituents in solution, or alter the sample in any way.
- Physical parameters which would undergo changes due to exposure to the air during containerization, transport, storage or laboratory analysis, and which cannot be preserved, will be measured at the time of sample collection.
- Portions of the sample will be treated to preserve those parameters which would otherwise be or altered affected during transport to the laboratory.

All wells will be purged using a peristaltic or centrifugal pump and will be sampled with a disposable bailer. A minimum of three casing volumes of water will be removed from each well prior to sampling. After each well casing has been removed, the temperature, turbidity, pH and electric conductivity will be measured and recorded. Before sampling, the pH, conductivity and temperature must stabilize. These parameters are considered to have stabilized when the results are reproducible.

The sample containers will be filled using a disposable bailer. A new bailer will be used at each well. Sample containers will be filled until a meniscus forms at the rim; the meniscus will be sheared and the closure secured. Sample containers will be given a number label from a sampling log book. All samples will be placed in a cooler with ice immediately following collection, and will remain in the cooler until received by the laboratory. Samples will be accompanied by chain-of-custody forms at all times.

#### Equipment Decontamination

The field equipment decontamination procedures are rigorous. They have been designed to eliminate any cross-contamination from one sample to another. The sampling equipment will be used once and then returned to the field decontamination center for cleaning. All

plastic tubing and other apparatus that cannot be completely decontaminated will be discarded, and new material will be used.

## Sample Containers/Preservation

Groundwater samples will be collected in appropriate clean glass containers supplied by the laboratory. All glass containers will be placed in an ice chest to keep the samples cooled to 2° to 4° C until delivery to the laboratory, where samples will be stored under refrigeration until analyzed.

## Sample Documentation

Each groundwater sample will be tracked by extensive paper work from the time of collection. The paper work which will be completed during sampling includes, as appropriate: field documentation, hydrologic data sheet, sampling field data sheet, chain-of-custody record and sample labels.

Field data recorded at the time of sample collection will include, as appropriate:

- · Date of entry
- · Purpose of sampling
- · Description of sampling
- · Number of samples taken
- · Date and time of sample collection
- · Field sample identification of well from which sample was collected
- References, such as maps or photographs of sampling site
- Field observations
- · Condition and operation of sampling equipment

Because sampling situations vary widely, field notes will be as descriptive and inclusive as possible; anyone reading the entries should be able to reconstruct the sampling situation from the recorded information. The language will be objective and factual.

Field personnel will date and sign all data entries. All sampling field data sheets will include information on specific activities related to the collection of a single sample. The sampling field data sheet will be completed in the field at the time of sample collection by sampling personnel.

#### Water Level Measurement

Water level measurements will be used to determine the water surface elevation in each of the new monitoring wells. Well sounding will be accomplished using an Olympic Well Probe Model 300 (Actac Corporation) electrical water level sounder. If floating product is observed, the thickness will be measured using a Marine Moisture Systems oil/water interface measurement device and water elevations corrected. All measurements will be referenced to the top of the well casing and expressed in feet.

## Subtask 4C - Disposal of Soil Cuttings and Water from Development and Purging

All soil generated during drilling will be collected in a soil bin; development water and purged water will be collected in a 500-gallon Baker Tank. The soil will then be transported to a Class III landfill, after analyses for TPH/G, BTXE and TPH/D indicate that petroleum concentrations are at acceptable disposal levels (<100 ppm). The liquids generated will also properly be disposed of, based on the analytical results from the Baker Tank. The water from the Baker Tank will be analyzed for the same constituents as the soil.

#### TASK 5 - PREPARE DATA REPORT ON INVESTIGATION FINDINGS

McLaren/Hart will present the results of Tasks 2.0 through 4.0 in a Phase I data report. This report will include a description and historical review of adjacent properties, and the laboratory data, data tables, and drawings necessary to evaluate soil and groundwater data. Drawings will include a site map, generalized lithologic log, chemical distribution in groundwater, groundwater contour map, drilling logs, and well construction details. Original laboratory data, chain-of-custody records, and field sampling records will be provided. The report will include recommendations for Phase II activities, both on- and off-site.

## 3.0 SITE HEALTH AND SAFETY PLAN

A Health and Safety Plan will be updated for this site and presented in this section for inclusion of the work plan submitted to the Alameda County Department of Environmental Health.

#### 4.0 SCHEDULE

The schedule of activities at this site will begin one week after approval has been given by the Alameda County Department of Environmental health. After well permits have been issued the construction, development and sampling of the four monitor wells and drilling of the soil borings will be completed within three weeks.

Within one month of receiving the analytical results from groundwater and soil sampling the summary data report will be submitted to Target.

FIGURE 1 SITE LOCATION MAP TARGET STORE T-328 DUBLIN, CA.

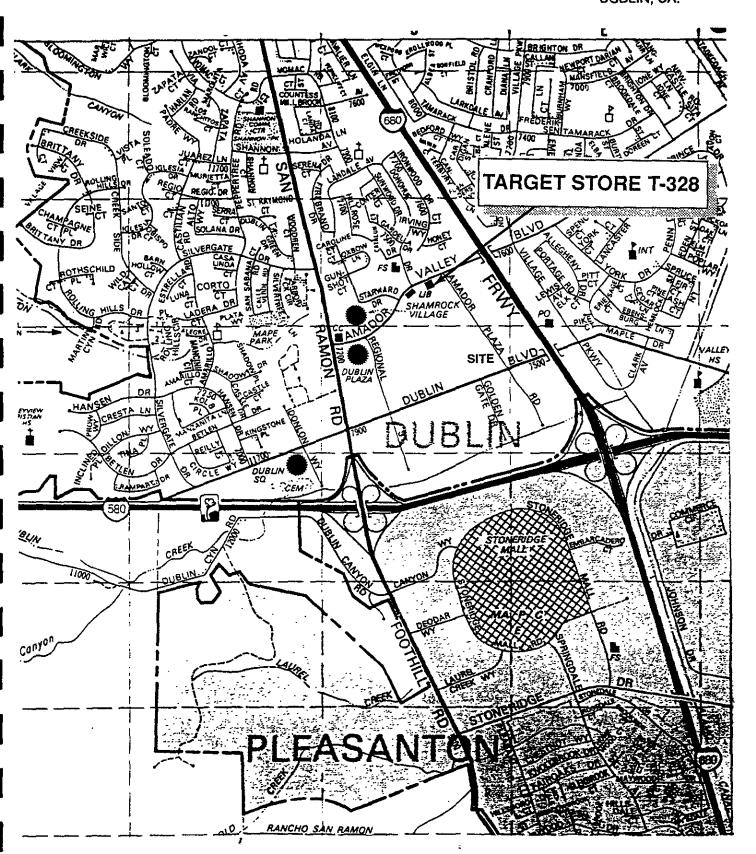
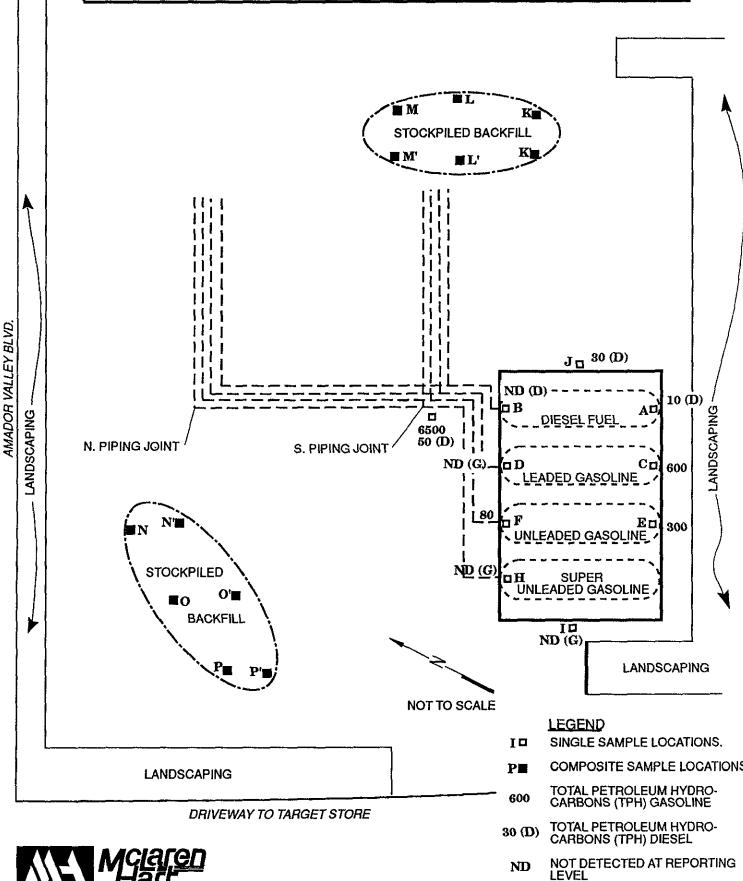
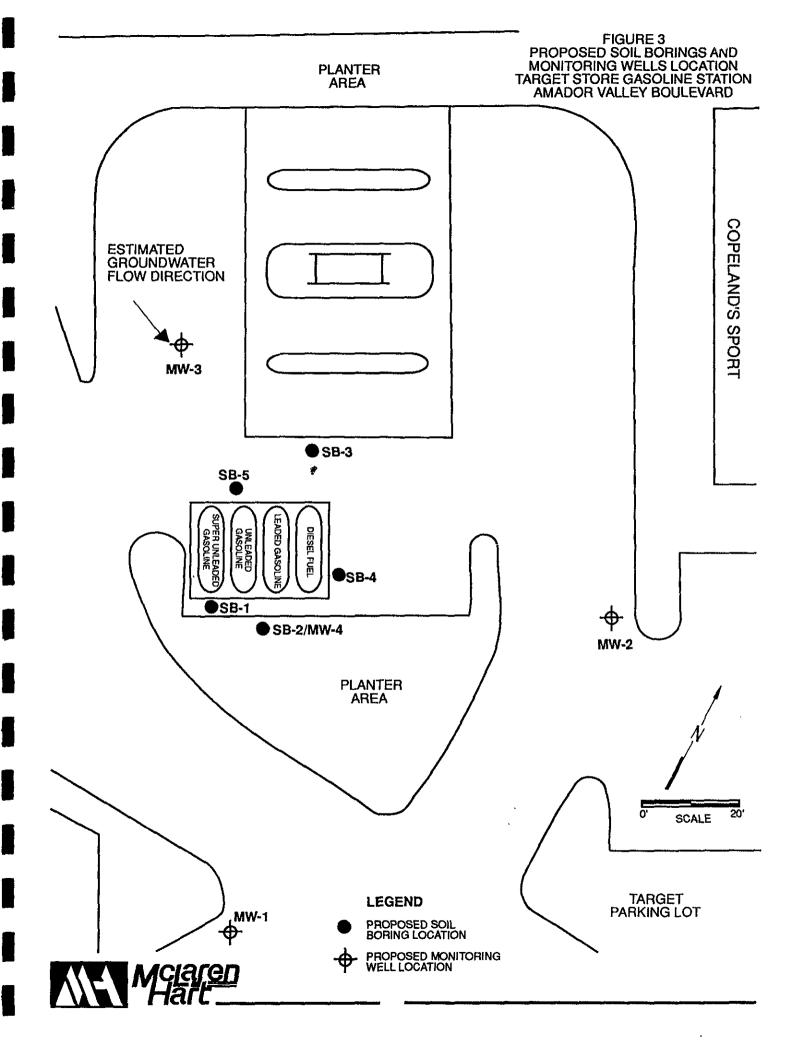




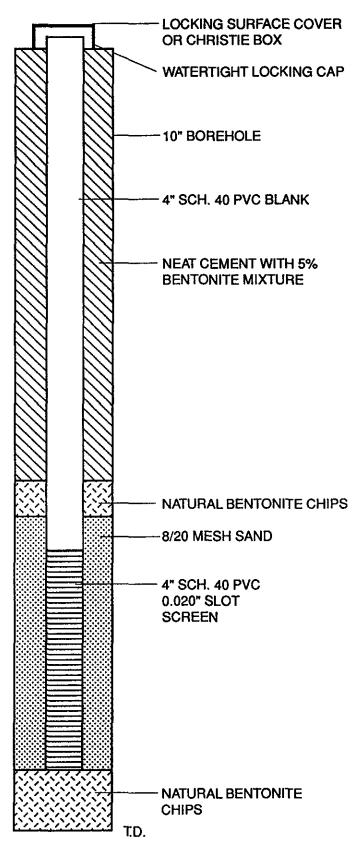
FIGURE 2
TARGET STORE GASOLINE STATION SITE PLAN AND TPH/G AND TPH/D ANALYTICAL RESULTS IN (ppm) OF SOIL SAMPLING K III L' 30 (D) ND (D) 10 (D) Αď, ANDSCAPING 6500 50 (D) ND (G). Cul  $\Box D$ 600 LEADED GASOLINE 80 300 UNLEADED GASOLINE ND(G)**SUPER** шĦ **UNLEADED GASOLINE** Ĭロ ND (G) **LANDSCAPING** NOT TO SCALE **LEGEND** SINGLE SAMPLE LOCATIONS. I COMPOSITE SAMPLE LOCATIONS P TOTAL PETROLEUM HYDRO-CARBONS (TPH) GASOLINE 600 TOTAL PETROLEUM HYDRO-CARBONS (TPH) DIESEL 30 (D) NOT DETECTED AT REPORTING LEVEL ND







## FIGURE 4 TYPICAL MONITORING WELL



**NOT TO SCALE** 



TABLE 1

SOIL AND GROUNDWATER PETROLEUM HYDROCARBON CONCENTRATIONS
(All concentrations are in parts per million)

Sample Location	TPH G	TPH D	<u>Benzene</u>	<u>Toluene</u>	Ethylbenzene	Xylenes	Total Lead
Location A	x	10	0.5	0.2	0.4	2.5	x
Location B	x	BRL	BRL	13	6	37	x
Location C	600	X	BRL	11	14	74	12
Location D	BRL	X	BRL	0.11	BRL	0.20	10
Location E	300	X	BRL	11	6	34	x
Location F	80	X	BRL	2.2	4.0	8.7	x
Location H	BRL	x	BRL	BRL	BRL	BRL	x
Location I	BRL	x	BRL	0.02	BRL	0.02	x
Location J	x	30	BRL	0.2	0.4	1.9	x
Composite K	3	BRL	0.06	0.02	0.08	0.30	X
Composite L	300	350	BRL	BRL	5	38	x

X Indicates analysis not requested. BRL Indicates a below reporting limit.

TABLE 1
(continued)

SOIL AND GROUNDWATER PETROLEUM HYDROCARBON CONCENTRATIONS
(All concentrations are in parts per million)

Sample Location	TPH G	TPH D	<u>Benzene</u>	<u>Toluene</u>	<b>Ethylbenzene</b>	<u>Xylenes</u>	Total Lead
Composite M	5	400	BRL	BRL	0.16	1.0	x
Composite N	4	BRL	0.02	0.09	0.11	0.80	x
Composite 0	50	BRL	BRL	1.5	1.4	10.0	x
Composite P	50	BRL	BRL	1	BRL	6	x
North Piping Joint	BRL	BRL	BRL	BRL	BRL	BRL	X
South Piping Joint	6500	50	51	320	74	372	x
Groundwater	28.000	2.000	1.500	2.700	0.050	3.940	BRL

X Indicates analysis not requested. BRL Indicates a below reporting limit.