Vector Three
Environmental
Inc.
Environmental Engineering
Lic. #558239

INTERIM REPORT OF GROUNDWATER MONITORING WELL INSTALLATION AND SITE ASSESSMENT REPORT AT 30215 MORNING VIEW DRIVE, MALIBU, CA, 90265

LOP File Number I-13216

To:

California Regional Water Quality Control Board
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Leaking Underground Tank Division

Prepared for:

SANTA MONICA-MALIBU SCHOOL DISTRICT
1651 SIXTEENTH STREET
SANTA MONICA, CA 90404

December 7, 1995

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1.0 INTRODUCTION

From April 14, through May 12, 1995, Vector Three Environmental, Inc. (VIII) conducted a site investigation, installed four groundwater monitoring wells and performed a groundwater sampling at the Santa Monica-Malibu School District bus barn located at Malibu Park School, 30215 Morning View Drive, Malibu, California, 90265, see Figure 1, Index Map. The work was performed by Mr. Christopher E. Wernicke, Project Geologist and Mr. Tim Buro, Project Manager of VIII. The drilling and well construction services were performed by WESTEX of Simi Valley, CA. The analytical laboratory was Chemical and Environmental Laboratories, Inc. of Santa Fe Springs, CA.

Work was performed in general accordance with a work plan submitted by Ocean Blue Engineers, Inc. (1994) and revised by two review letters from the County of Los Angeles, Department of Public Works, Waste Management Division, Local Oversite Program (LOP) guidelines, to conform with established guidelines (County of Los Angeles, 1994a, 1994b).

Under the Purpose of Guidelines (County of Los Angeles, 1993), Chapter 1, not all recommended activities are required at each site, LOP or the Board will tailor the requirements on a site by site basis reflecting the specific site conditions. Open communication between the responsible party, consultants and the agency will facilitate the regulated community to complete comprehensive and expeditious site remediation.

2.0 BACKGROUND

The Tank Removal

Two underground storage tanks used for diesel fuel were removed from the subject site between August 21 and August 26, 1992. The tanks were situated with their longitudinal midline parallel to the bus barn and approximately 15 feet south of the bus barn, the lateral position is more poorly defined on the site plan figure #2. One sample was collected from each end of each tank and from directly beneath each dispenser for a total of six in-situ soil samples, see Figure 2, Site Plan. Five samples were collected from a stockpile of excavated soil (The report suggest the stockpile will be shipped to a treatment facility). Nine of eleven soil samples collected after the tanks were removed contained diesel fuel, five of those had concentrations higher than 1,000 milligrams per kilogram of soil (mg/kg), with maximum detected concentrations of 5,800 mg/kg, see

Figure 3 for the distribution of the TPH as diesel fuel results. The soil underneath both tanks and both dispensers were apparently impacted by the unauthorized release of diesel fuel, based on visual, olfactory and field monitoring (TTMS, Inc., August, 1992). See Table 1 for a summary of the tank removal laboratory test results.

Table 1
Summary of Laboratory Results for Samples Collected After the Tanks Were Removed

Sample Number (SS Prefix is not printed on Figure 2, Site Plan)(spoil pile samples not on site plan)	TPH Diesel Fuel mg/kg	EPA 8020 µg/kg			
		Benzene	Toluene	Ethylbenzene	Xylene
SS T1AW	2,400	ND	68	64	500
SS T1BE	5,400	ND	38	26	300
SS T2AW	5,800	ND	10,000	15,500	130,000
SS T2BE	11	ND	32	32	320
SS D1C	450	ND	ND	ND	ND
SS D2C	2,700	ND	16	ND	36

Table 1
Summary of Laboratory Results for Samples Collected After the Tanks Were Removed

Sample Number (SS Prefix is not printed on Figure 2, Site Plan)(spoil pile samples not on site plan)	TPH Diesel Fuel mg/kg	EPA 8020 µg/kg			
		Benzene	Toluene	Ethylbenzene	Xylene
SSSP1N	ND	ND	ND	ND	ND
SSSP1E	1,200	ND	6.2	ND	880
SSSP1S	ND	ND	ND	ND	ND
SSSP1W	16	ND	ND	ND	ND
SSSP1SE	180	ND	ND	ND	430

ND Not Detected

The Initial Site Investigation in October, 1992

A site investigation was conducted on October 20 and October 21, 1992. The investigation was divided into a Webster Elementary School Phase and a Malibu Park School Phase (Earth Systems, Inc.,1992). Webster Elementary School is located several miles from Malibu Park School; we will only review the relevant portion of the report.

Six soil borings were advanced with a hollow stem auger to a depth of 20 feet below the ground surface. Two additional borings were advanced to thirty-five and forty feet respectively, see Figure 2, Site Plan. The borings were plotted by scaling their site plan; they depict the tanks at 40 feet long and the bus barn as 143 feet long, but tanks are only 30 feet long and the barn is 132 feet long. Only nine samples from the eight soil borings were analyzed in the laboratory.

The investigation indicated diesel fuel in the vicinity of the eastern dispenser (SSDS2) and the northwest corner of the eastern tank (T2BE), at the southwest corner of the eastern tank (T2BE) and at the east end of the eastern tank (T2BE). BTEX compounds found in borings including benzene measured at 360 micrograms per kilogram of soil (µg/kg) were also detected at a depth of 39 feet below the ground surface, the only sample analyzed deeper than 19 feet below the ground surface. Soil borings 2, 7 and 8 were situated around the western tank and had one sample analyzed each from a depth of 14 feet below the ground surface, approximately two feet below the tank invert.

Table 2
Summary of Laboratory Results of Soil Analysis from the October, 1992 Investigation

Sample Identification and depth	TPH Diesel Fuel mg/Kg	EPA METHOD 8020 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
1 @ 19'	2,200	56	17,000	32,000	310,000
2 @ 14'	ND	ND	ND	ND	ND
3 @ 19'	ND	ND	ND	ND	ND
3 @ 39'	ND	360	280	520	2,000
4 @ 19'	ND	ND	ND	ND	ND
5 @ 14'	ND	ND	ND	ND	ND
6 @ 14'	ND	10	12	ND	23
7 @ 14'	ND	ND	ND	ND	ND
8 @ 14'	ND	ND	ND	ND	ND
Detection Limit	10	5	5	5	20

ND - Not Detected

Additional Investigation in January, 1993

Two additional soil borings were advanced to depths of 40.5 and 41.5 feet below the ground surface and one boring was advance to a depth of 30 feet below the ground surface at a 30° angle from vertical. The linear depth of the slant boring was 35 feet, see Figure 2, Site Plan. A hand boring was completed beneath each dispenser and a water sample was collected from a boring left open overnight. The static depth to groundwater was 34 feet below the ground surface at B-11, the water level apparently rose in the open boring overnight (Earth Systems, Inc.,1993). See Table 3 for a summary lab test results.

Benzene was measured in three of five samples collected below a depth of thirty feet as well as dissolved in the groundwater at a concentration of 1.5 milligrams per liter (mg/l). Benzene was also detected in the previous investigation.

Diesel fuel was detected in the samples retrieved from the borings beneath both dispensers. The slant boring B10 did not detect diesel fuel at depths of 12.5, 20 and 30 feet beneath the east dispenser plume.

Table 3
Summary of Laboratory Results of Soil and Water Analysis from the January, 1993 Investigation

Sample Identification and depth from boring logs	TPH Diesel Fuel mg/Kg	EPA METHOD 8O20 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
B9 #3@ 25'	ND	ND	ND	ND	ND
B9 #4 @ 30.5'	ND	5.4	ND	18	43
B9 #5 @ 35.5'	ND	500	25	190	1,300
B9 #6 @ 40.5'	ND	ND	ND	130	ND
B10 #1 @ 12.5'	ND	ND	ND	ND	ND
B10 #2 @ 20'	ND	ND	ND	ND	ND
B10 #3 @ 30'	ND	ND	ND	ND	ND

Table 3
Summary of Laboratory Results of Soil and Water Analysis from the January, 1993 Investigation

Sample Identification and depth from boring logs	TPH Diesel Fuel mg/Kg	EPA METHOD 8O20 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
B11 #1 @ 15.5'	ND	ND	ND	ND	ND
B11 #2 @ 20.5'	ND	ND	ND	ND	ND
B11 #3 @ 25.5'	ND	ND	36	16	190
B11 #4 @ 30.5'	14	20	690	320	2,900
B11 #5 @ 35'	ND	10	96	17	120
B11 #6 @ 40'	10	ND	59	74	360
West Dispenser @ 3'	18	ND	ND	ND	ND
East Dispenser @ 4.5'	290	ND	ND	ND	ND

Table 3
Summary of Laboratory Results of Soil and Water Analysis from the January, 1993 Investigation

Sample Identification and depth from boring logs	TPH Gasoline Fuel mg/Kg	EPA METHOD 8020 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
B11 Groundwater	*57*	1,500	19,000	2,300	15,000
Detection Limit	10	5	5	5	20

ND - Not Detected
57 TPH for groundwater reported as gasoline not diesel fuel due to lack of adequate sample volume.

A sampling and analysis program of the stockpiled soils was conducted and based on that, a part of the stockpiled soils was determined to be contaminated and could not be returned to the excavation. In May of 1993, a total of 56.17 tons of petroleum contaminated soils was shipped to Clean Soils, Inc., a soil recycling facility for treatment and recycling. The balance of the soil was used in the excavation as backfill material.

Based on the results of the tank removal sampling and the following limited site investigations, a full scale investigation to delineate the lateral and vertical extent of the soil and groundwater plumes was required by the State of California's Leaking Underground Fuel Tank Manual.

A work plan was prepared by Ocean Blue Engineers, Inc. (1994). Two LOP review letters (County of Los Angeles, 1994a, 1994b) provide specific requirements omitted from the work plan. The work plan indicates three groundwater wells, gauged in 1978, to be used as a basis for groundwater in the area.

3.0 GEOLOGY AND HYDROGEOLOGY

Topography at the site is flat, having been graded into the natural surface which slopes 2.7 percent southwest toward the ocean.

The large bus barn is clearly marked on the USGS topo Map. Using a protractor to measure the long axis for the barn we plotted the north arrow on the site plan; large buildings on the USGS maps a plotted direcly from the photo used to draw the maps

3.0 GEOLOGY AND HYDROGEOLOGY

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The large bus barn is clearly marked on the USGS topo Map. Using a protractor to measure the long axis for the barn we plotted the north arrow on the site plan; large buildings on the USGS maps a plotted directly from the photo used to draw the maps and are very accurate, even at a length of 0.065 inches.

Geology

The site is located on a Marine Terrace on the south flank of the Santa Monica Mountains which rise abruptly to elevations of more than 2,000 feet (see Figure 1). The Santa Monica Mountains are in the central portion of California's Transverse Ranges which are apparently being thrust rapidly upward in response to the Pacific Crustal Plate being pushed around the Great Bend in the San Andreas Fault and they are rotating clockwise in response to shearing between the Pacific and North American Crustal Plates. The Santa Monica-Malibu Coast Fault located just off shore separates the Transverse Ranges from the Southern California Borderland.

Bedrock in the Santa Monica Mountains ranges in age from Jurassic (160± million years) to Middle Miocene (15± million years). Predominant lithologies are marine basin and nonmarine conglomerates, sandstone and mudstone along with granitic and metamorphic rocks. Surficial soils are Pleistocene to Holocene (1± million years to present) marine and nonmarine terrace deposits (Norris and Webb, 1976)(Hall, 1981)(Hornifus and others, 1986).

Soil was logged systematically, see Appendix B, Boring Logs, as each of four borings were constructed at the subject site by Vector III and in eleven other borings (Earth Systems, Inc., 1992, 1993). The Unified Soil Classification System was used to describe the soil. Soil generally consists of poorly sorted and poorly washed sandy silt and silty sand, both with clay and gravel to a depth of 42 to 50 feet. At 48 feet and 50 feet, siliceous sandstone and siliceous siltstone bedrock was encountered in MW-1 and MW-2 respectively. Soil from MW-3 consisted primarily of sandy silt to a depth of 32.5 feet, clayey silt from 32.5 ft to 45 feet, and sandy siltstone at 50 feet. MW-4 consisted of sandy silt to a depth of 41 feet. Black siliceous siltstone bedrock was encountered in MW-4 at 42 feet. Drilling refused to advance below the contact between the Marine Terrace and the Miocene bedrock.

The contact between the Marine Terrace and the Miocene bedrock is well exposed in a southwest facing slope constructed for Pacific Coast Highway 1,300 feet southwest of the subject site, see Figure 1. The surface of the bedrock was cut relatively flat in the surf zone at the beach, a wave cut terrace (Shepard, 1976), commonly observed at nearby rock beaches at low tide. This surface slopes toward the ocean at approximately the same percentage as the ground surface and has its own topography with respect to stream channels.

The Marine Terrace deposit at the subject site is comprised of debris flow, mud flow, landslide and stream channel deposits which unconformably cover the wave cut terrace. Sieve analyses of two discrete sample indicate the formation is more than 50 percent mud, passing the number 200 sieve (US Army Corps of Engineers, 1960), but thin layers of well washed sand were observed up to 2 inches thick.

The hydraulic conductivity (K) of this material can be estimated based on the silt to clay ratio. If the mud is coarse silt then K is 10^{-2} cm/sec. If there is 20 percent clay, the K may be less than 10^{-6} cm/sec, impermeable from a practical standpoint. Clean sandy Stream Channel deposits could have K as high as 10^{0} cm/sec (Freeze and Cherry, 1979).

Groundwater

Groundwater was encountered at approximately 28 feet below ground surface below the ground surface in three of the four borings. Water rose in MW-4 boring over a period of time as observed in B-11(Earth Systems, Inc.,1993).

The groundwater gradient has been defined as 0.048 at an azimuth of 204°. Four three point problems using the well gauging data were unusually equivalent indicating hydraulic continuity in the aquifer, see Table 4 and 4A for the three point solutions and well gauging data and Figure 5, Groundwater, for a graphical depiction of the gradient and groundwater contours.

The Pacific Ocean is southwest 1,900 feet from the site. A domestic groundwater well is situated on the south side of Morning View Drive directly down gradient from the subject site; there are beneficial uses of the local groundwater.

Table 4		
Wells in Three Point Solution	Gradient Magnitude	Azimuth
MW1, MW2 and MW3	0.048	204.5°
MW1, MW2 and MW4	0.047	204°
MW1, MW3 and MW4	0.048	204°
MW2, MW3 and MW4	0.048	204°

Table 4A
Monitoring Well Gauging Data in feet from May 5, 1995
Malibu High School

Well ID	Relative * Elevation	Depth to Groundwater	Water Table Elevation *	Casing Depth	** Well Volume
MW-1	98.83	27.69	71.14	48.30	13.0
MW-2	99.72	28.78	70.94	50.37	13.7
MW-3	98.55	29.22	69.33	48.81	13.3
MW-4	99.29	30.22	69.07	40.02	6.4

* - Elevations are relative to a benchmark of 100.00 feet established by Eagle Eye Mapping.
** - Well Volume in gallons = saturated thickness in feet times 0.653 gallons per foot.

The surveyor who performed the survey of the well locations was:

Albert J Moro, Jr. RPE # C25677
Eagle Eye Mapping
P.O. Box 818
Brea, California 92622

The linear velocity of groundwater is the gradient times -K, so the velocity at this site

ranges from 0.048 cm/sec at a high for clean sand to 4.8 10^{-4} cm/sec if coarse silt comprises the mud or 4.8 X 10^{-5}cm/sec or less for clay. There have been 9.46 x 10^{7} seconds since the tanks were removed three years ago; the distance contaminants may have moved down gradient ranges from 45 kilometers in clean sand (unlikely), to 45 meters if the mud is coarse silt, to 4 cm if there is substantial clay in the mud, see Freeze and Cherry (1979) for more discussion on groundwater velocities.

Hand specimens of the bedrock indicate very low primary porosity due to cementation. Active tectonics have produced fracture zones in the bedrock which may have good secondary porosity and hydraulic conductivity. Water in the marine terrace is probably in hydraulic continuity with aquifers in the bedrock supplying.

The three wells cited in the work plan are located in groundwater basins comprised of the most recent alluvium. Well 2156 is in the Trancas Basin, Department of Water Resources (DWR)(1975) Basin 222; Wells 2186 and 2187B are in the Zuma Canyon Basin, DWR Basin 223. Groundwater from the subject site is unlikely to drain into either of these basins, but probably emerges from the slope cut for Pacific Coast Highway at the contact between the Marine Terrace and the Miocene bedrock.

4.0 BORING AND SOIL SAMPLING PROCEDURES

The groundwater monitoring wells were constructed with a truck mounted Mobile Drill B-61 rig that utilized 8-inch hollow stem auger flights. Borings MW-1, MW-2, and MW-3, were installed to a total depth of 50± feet. MW-4 was Installed to a total depth of 41 feet. Groundwater was encountered at 28 feet in MW-1 and MW-2 and at 32.5 feet in MW-3. No free water was encountered in MW-4 at the time of well installation.

Discrete soil samples were collected ahead of the drill bit using a split tube sampler that contained three pre-cleaned 2 inch by 6 inch brass tubes. The samples were obtained at five foot intervals from all borings. The split tube sampler and each brass tube were decontaminated in a solution of Liquinox and rinsed with deionized water prior to the collection of each sample. After collection, each sample was packed full, where necessary, to eliminate head space, immediately covered with Teflon tape, capped, labeled, put into plastic zip-lock bags and placed into an ice-cooled chest. A chain of custody record was maintained to trace sample custody.

5.0 WELL CONSTRUCTION METHOD

Eight inch diameter pilot holes were reamed with 10 inch diameter augers. Approximately 30 feet of four inch diameter, Schedule 40 PVC, flush threaded, ten-thousandth inch slotted well casing was suspended just above the bottom of the boring with blank casing and two-twelfths Lonestar sand was placed in the annular space through the hollow stem augers, which also served to centralize the well casing. The well was surged with a block for 30 minutes and additional sand was added until the pack stabilized three feet above the top of the slotted casing. One hundred gallons of development water was removed from each well prior to placing the three foot thick bentonite slurry seal. Bentonite chips were used to seal the blank casing. Bentonite products were hydrated with potable water. The top of each well was completed with a traffic rated, weather tight well box set in three feet of concrete. See Appendix C for a detailed well construction diagram of each well.

Well MW-4 did not fill with water during construction and has only twenty feet of slotted casing. The sand pack was settled by vibrating the casing. Limited development was performed on the day of sampling, but since the well went dry after 14 gallons were pumped development can not be feasibly accomplished with adding fluids. Since the groundwater at this location is contaminated, the addition of fluids may cause the contaminants to spread from the well.

The wells were developed by use of a surge block and a bailer before the sanitary seal was placed except MW-4 which produced no water at the time of construction.

Justification for Sand Pack and Slot Size Selected

The Marine Terrace deposits from Santa Monica to the Oxnard Coastal Plain consists of poorly sorted and poorly washed debris flow and landslide material shed from the adjacent slopes of Santa Monica Mountains. Sieve analyses, see Appendix D, of two samples, one from thirty feet below the ground surface and one from 40 feet below the ground surface, and observations made during drilling support the working hypothesis.

Fifty-four and fifty-six percent of the material passed the #200 sieve from the two analyses. No determination was made concerning the actual grain size of the mud portion of the formation; an analytical technique more refined than a sieve, laser analysis for instance, must be used. The sand portion of the formation is fine grained with up to four percent medium and coarse sand.

Well screens slots, 0.01 inches, were selected to retain the formation sand while fine materials, mud, are washed from the formation (USEPA, 1993). The slot size selected is the smallest commercially available.

Commercially available well filter sands are designed for production wells to create a more permeable zone around the well, increase the effective diameter of the well, stabilize the aquifer material, reduce the velocity and head losses to the well (Devinny and others, 1990) and minimize sand pumping (Todd, 1980).

Todd (1980) suggests using the uniformity coefficient (the ratio of the sieve number passing 60 percent to the sieve number passing 10 percent; values between 1, for poorly graded sand, and 30 for well graded sand, are possible)(Bates and Jackson, 1987) of the sand pack and sizing the sand pack so that the 50 percent size of the formation is no greater than six times the 50 percent size of the formation. The uniformity coefficient of the formation is between one and two, considering the sand portion only; the mud portion does not lend itself to sieve sizes (#325 is the smallest available, 0.044 mm) and the purpose of well development is to wash the mud from the formation in the vicinity of the well bore. Inspection of the sand portion of the distribution graphs reveals that 50 percent of the formation sand is sieve number 70-100 (0.21 to 0.15 mm), the #2/12 sand is fifty percent retained by the # 20 sieve (0.85 mm). Todd's criteria are satisfied.

We selected #2/12 sand so as not to dampen the surging action at the edge of the bore hole during development and to cover the possibility that all water entering the well comes from anastomosing sand and gravel beds produced by stream channels crossing the Terrace in between debris flows. See Devinny and others (1990) for a more thorough discussion of problematic aspects of monitoring well construction.

Empirical proof that the wells are satisfactory is evident in that they produce sufficient formation water for sampling, except possibly MW-4; water from MW-4 does contain measurable diesel fuel and BTEX compounds, a situation not due in any measure to the well construction methods employed.

6.0 GROUNDWATER SAMPLING PROCEDURE

Groundwater levels were measured relative to an index mark at the top of the well casing. The wells (Top of Casing) were surveyed by Eagle Eye Mapping of Brea, CA, under the supervision of Albert J. Moro, Jr., C25677, relative to an on site benchmark used as a control point. The groundwater flow direction was calculated from the depth to groundwater measurements from the four wells.

Groundwater levels were measured when first encountered during drilling, after the monitoring wells were constructed, before well purging and before sampling. A Solinst water level meter with a stainless steel probe was used.

Water samples were collected with a Teflon bailer on May 3, 1995. The bailer was washed with Liquinox and rinsed in deionized water and allowed to air dry, preventing cross-contamination (volatile organic hydrocarbon compounds readily evaporate, dissolved BTEX is a problem at this site, see SW-846). The sampling was performed after at least three well volumes of groundwater were evacuated by use of a variable speed submersible pump at a rate less than 2 gallons per minute and stopped following the observation that and the temperature, pH and conductivity of the water had reached stability, see Appendix E for a summary of the physical parameters recorded during purging. Sampling was performed after the wells had recharged, turbidity was reduced to minimal levels though it did not go below 10 NTU'S for well MW-2 or MW-4. After pumping dry MW-4 was bailed to the bottom and allowed to recharge prior to sampling; a total of twenty gallons of water have been removed from MW-4.

The groundwater samples were decanted into sterile 40 milliliter glass VOA vials, at a rate of less than 100 milliliters per minute, capped with Teflon silicone septum and 1 liter diesel vials (amber, narrow neck vials), placed into plastic ziplock bags and stored in an ice cooled chest. All sampling equipment and storage containers were designed for the purpose. A chain of custody record was maintained to trace sample custody.

7.0 ANALYTICAL METHODS AND RESULTS

The soil samples were delivered under chain-of -custody protocol to Chemical and Environmental Laboratories, Inc., Santa Fe Springs, CA for analysis. All soil and ground water samples were analyzed for Total Petroleum Hydrocarbons (TPH) in accordance with EPA Method 8015 modified using LUFT Manual procedures for diesel fuel and for BTEX by EPA Method 8020\602. Duplicate water samples were delivered to the laboratory and discarded after the holding time expired. Duplicate soil samples are in storage at the offices of Vector Three, Inc.; these samples may be analyzed for air permeability, grain size and hydraulic conductivity since there is no holding time for these test. Please see Table 5 for a summary of the laboratory results and Appendix F for the complete laboratory results including the quality control and quality assurance data.

Table 5
Laboratory Results of Soil Analysis

Sample Label	TPH Diesel Fuel mg/Kg	EPA METHOD 8O20 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
MW1 @ 5'	ND	ND	ND	ND	ND
MW1 @ 10'	ND	ND	ND	ND	ND
MW1 @ 15'	ND	ND	ND	ND	ND
MW1 @ 20'	ND	ND	ND	ND	ND
MW1 @ 25'	ND	ND	ND	ND	ND
MW1 @ 30'	ND	ND	ND	ND	ND
MW1 @ 35'	ND	ND	ND	ND	ND
MW1 @ 40'	ND	ND	ND	ND	ND
MW2 @ 5'	ND	ND	ND	ND	ND
MW @ 10'	ND	ND	ND	ND	ND
MW2 @ 15'	ND	ND	ND	ND	ND
MW2 @ 20'	ND	ND	ND	ND	ND
MW2 @ 25'	ND	ND	ND	ND	ND
MW2 @ 30'	ND	ND	ND	ND	ND
MW3 @ 5'	ND	ND	ND	ND	ND
MW3 @ 10'	ND	ND	ND	ND	ND
MW3 @ 15'	ND	ND	ND	ND	ND
MW3 @ 20'	ND	ND	ND	ND	ND
MW3 @ 25'	ND	ND	ND	ND	ND
MW3 @ 27'	ND	ND	ND	ND	ND

Table 5
Laboratory Results of Soil Analysis

Sample Label	TPH Diesel Fuel mg/Kg	EPA METHOD 8020 µg/Kg			
		Benzene	Toluene	Ethylbenzene	Xylene
MW3 @ 30'	ND	ND	ND	ND	ND
MW3 @ 35'	ND	ND	ND	ND	ND
MW3 @ 40'	ND	ND	ND	ND	ND
MW3 @ 50'	ND	ND	ND	ND	ND
MW4 @ 5'	ND	ND	ND	ND	ND
MW4 @ 10'	ND	ND	ND	ND	ND
MW4 @ 15'	ND	ND	ND	ND	ND
MW4 @ 20'	ND	ND	ND	ND	ND
MW4 @ 25'	ND	ND	ND	ND	ND
MW4 @ 32'	ND	444	190	212	193
MW4 @ 35'	ND	443	63	90	158
MW4 @ 42'	ND	8	ND	10	ND
Detect Limits	10	5	5	3	15

ND Not Detected

Soil contamination was measured in the vicinity of MW-4.

Table 6
Laboratory Results of Groundwater Analysis

Sample Label	TPH Diesel Fuel mg/Kg	EPA METHOD 602 µg/l			
		Benzene	Toluene	Ethylbenzene	Xylene
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	1.2	42.9	16.3	6.9	41.5
MW-4	0.8	3.4	2.5	3.8	16.5
Detect Limits	0.5	0.3	0.3	0.3	0.5

ND Not Detected

Diesel fuel was measured in the groundwater in the vicinity of Wells MW-3 and MW-4.

8.0 DISPOSAL OF SOIL AND WATER GENERATED DURING THIS INVESTIGATION

Soil generated during the construction of the four wells was hauled to TPS Technologies of Adelanto, California for treatment by thermal desorption. The well development and purge water was shipped to Avalon Environmental Management of Gardena, California for treatment and disposal. See Appendix G for a copy of the non hazardous waste manifests. Copies signed by the receiving facility should have been delivered to the School District Office.

9.0 DISCUSSION OF THE RESULTS FROM THIS INVESTIGATION AND PREVIOUS INVESTIGATIONS

Samples collected during the tank removal indicated the need for a site assessment. Two limited assessment contracts were let and executed without the approval or oversite of the local regulatory authority.

No justification is offered by Earth Systems, Inc. for not analyzing samples at five foot intervals in each boring nor is there any justification for the samples that were selected. Cape Environmental provided third party review of Earth Systems, Inc.'s investigation and directed the sampling protocol outside generally accepted practice of analyzing

samples at a minimum of five foot intervals (Earth Systems, Inc., Richard Kelly, personal communication, October, 1995).

The Western Tank

Diesel fuel under the both ends of the western tank at a depth of approximately 14 feet below the ground surface were above 2,400 mg/kg, see Figure 6, Section AA'. Earth Systems, Inc. (1992 and 1993) advanced borings B2, B7 and B8, see Figure 7, Section BB', at the northeast, southwest and southeast corners, respectively, of the tank excavation and did not detect diesel fuel or BTEX compounds at a depth of 14 feet below the ground surface in any of the three borings. This indicates the fuel did not spread horizontally at the 14 foot depth; regrettably this data provides no vertical or lateral delineation of the western tank plume.

Boring B11 was advanced half way between the east and west tanks and between Borings B2 and B8. Samples analyzed form depths of 25.5 feet, 30.5 feet, 35 feet and 40 feet contained measurable diesel fuel and/or BTEX compounds. The source of these contaminants could be either tank based on the position of the boring

If the contaminants came from the western tank, the closest tank removal sample contained 5,400 mg/kg diesel fuel, then the plume extends at least 15 feet beyond the tank excavation. The plumes from both tanks may commingle in this location.

Boring MW-1 was advanced on the northwestern corner of the former excavation and sampled at five foot intervals to a depth of forty feet. Neither diesel fuel or BTEX compounds were detected in the soil or water retrieved from this boring. The western tank plume has not migrated to this location at this time and this boring defines the plume in the vicinity. The boring is positioned up gradient from the plume.

Samples retrieved from Boring MW-2 did not detect diesel fuel or BTEX compounds in the soil or water; while it is a bit far away and up gradient from the former western tank it does define the soil and groundwater plume in this vicinity.

Additional borings are required on the north and south side of this former tank location to define the soil plume. A down gradient well should be established for the west end of this former tank location to define the groundwater plume.

The Eastern Tank

Samples retrieved from a depth of fourteen feet below the ground surface contained 5,800 mg/kg diesel fuel at the west end of this tank and 11 mg/kg diesel fuel at the east end of the tank. Earth Systems, Inc. (1992 and 1993), advance Borings B1 and B3 at the northwest and south west corners of the former tank location. Boring B5 was located at the south center edge of the former tank location and Boring B-6 was at the east end of the former tank location. A sample analyzed from a depth of 19 feet below the ground surface from B1 contained 2,200 mg/kg diesel fuel, B3 contained no detectable concentrations of diesel fuel at a depth of 19', but did contain BTEX compounds at a depth of 39 feet below the ground surface. Boring B6 contained BTEX compounds at a depth of 14 feet. The diesel fuel concentrations decrease toward the east end of the former tank excavation. Boring B9 was advance 12 feet south of B3 and samples retrieved from depths of 30.5 feet and 35 feet below the ground surface contained BTEX compounds including 0.5 mg/kg benzene at 35 feet, the capillary fringe at the time the boring was sampled. Boring B10 was advanced to the northeast from approximately the same location as B1, samples from depths of 12.5, 20 and 30 feet below the ground surface did not detect diesel fuel or BTEX compounds characterizing the soil plume to the north of the former tank, the thirty foot sample was with in fifteen feet of the former tank and the contaminated tank pull sample.

The static groundwater level measured in Boring B11 was at 34 feet below the ground surface; benzene may have accumulated at the surface of the water table.

MW- 4 was advanced 15 feet southeast of B-6. BTEX compounds were detected at depths of thirty-two, thirty-five and forty-two feet below the ground surface as well as in the groundwater. We do not believe that the contaminants penetrated the Miocene bedrock at this location but further lateral investigation is warranted. A well should be established to the southeast of MW-4 and soil borings are required northeast of the former tank location south of the center of the former tank location.

Samples retrieved from Boring MW-2 did not detect diesel fuel or BTEX compounds in the soil or water.

The Dispensers

The west dispenser had diesel fuel concentrations of 450 mg/kg under the center of the dispenser and at 3 feet below the dispenser the concentration was 18 mg/kg the following winter.

The east dispenser had diesel fuel concentrations of 2,700 mg/kg under the center of the dispenser and at 4.5 feet below the dispenser the concentration was 290 mg/kg the following winter, see Figure 8, Section CC'.

Boring B10, slanted under the dispenser from outside the building, did not detect diesel fuel or BTEX compounds at depths of 12.5, 20 and 30 feet below the ground surface. Boring B10 defines the lateral portion of the plume to the southwest and the vertical extent of the plume.

The Groundwater Plume

Soil samples retrieved from Well MW3 did not contain detectable concentrations of diesel fuel or BTEX compounds nor did Boring B4 at a depth of 19 feet below the ground surface (Earth Systems Inc., 1992). The sample from Boring B4 was far too shallow to be of value in defining the plume for the same reasons as Borings B3, B5 and B6. Pollutants do migrate downward under the influence of gravity while it is very difficult for capillary forces to pull fuel sideways.

The approximate lateral soil and groundwater contamination limits are shown in Figure 4.

Matrix interference while analyzing saturated soil samples from Boring MW3 can give false negative values. Fluctuations of more than 10 feet (deeper than 40 feet at B3 in the Fall of 1992 and 29 feet in spring of 1995 at MW-4) in the water table most certainly have smeared fuel in the now saturated zone. This fuel can be very difficult to dislodge under the muddy conditions of the formation at the site.

MW-4 does contain benzene in excess of the Maximum Contaminant Levels for drinking water and is in a down gradient position for both former tanks and dispensers.

Step outs wells are required to define the down gradient extent of the groundwater plume. Hydropunch sampling could aid in reducing the number of required wells.

10.0 INVESTIGATION LIMITATIONS

Our professional services were performed using the degree of care and skill ordinarily exercised by environmental consultants practicing in this or similar localities. The findings in this report are based on Vector Three, Inc. field observations and analytical results provided by an independent laboratory as well as reports prepared by others one and one-half years prior to this investigation. Interpretations of the subsurface

conditions at the site for the purpose of this investigation are made from a limited number of available data points (I. e. soil borings, monitoring wells) and subsurface conditions may vary away from these data points. No other warranty, expressed or implied, is made to as to the professional conclusions or recommendations contained in this report.

11.0 CONCLUSIONS

Based on the data gathered in this investigation and a review of the reports by others, the following conclusions are presented:

- An unauthorized release of diesel fuel from both tank systems operated at he subject site has impacted the soil to a depth of at least 42 feet below the ground surface.
- Groundwater has been impacted by the unauthorized release of diesel fuel and benzene at the subject site.
- The water table elevation has fluctuated more than thirteen feet between late 1992 and mid 1995. This fluctuation allowed fuel to penetrate to depths of 13 feet below the water table observed for this investigation.
- The direction of groundwater flow is toward the south-southwest.
- Surficial soil at the subject site consists of 42 to 50 feet of sandy mud emplaced by mass wasting and debris flow mechanisms. The silt and clay percentages are unknown. The surficial deposit rest on top of well indurated Miocene bedrock which could not be drilled with hollow stem technology.
- The down gradient extent of the groundwater plume has not been defined, nor has the soil plume been adequately defined.
- The diesel fuel plumes at each dispenser have been defined and quantified.

12.0 RECOMMENDATIONS

Based on the data gathered in this investigation, a review of the reports by others and the conclusions of this report the following recommendations are presented:

- Consult with the California Regional Water Quality Control Board. They are required by statute to review your project and aid you with respect to practical site investigation measures, the technologies available with pros and cons, competence of your consultants, remediation of the site through establishment of cleanup goals that can be attained and regulatory closure.

- Conduct quarterly groundwater monitoring so a history of TPH and BTEX compounds and the water table behavior can be developed to make sensible remediation decisions.

- Additional investigation should be performed to delineate the soil and groundwater plumes in the areas queried on the figures.

- The additional investigation should address the feasibility of some of the most proven remediation technology (no action, monitoring only, bioventing, air sparging, in-situ bioremediation or soil washing, steam injection coupled with vapor extraction, pump and treat, ex-situ treatment or a combination of these).

- Excavate additional soil borings to define the lateral extent of the soil plume to a reasonable certainty. Borings should be placed in the former tank excavations to delineate the vertical extent of each plume. Sampling in each boring should extend to the surface of the Miocene bedrock or deeper since contamination is known at a depth of 42 feet.

- Feasibility studies for site mitigation work should be implemented after the site investigation.

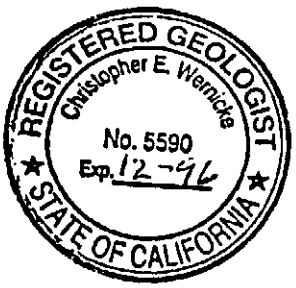
- Install additional wells to define the plume and conduct remediation pilot studies, including aquifer test.

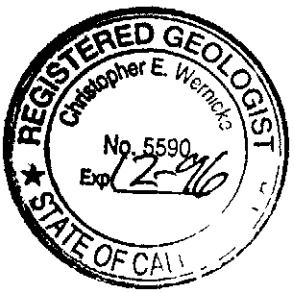
- Develop a corrective action plan based on pilot study(ies), to prevent further degradation of the aquifer and to restore the aquifer to a satisfactory level and obtain permits.

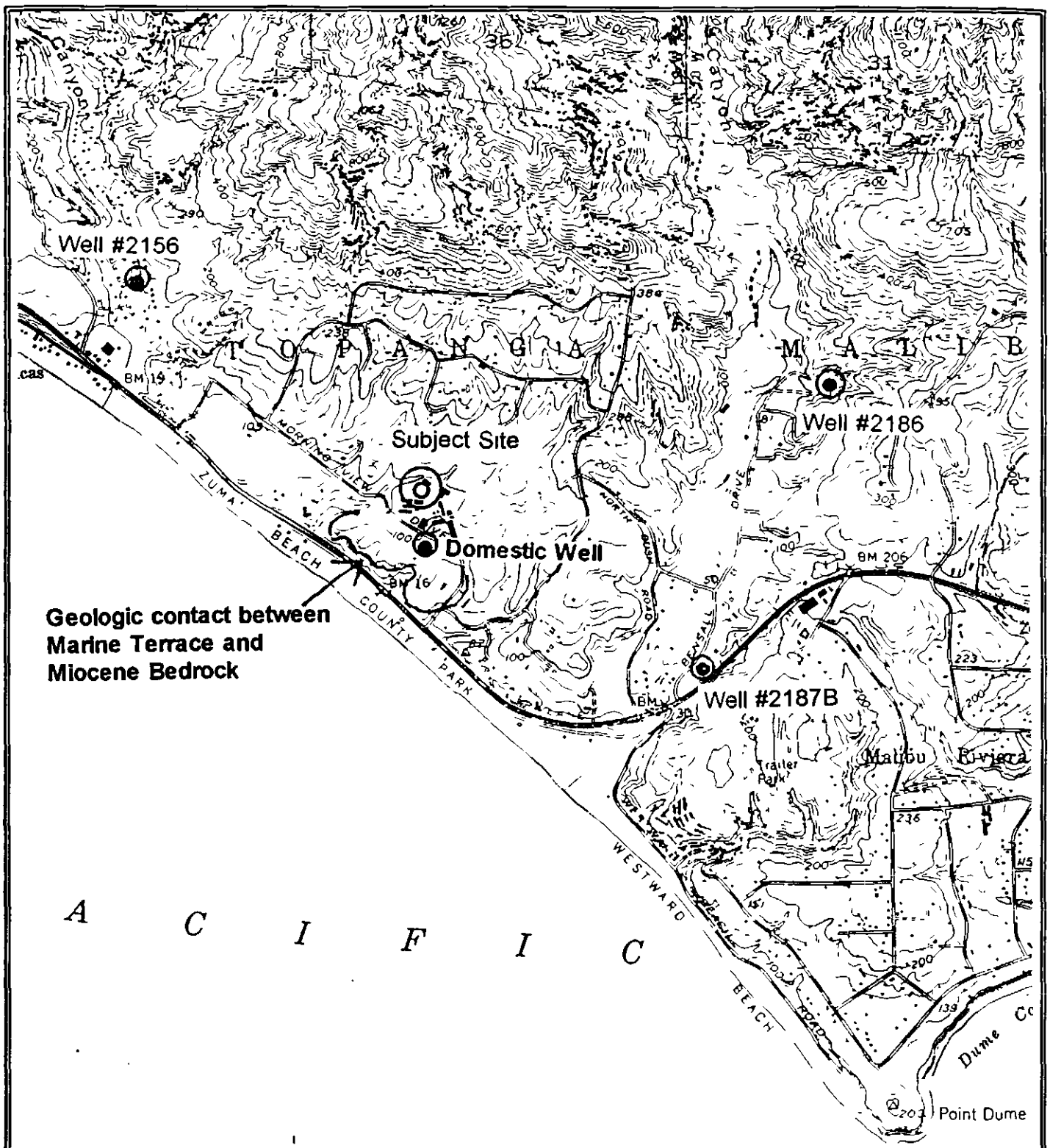
The opportunity to prepare this report is greatly appreciated. Please call our office if you have any questions.
Sincerely,

Vector Three Environmental, Inc.

Christopher E. Wernicke
California Registered Geologist No. 5590

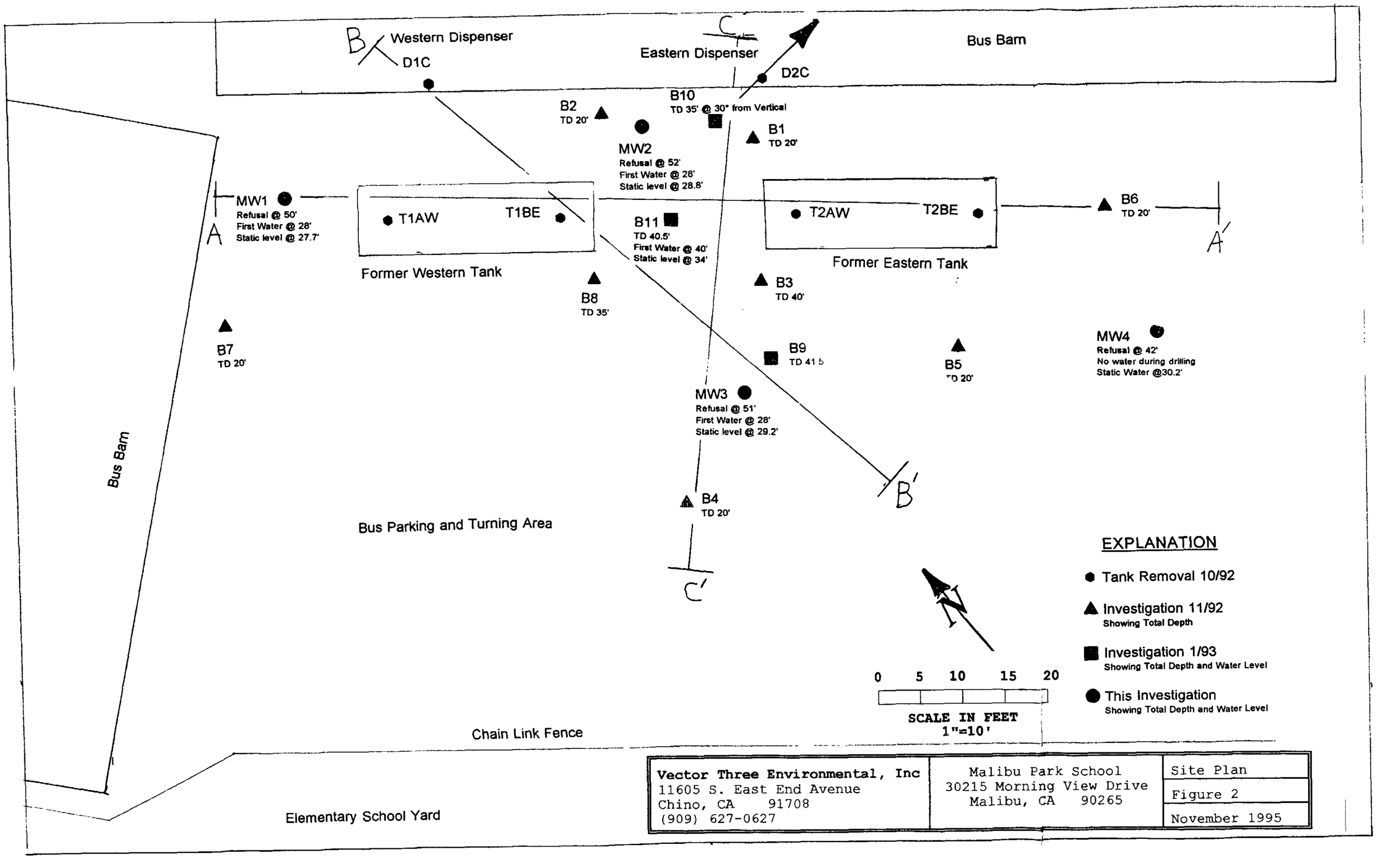




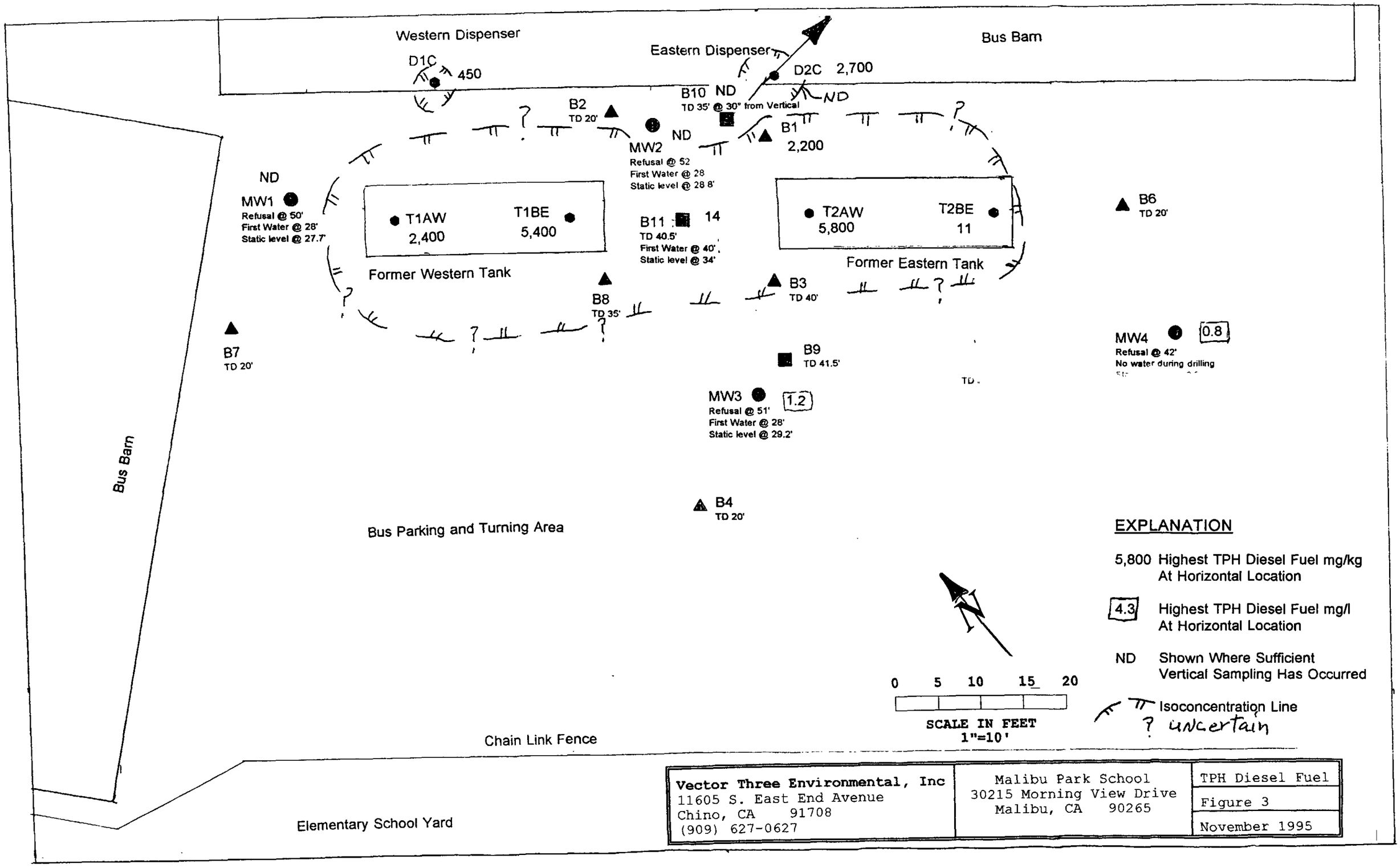


Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Index Map Figure 1 November 1995

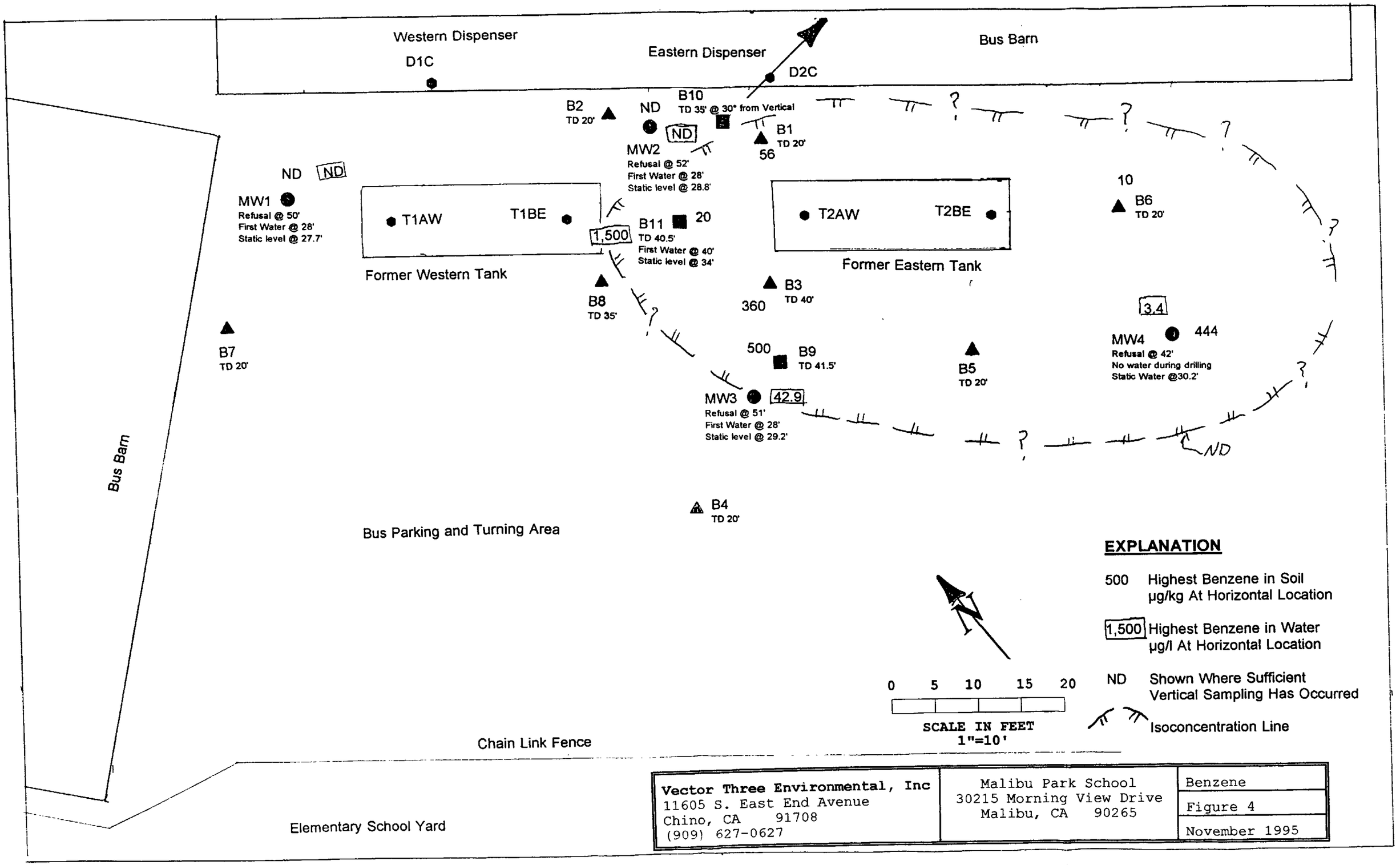
Subject Site



Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Site Plan Figure 2 November 1995



Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	TPH Diesel Fuel Figure 3 November 1995



Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Benzene Figure 4 November 1995

Western Dispenser

D1C

Eastern Dispenser

D2C

Bus Barn

B10
TD 35' @ 30° from Vertical

B2
TD 20'

B1
TD 20'

MW2
Refusal @ 52'
First Water @ 28'
Static level @ 28.8'

MW1
Refusal @ 50'
First Water @ 28'
Static level @ 27.7'

T1AW

T1BE

T2AW

T2BE

B11
Refusal @ 40.5'
First Water @ 40'
Static level @ 34'

B6
TD 20'

Former Western Tank

Former Eastern Tank

B8
TD 35'

B3
TD 40'

B7
TD 20'

B9
TD 41.5'

B5
TD 20'

MW4
Refusal @ 42'
No water during drilling
Static Water @30.2'

MW3
Refusal @ 51'
First Water @ 28'
Static level @ 29.2'

B4
TD 20'

Bus Parking and Turning Area

Chain Link Fence

Elementary School Yard

Bus Barn

20 scale

S24.5°W

S24°W

S24.5°W

N

2-3-4

1-2-3

1-2-4

1-3-4

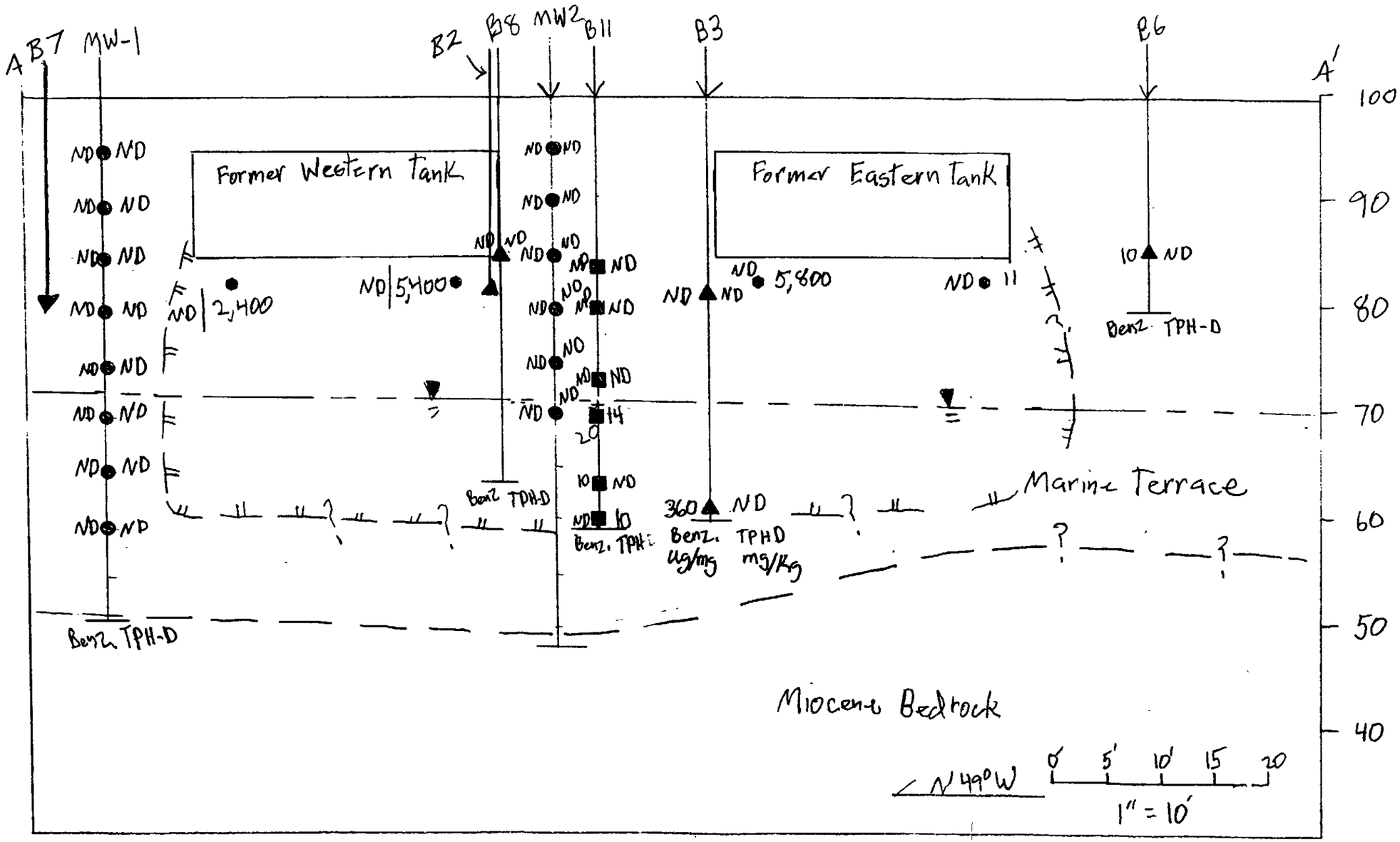
0 5 10 15 20

SCALE IN FEET
1"=10'

EXPLANATION

- Tank Removal 10/92
- Investigation 11/92
  Showing Total Depth
- Investigation 1/93
  Showing Total Depth and Water Level
- This Investigation
  Showing Total Depth and Water Level

Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Site Plan Figure 5 November 1995



EXPLANATION

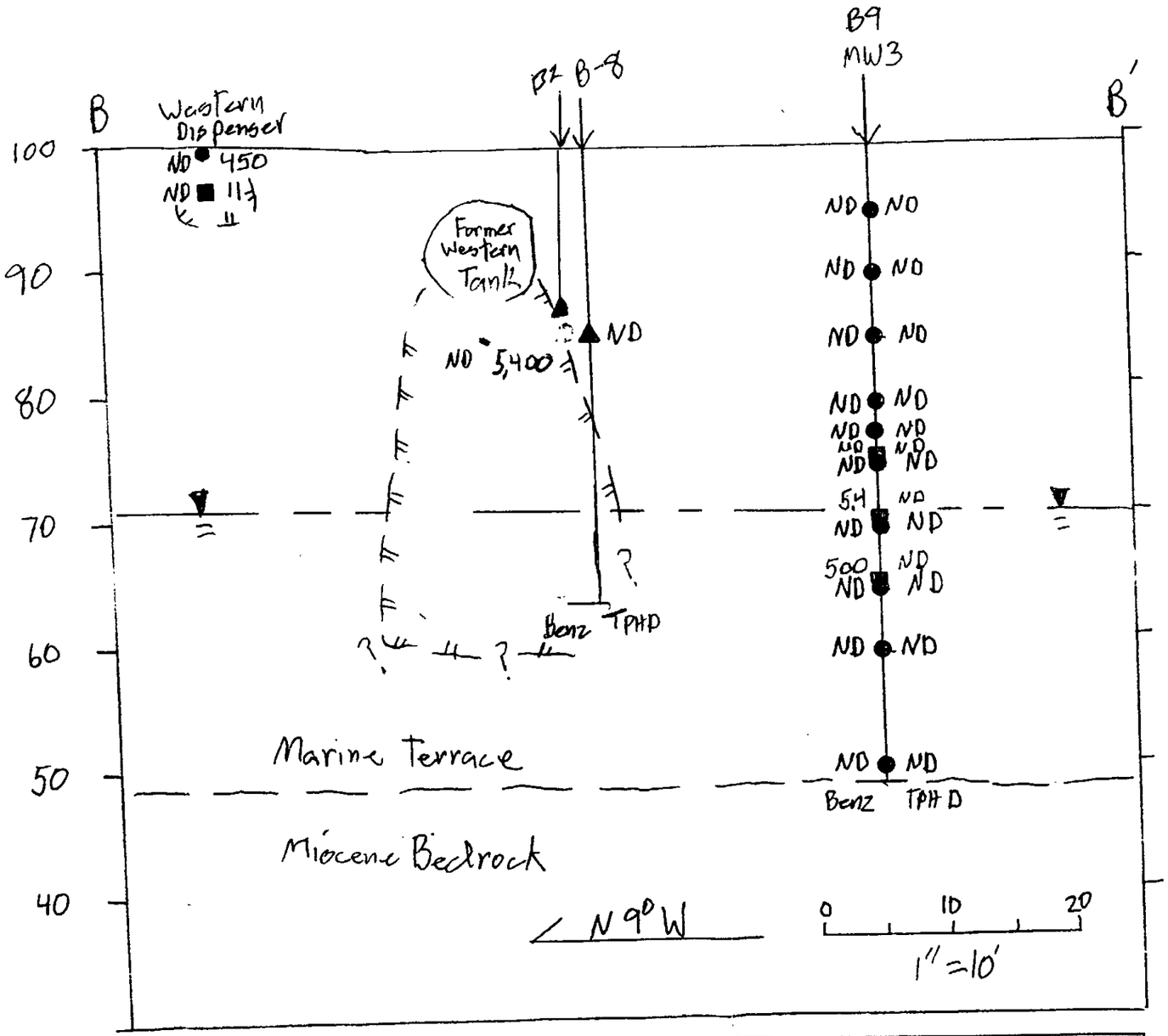
Static Water Table Elevation 5/95, in Feet

Estimated Limit Contamination (TPH-D)

(10) ND Benzene on Left Side of Boring µg/kg

360 | (ND) TPH Diesel Fuel Right Side of Boring mg/kg

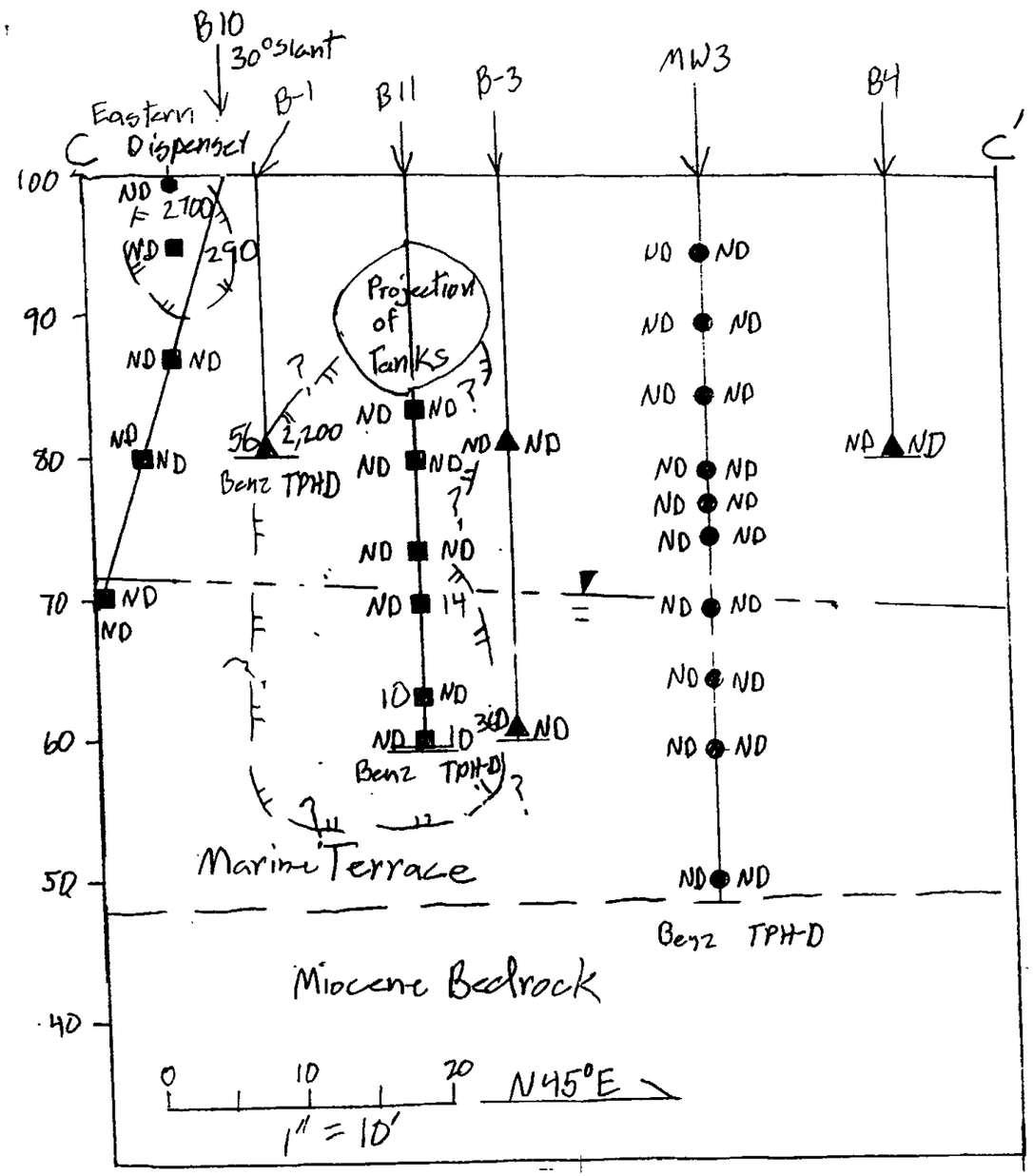
Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Section AA' Figure 6 November 1995



EXPLANATION

- Static Water Table Elevation 5/95, in Feet
- Estimated Limit Contamination (TPH-D)
- 500 | ND Benzene on Left Side of Boring µg/kg
- 500 | ND TPH Diesel Fuel Right Side of Boring mg/kg

Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Section BB' Figure 7 November 1995



EXPLANATION

Static Water Table Elevation 5/95, in Feet

Estimated Limit Contamination

(56) | ND Benzene on Left Side of Boring µg/kg

56 | (ND) TPH Diesel Fuel Right Side of Boring mg/kg

Vector Three Environmental, Inc 11605 S. East End Avenue Chino, CA 91708 (909) 627-0627	Malibu Park School 30215 Morning View Drive Malibu, CA 90265	Section CC' Figure 8 November 1995

Appendix A - References

Bates, R. and Jackson, J., 1987, Glossary of Geology, Third Edition, American Geological Institute, Alexandria, Virgina.

County of Los Angeles, Department of Public Works, Waste management Division, UST Local Oversite Program, 1993, Guidelines for Report Submittals, June, 1993

County of Los Angeles, 1994a, UST LOCAL OVERSIGHT PROGRAM (LOP) REVIEW SHEET. SITE ASSESSMENT PROPOSAL DATED APRIL 4, 1994, PREPARED BY OCEAN BLUE ENGINEERS, INC., CLOSURE PERMIT NO. 9285B, LOCATION: 30215 MORNING VIEW DRIVE, MALIBU, dated May 18, 1994

County of Los Angeles, 1994b, UST LOCAL OVERSIGHT PROGRAM (LOP) REVIEW SHEET, SITE ASSESSMENT PROPOSAL, DATED APRIL 4, 1994, PREPARED BY: OCEAN BLUE ENGINEERS, INC., CLOSURE PERMIT NO. 9285B, LOCATION: 30215 MORNING VIEW DRIVE, MALIBU, dated June 16, 1994.

Devinney, S., Evertt, J., Lu, J., Stollar, R, 1990, Subsurface Migration of Hazardous Wastes, Van Nostrand Reinhold, 1990.

Earth Systems, Inc.,1992, Report of environmental activities for Malibu Park School and Webster Elementary School sites, Malibu, California, dated November 16, 1992.

Earth Systems, Inc.,1993, Report additional site assessment activities, Malibu Park School, Malibu, California, dated November 16, 1992.

Earth Systems, Inc.,1995, Phone conversation with Richard Kelly, Senior Engineer, Friday afternoon, October 20, 1995.

Freeze, R. and Cherry, J. 1979, Groundwater, Prentis-Hall, Inc.

Hall, C.J.,1981, Evolution of the Western Transverse Ranges MicroPlate: Late Cenozoic faulting and basinal development, in: Earnst, W.G., 1981, The geotechtonic development of California, Rubey Volume I, Prentis-Hall, Inc. Englewood Cliffs, N.J.

Honifus, J., Luyendyk, B., Terres, R., Kamerling, M., 1981, Timing and extent of Neogene tectonic rotation in the Western Transverse Ranges, California, Geological Society of America Bulletin, Volume 97, Number 12, December, 1986.

Norris, R., Webb, R., 1976, Geology of California, John Wiley and Sons, Inc.

Ocean Blue Engineers, Inc., 1994, Subsurface investigation by drilling four borings and soil sampling, and possible installation, development and sampling of four groundwater monitoring wells at Malibu Park School, Malibu, California, dated April 4, 1994, by John Schrock, RPE C35420.

Shepard, F., 1976, The Earth Beneath the Sea, Atheneumn New York, reprinted by arrangement with Johns Hopkins Press, 1959, 1967.

State of California, Water Quality Control Board, 1989, Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989, Leaking Underground Fuel Tank Task Force.

State of California, 1975, Department of Water Resources, Sea Water Intrusion in California, Bulletin No. 63-5.

Todd, David, 1980, Groundwater Hydrogeology, John Wiley and Sons.

TTMS, Inc., 1992, Tank removal, August 1992. (We have only an unsigned copy of this document. We accept its content at face value.)

US Army Engineer Waterways Experiment Station, Corps of Engineers, The Unified Soil Classification System, Technical Memorandum No. 3-357, Volume I, Revised April 1960.

USEPA, 1993, Subsurface Characterization and Monitoring Techniques, A Desk Reference Guide, Volume I, Solids and Ground Water, May 1993, USEPA/625/R-93/003a

Appendix B

Boring Logs

Date: April 10, 1995

Drill Hole No. **MW-1** Sheet 2 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115'± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C.Wernicke
30			ML		
35		11	ML	none 0	35' Brown, sandy silt, saturated, sand faction poorly sorted, trace of gravel
40		23	ML	none 0	40' Brown. sandy silt, saturated, stiff
		SPT			
45		64			
		49			48' Drill rig slows noticeably on white, siliceous sandstone
50					50' Drilling Refusal
					Notes:
					Total depth 50 feet, drilling refusal.
55					Water encountered at 28 feet.
					Bedrock encountered at 48 feet.
60					

Date: April 10, 1995

Drill Hole No. **MW-1** Sheet 1 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C. Wernicke
-0			ML		0-5' Artificial Fill, brown, sandy silt, moist, stiff, wood fragments, sandstone fragments.
-5		9	ML	none 0	5' Brown sandy silt with asphalt fragments
10		17	SM ~~ML~~	none 0	10' Brown, silty sand, moist, very dense, trace of crushed gravel, abundant bedrock fragments
15		36	ML	none 0	15' Brown silt with a trace of clay and fine sand, moist, very stiff, no visible porosity, subrounded bedrock fragments
20		37	ML	none 0	20' Brown sandy silt, moist, stiff, sand faction is poorly sorted
25		30	ML	none 0	25' Brown silty sand, very moist, stiff, sand content increasing for the last three samples
					28' Free water encountered
30		21	SM	none 0	30' Brown silty sand, saturated, stiff

Date: April 10, 1995

Drill Hole No. **MW-2** Sheet 1 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C. Wernicke
-0			ML		0-5' Artificial Fill, brown, sandy silt with cobbles, moist, stiff
-5		37	ML	none 0	5' Brown sandy silt with asphalt fragments, no visible pores
					8' Drilling refusal on siliceous sandstone boulder. Augers removed, repaired and restarted.
10		58	ML	none 0	10' Brown, sandy silt, moist, very stiff, 30% poorly sorted sand
15		43	ML	none 0	15' Brown, sandy silt, moist, very stiff, sand faction is fine to coarse grained with a trace of gravel
			SW		
20		51	ML	none 0	20' Brown sandy silt, moist, stiff, no coarse sand, 2" layer of well graded sand with a trace of silt
25		52	ML	none 0	25' Brown sandy silt, moist, stiff, no visible pores
					28' Free water encountered
30		21	ML	none 0	30' Brown sandy silt, saturated, stiff, thin sand beds

Date: April 10, 1995

Drill Hole No. **MW-2** Sheet 2 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115'± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C.Wernicke
30			ML		
35		SPT 8	ML	none	35' Top of SPT sample is green silt; bottom
			SM	0	of SPT sample is silty fine to coarse sand, saturated, dense or moderately stiff.
40		18	ML	none	
				0	40' Brown, sandy silt, saturated, moderately stiff; sand is poorly sorted in the silt layers, 2% gravel is present, up to 1 inch diameter
45		18	ML	none	
				0	45' Brown sandy silt layered as above, saturated, very stiff
50		100		none	50' Drilling refusal on siliceous bedrock.
				0	Drilled more than 30 minutes to make one foot, tip of sampler bent on bedrock
55					Notes:
					Total depth 51 feet, drilling refusal.
					Water encountered at 28 feet.
					Bedrock encountered at 50 feet.
60					

Date: April 11, 1995

Drill Hole No. **MW-3** Sheet 1 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C. Wernicke
-0			ML		
-5		20	ML	none 0	5' Brown, fine to medium sandy silt, moist
10		39	ML	none 0	10' Brown, sandy silt, moist, stiff
15		34	ML	none 0	15' Brown, fine to medium sandy silt, moist, very stiff, no visible porosity,
20		21	ML	none 0	20' Brown sandy silt, moist, stiff, sand faction is fine to medium grained
25		36	ML	none 0	25' Sampler blocked by rock in stuck in the tip 28' Dark brown, sandy silt, very moist, stiff, possibly the capillary fringe.
30		17	ML	none 0	30' Dark brown sandy silt with a trace of clay, moist but no free water, stiff, angular lithic fragments

Date: April 11, 1995

Drill Hole No. **MW-3** Sheet 2 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115'± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C.Wernicke
30					
					32.5' Free groundwater
35		22	ML	Slight diesel 5	35' Mottled orange-brown and gray-green, clayey silt with a trace of very fine sand, very moist, stiff, fractured with sheared surfaces,
40		12	ML	Slight diesel 0	40' Mottled orange-brown and gray-green clayey silt with a trace of fine sand, moist, very stiff
		SPT			
45		39	ML	Slight	45' Mottled as above, fine sandy silt, moist but not saturated, stiff
				Slight	49' As above with petroleum odor
50		80		none	50' Black sandy siltstone, damp to moist, very hard but not as hard as the siliceous sandstone at the bottom of MW-1 and MW-2
					51' Drilling Refusal
55					Notes: Total depth 51 feet, drilling refusal. Water encountered at 32.5 feet. Bedrock encountered at 50 feet.
60					

Date: April 12, 1995

Drill Hole No. **MW-4** Sheet 1 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C. Wernicke
-0					
-5		46	ML	none 0	5' Brown, fine to coarse sandy silt with a trace of gravel, moist, stiff, caliche veins, no visible pores
10		68	ML SM	none 0	10' Brown to orange-brown, sandy silt to silty sand, moist, very dense to hard, penetrated siliceous cobbles
15		32	ML	none 0	15' Gray to gray-green to brown, fine sandy silt, moist, very stiff, sandstone bedrock fragments 17' Cuttings are subrounded to subangular gravel,
20		75	ML	none 0	20' Orange-brown and tan sandy, gravelly silt, gravel up to 2" diameter, moist, very stiff, mottled coloring, blocky soil structure, silt is sheared along joints
25		81	ML	none 0	25' Orange-brown to tan to brown, gravelly, sandy silt, rounded siliceous pebbles are in a sheared silt matrix
30		60			30' No recovery, sampler blocked with blue-green, sandy siltstone, hard

Date: April 12, 1995

Drill Hole No. **MW-4** Sheet 2 of 2

Project: Santa Monica & Malibu Unified School District Job No.

Drilling Co. Western Strata Exploration Type of Rig: Mob Drill 61 HSA

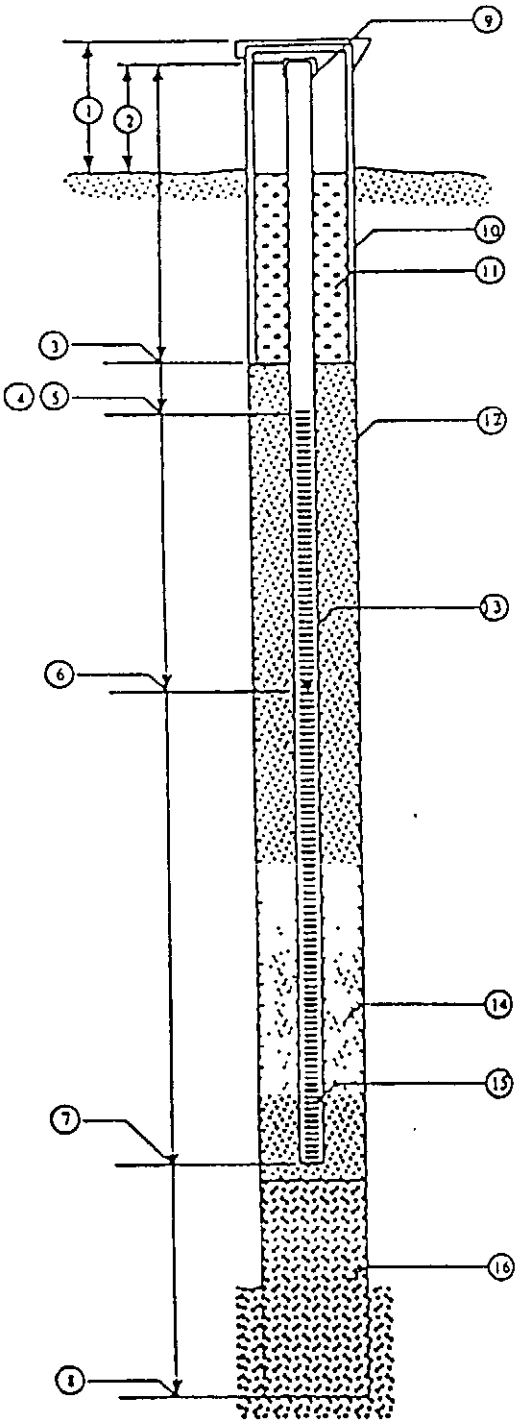
Hole Diameter: 10" Drive Weight: 140lbs Drop: 30"

Elevation Top of Hole: 115'± Ref. or Datum USGS

Depth Feet	Graphic Log	Sample Blows/ Foot	USCS	Odor/ OVA PPM	Description Logged By: C.Wernicke
30					
			ML	none	32' Green and orange-brown mottled, fine
		64		0	sandy silt, blocky structure, no bedding
					evident, stiff
35			ML		
		42		none	35' As above, no free water
				0	
					38' Cuttings are wet
40		50	ML		
				none	40' Silt as above with siliceous gravel,
				0	moist
					42' Tan silt on top of black siltstone,
					drilling refusal
45			ML		
					Notes:
					Total depth 41 feet, drilling refusal.
					Bedrock encountered at 42 feet.
					At 10:30 AM one auger was removed from the
50					hole to expose the lower portion of the
					boring and allow water to seep into the well.
					At 11:30 AM there was no free water in the
					boring. We conferred with Jahan Nazarian of
					Ocean Blue Engineering concerning the
55					practicality of installing a well in a dry
					hole. We concluded with his concurrence that
					the wet zone of soil will probably fill the
					well. If water samples can be attained from
					this well it will aid in the site
60					characterization process.

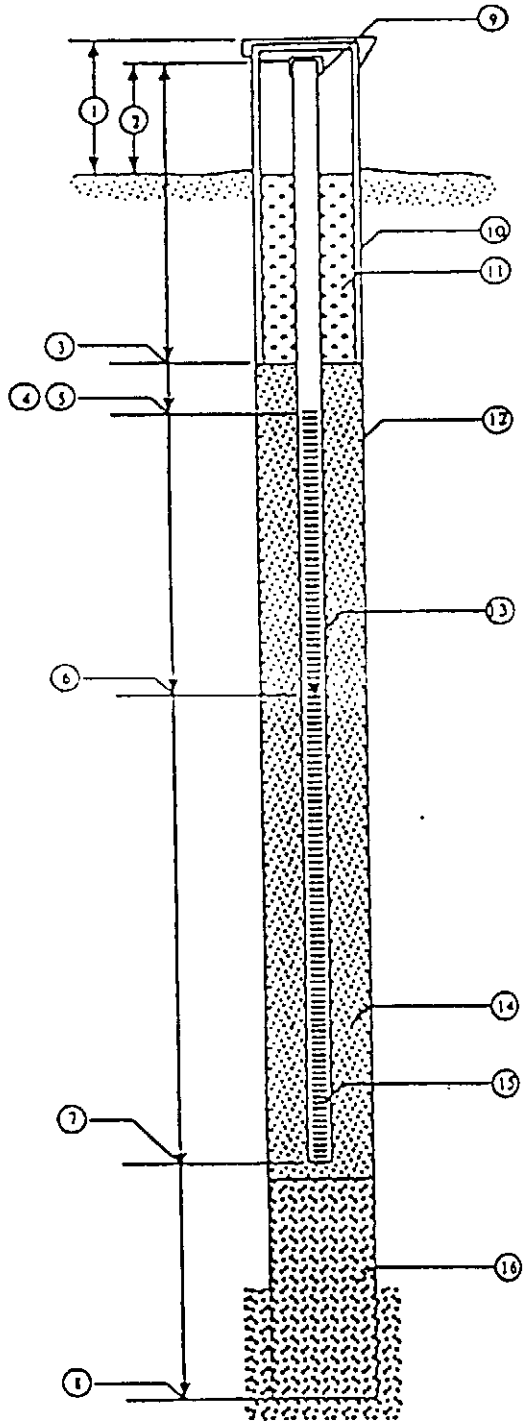
Appendix C

Monitoring Well Construction Details



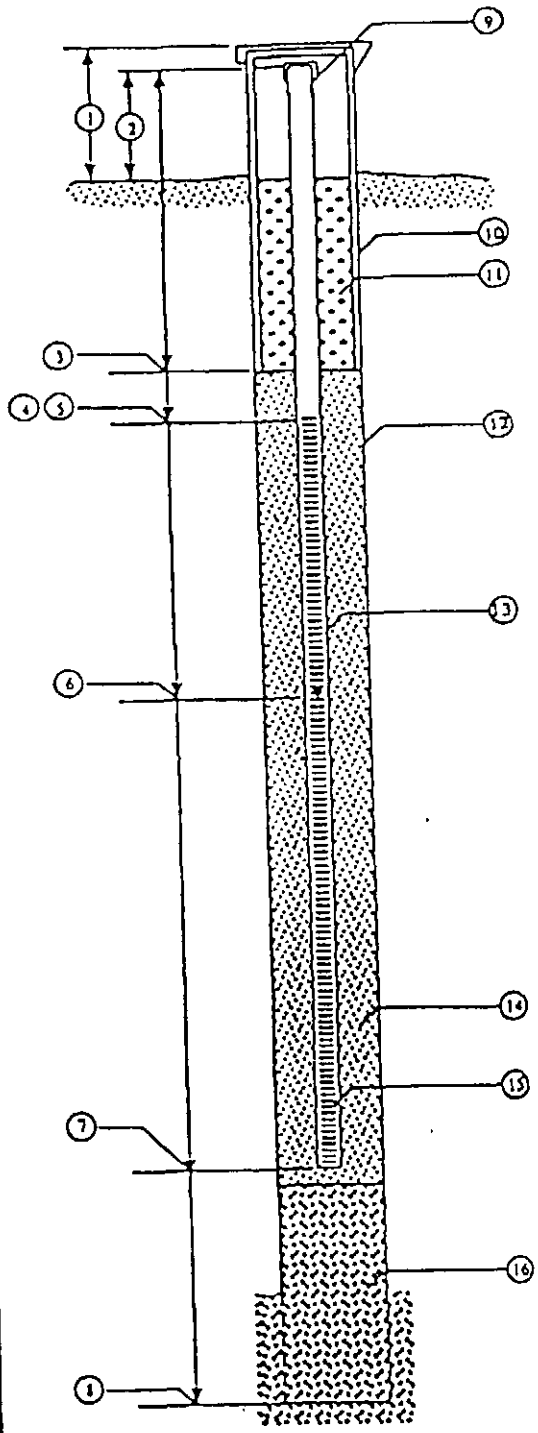
1. Stick-up of Protective Casing		0.0 Feet
2. Stick-up of Well Casing		0.0 Feet
3. Depth to Bottom of Upper Seal/Protective Casing		12.5 Feet
4. Depth to Top of Well Screen		15 Feet
5. Length of Blank Casing		15 Feet
6 Depth to Groundwater Surface Elevation: Approximately		28 Feet
7. Bottom Depth of Well Screen:		50 Feet
8. Depth of Borehole:		51 Feet
9. Locking Cap. Yes		
10. Protective Casing: Yes	Diameter:	10 Inches
11. Type of Upper Seal: 3 feet of bentonite		
12. Borehole Diameter:		10 Inches
13. Well Blank Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
14. Type/Size of Gravel/Sand Pack:		3/16
15. Well Screen Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
	Slot Size:	.010
16. Type of Lower Backfill: Native		

VECTOR THREE ENVIRONMENTAL, INC.	MONITORING WELL CONSTRUCTION Malibu Park School Malibu, CA 90265	MW-1



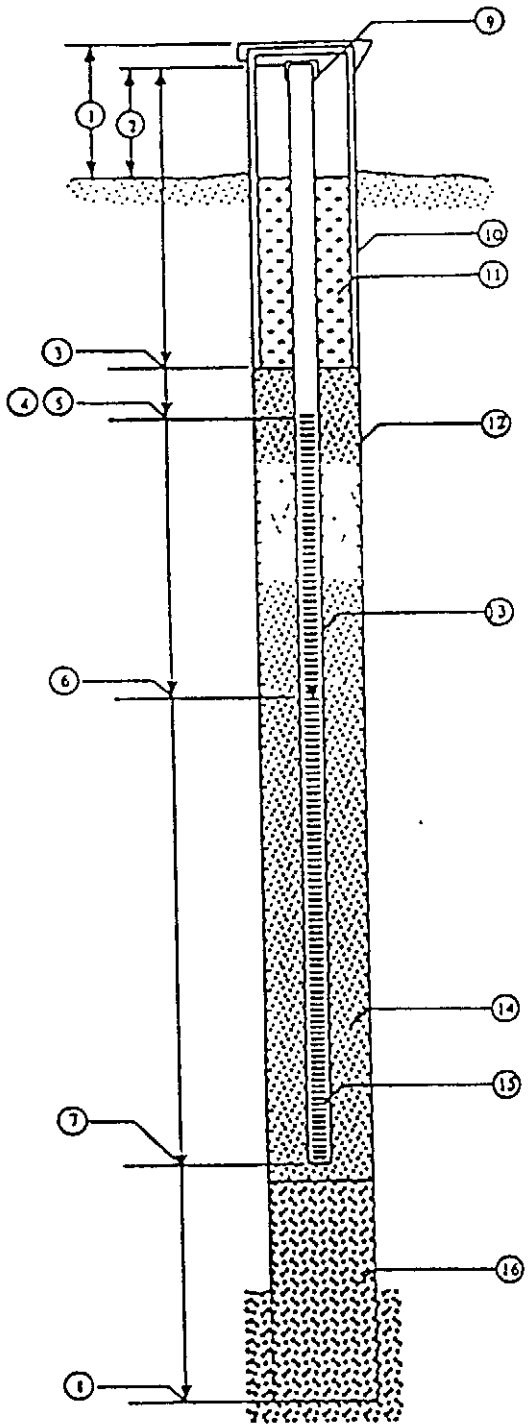
1. Stick-up of Protective Casing		0.0 Feet
2. Stick-up of Well Casing		0.0 Feet
3. Depth to Bottom of Upper Seal/Protective Casing		12.5 Feet
4. Depth to Top of Well Screen		15 Feet
5 Length of Blank Casing		15 Feet
6 Depth to Groundwater Surface Elevation: Approximately		28 Feet
7. Bottom Depth of Well Screen:		50 Feet
8. Depth of Borehole:		51 Feet
9. Locking Cap: Yes		
10. Protective Casing: Yes	Diameter:	10 Inches
11. Type of Upper Seal: 3 feet of bentonite		
12. Borehole Diameter:		10 Inches
13. Well Blank Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
14. Type/Size of Gravel/Sand Pack:		3/16
15. Well Screen Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
	Slot Size:	.010
16. Type of Lower Backfill: Native		

VECTOR THREE ENVIRONMENTAL, INC.	MONITORING WELL CONSTRUCTION Malibu Park School Malibu, CA 90265	MW-2



1. Stick-up of Protective Casing		0.0 Feet
2. Stick-up of Well Casing		0.0 Feet
3. Depth to Bottom of Upper Seal/Protective Casing		17.5 Feet
4. Depth to Top of Well Screen		20 Feet
5. Length of Blank Casing		20 Feet
6. Depth to Groundwater Surface Elevation: Approximately		32 Feet
7. Bottom Depth of Well Screen:		50 Feet
8. Depth of Borehole		51 Feet
9. Locking Cap: Yes		
10. Protective Casing: Yes	Diameter:	10 Inches
11. Type of Upper Seal: 3 feet of bentonite		
12. Borehole Diameter:		10 Inches
13. Well Blank Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
14. Type/Size of Gravel/Sand Pack:		3/16
15. Well Screen Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
	Slot Size:	.010
16 Type of Lower Backfill: Native		

VECTOR THREE ENVIRONMENTAL, INC.	MONITORING WELL CONSTRUCTION Malibu Park School Malibu, CA 90265	MW-3



1. Stick-up of Protective Casing		0.0 Feet
2. Stick-up of Well Casing		0.0 Feet
3. Depth to Bottom of Upper Seal/Protective Casing		17.5 Feet
4. Depth to Top of Well Screen		20 Feet
5. Length of Blank Casing		20 Feet
6. Depth to Groundwater Surface Elevation: Approximately		30 Feet
7. Bottom Depth of Well Screen:		40 Feet
8. Depth of Borehole:		41 Feet
9. Locking Cap: Yes		
10. Protective Casing: Yes	Diameter:	10 Inches
11. Type of Upper Seal: 3 feet of bentonite		
12. Borehole Diameter:		10 Inches
13. Well Blank Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
14. Type/Size of Gravel/Sand Pack:		3/16
15. Well Screen Casing Construction: Schedule 40 PVC	Diameter:	4 Inches
	Slot Size:	.010
16. Type of Lower Backfill: Native		

VECTOR THREE ENVIRONMENTAL, INC.	MONITORING WELL CONSTRUCTION Malibu Park School Malibu, CA 90265	MW-4

COUNTY OF LOS ANGELES

DEPARTMENT OF HEALTH SERVICES

RECEIPT/RECIBO

- ☐ HARBOR-UCLA MEDICAL CENTER
- ☐ HIGH DESERT HOSPITAL
- ☐ KING/DREW MEDICAL CENTER
- ☐ OLIVE VIEW MEDICAL CENTER
- ☐ RANCHO LOS AMIGOS MEDICAL CENTER
- ☐ LAC-USC MEDICAL CENTER
- ☑ PUBLIC HEALTH

SPECIFY Water - Sewage

ANY ALTERATION OR ERASURE RENDERS RECEIPT VOID

CUALQUIER ALTERACION O BORRON HACE ESTE RECIBO NULO

DATE April 7, 1995

RECEIVED FROM Vector Three Environmental Inc $ 532.00

THE AMOUNT OF Five Hundred Thirty-two and 00/100

☐ CASH ☐ MONEY ORDER # ____

☑ CHECK # 9489 ☐ VISA ☑ ~~MASTER CARD~~ Bank ID # 0776-015612

PATIENT NAME 4 Monitoring Wells Construction

PF # ____ ACCOUNT NO ____

DATE(S) OF SERVICE ____

PAYMENT RECEIVED FOR ☐ MEDICAL SERVICES ☑ PHARMACY

MISCELLANEOUS

30215 Morningview Dr.
Malibu

CEIVED BY [signature]

No. 393235

65 78C50R (9/90) 8/94

PATIENT'S COPY

SERVICE APPLICATION AND FEE COLLECTION
COUNTY OF LOS ANGELES - DEPARTMENT OF HEALTH SERVICES
PUBLIC HEALTH PROGRAMS - ENVIRONMENTAL HEALTH

SERVICE REQUEST APPLICATION

INSTRUCTIONS

1. Check the TYPE OF SERVICE requested and attach the required non-refundable fee to the application. Make money order or check payable to LOS ANGELES COUNTY TREASURER, DO NOT SEND CASH. This application is nontransferable.

FEE REQUIRED*		TYPE OF SERVICE
4003 (1224)	☒	MONITORING WELL CONSTRUCTION/DESTRUCTION
_____	☐	WELL CONSTRUCTION, RENOVATION OR DESTRUCTION PERMIT Complete and attach a Well Permit Application
_____	☐	PRIVATE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT
_____	☐	PRIVATE SEWAGE DISPOSAL SYSTEM RENOVATION/EXPANSION
_____	☐	INSPECTION OF MOUNTAIN CABIN SITE as required by the United States Forest Service
_____	☐	INSPECTION OF EXISTING PRIVATE SEWAGE SYSTEM as required by FHA/VA
_____	☐	WATER SUPPLY TEST AND CERTIFICATION as required by U.S. Department of Agriculture

2. Check with Contact Office stamped below for requirements or information.
3. Complete the required information or deliver the completed application, money order or check with the forms indicated.

to: County of Los Angeles
Department of Health Services
Public Health Programs
Environmental Health
2525 Corporate Place
Monterey Park, Ca 91754
(213) 881-4147

*Refer to Schedule of Fees for current fiscal year.

NOTE: FIELD PERSONNEL CANNOT ACCEPT FEES.

4. Phone Contact Office noted below, after you have received your receipt, to request an inspection.

3217 [illegible] Dr. [illegible] 4-7-95
Service/Job Location Address Date

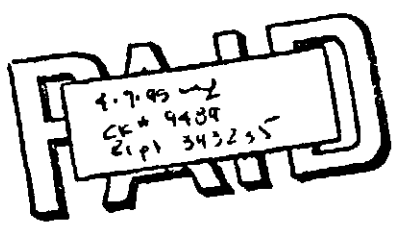
[illegible] Owner/Applicant's Name Address Phone No.

Vector Trace Environmental [illegible]
Contractor's Name Address Phone No.

Co. Engineer Plan Check No.____ Tract No. _____ Lot No. _____ No. Bedrooms ____
(Complete line above for Private Sewage Disposal System Construction or Renovation Application)

CONTACT OFFICE

DEPARTMENT STAMP



Printed on recycled materials

76S979 - H2124 (Rev. 3/91) 5/93 WHITE CHIEF COPY CANARY. APPLICANT COPY PINK. SENIOR COPY

Appendix D

Sieve Analyses

DALLAS TX
LOS ANGELES, CA
MILWAUKEE, WI
WASHINGTON, D.C.

GILES ENGINEERING ASSOCIATES, INC.
GEOTECHNICAL, ENVIRONMENTAL
AND CONSTRUCTION MATERIALS CONSULTANTS
4875 EAST LA PALMA AVENUE SUITE 607 / ANAHEIM, CA 92807
714-779-0052 FAX: 714-779-0068

April 11, 1995

Vector 3 Environmental
10605 SE End Avenue
Chino, California 91710

Attention: Mr. Tim ~~Pierce~~ Beard

Subject: Sieve Analysis Testing
Project No. 2G-9504007

Dear Mr. Pierce:

Please find attached herewith the results of the sieve analyses performed by Giles Engineering Associates, Inc. (*Giles*) on samples you delivered to the *Giles* laboratory. *Giles* sincerely appreciates the opportunity to be of service on this project and we look forward to working with you in the future. If there are any questions concerning this matter, please feel free to contact our office at your convenience.

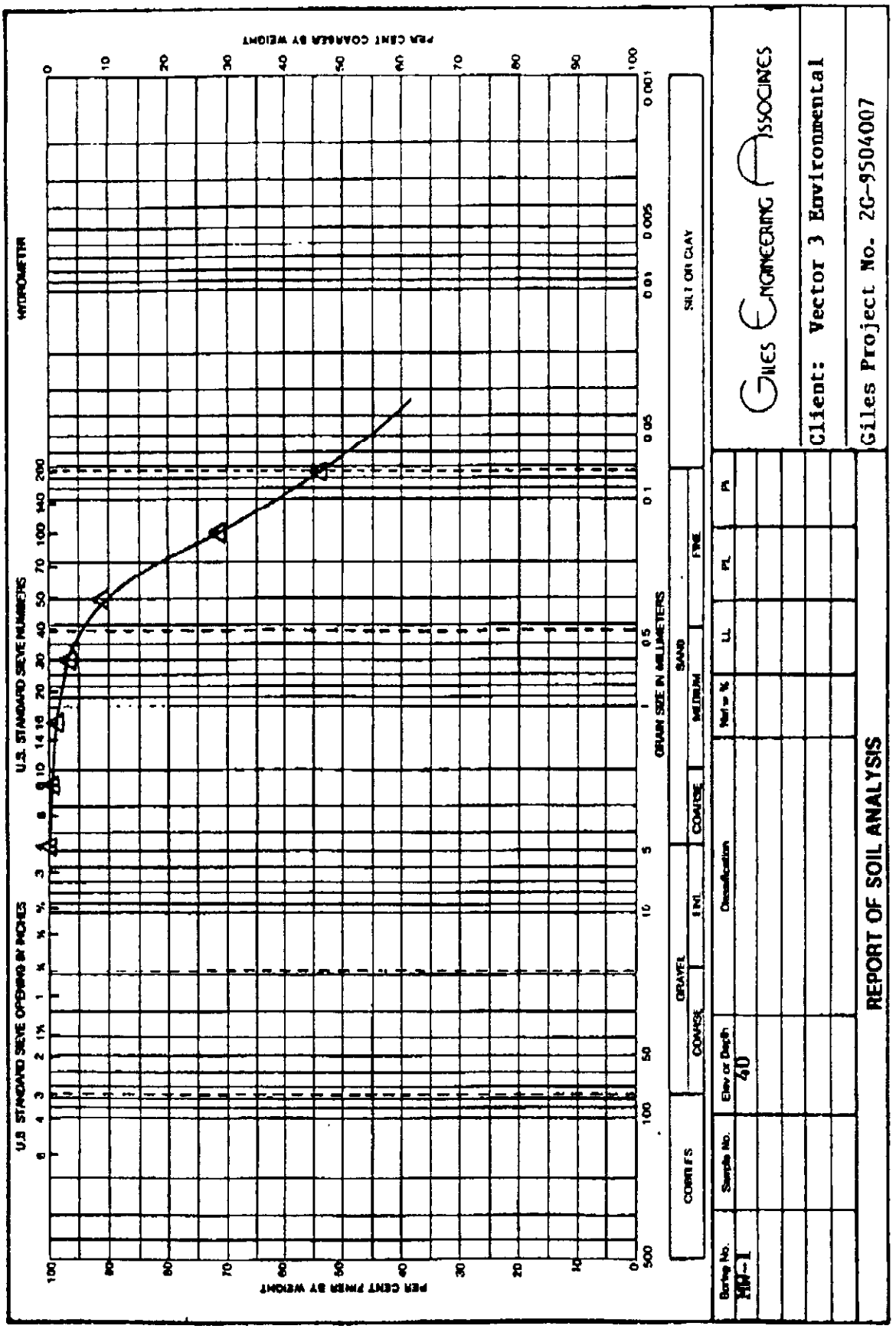
Very truly yours,

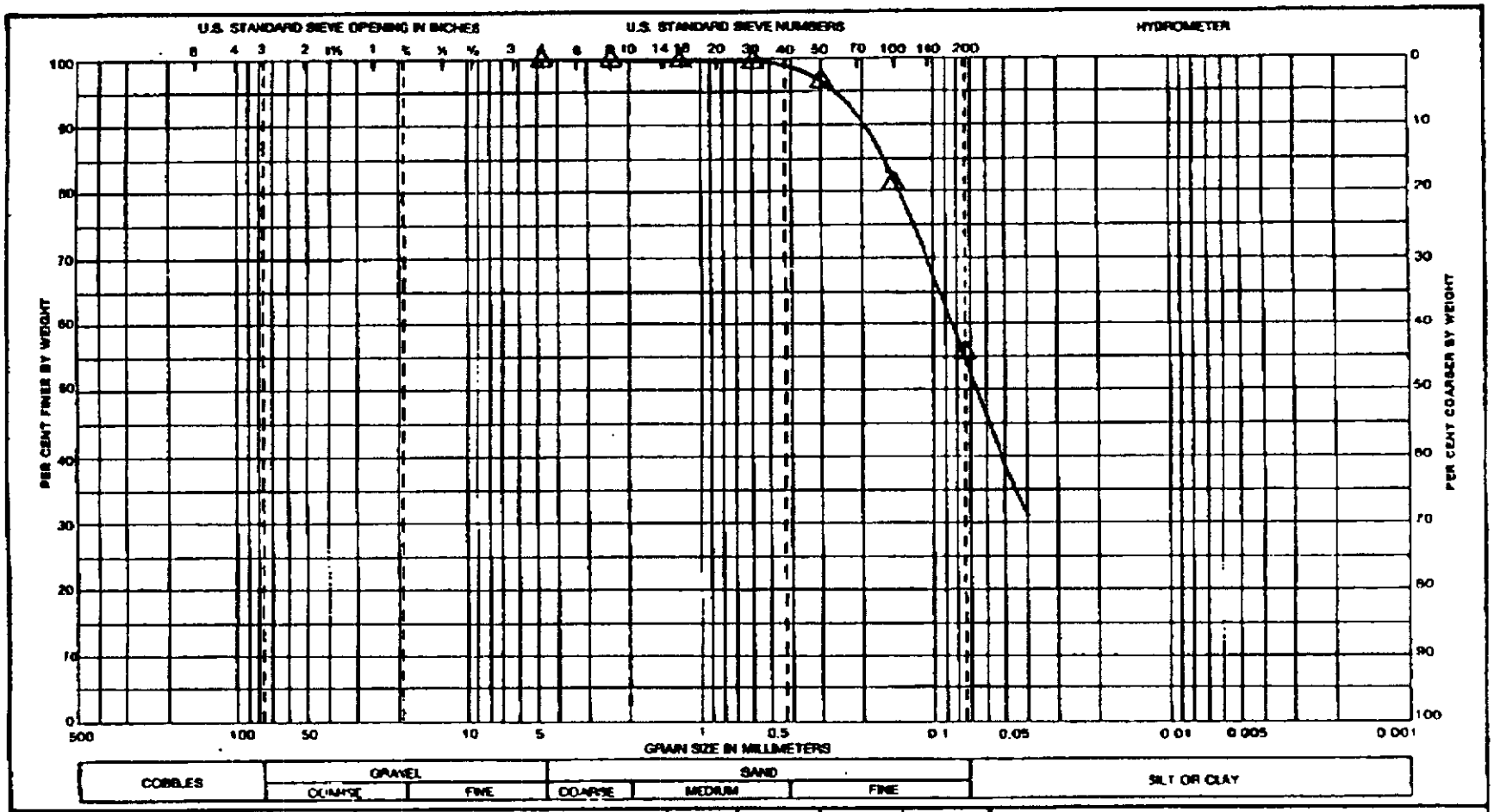
GILES ENGINEERING ASSOCIATES, INC.

Gregory K. Mitchell, R.C.E.
Branch Manager

Enclosures

GKM/sh
CA097


U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
HYDROMETER
GRAIN SIZE IN MILLIMETERS
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
COBBLES
GRAVEL
COARSE
FINE
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev or Depth
Classification
Nat w %
LL
PL
PI
MW-1
40
Giles Engineering Associates
Client: Vector 3 Environmental
Giles Project No. 2G-9504007
REPORT OF SOIL ANALYSIS



Boring No	Sample No	Elev or Depth	Classification	Nat w %	LL	PL	PI
MW-1		30					

REPORT OF SOIL ANALYSIS

Giles Engineering Associates

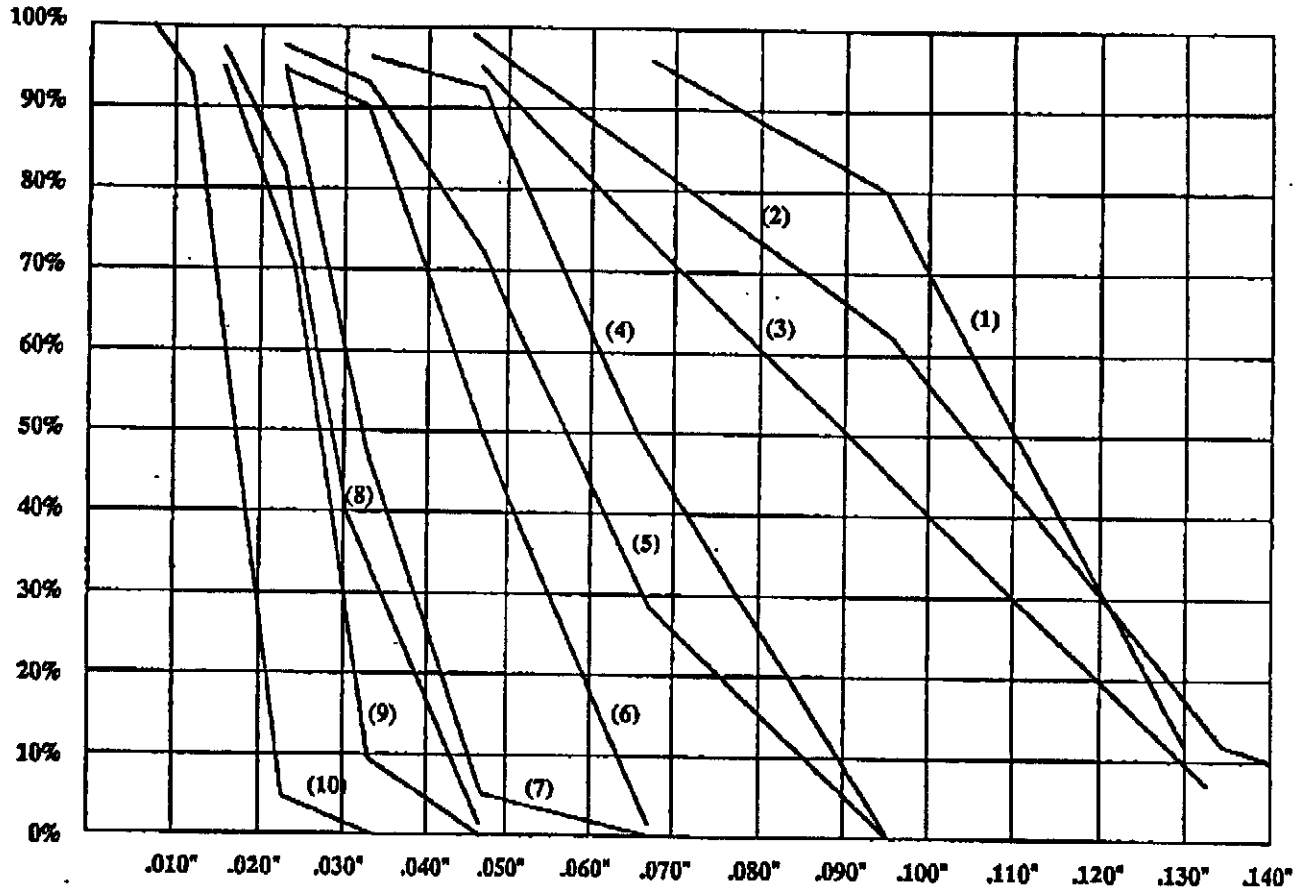
Client: Vector 3 Environmental

Giles Project No. 2G-9504007

LONE STAR FILTER SANDS

CUMULATIVE PERCENT RETAINED vs. SLOT OPENING WIDTH

This graph shows the correlation, for a given size of filter sand, between the cumulative percent of sand retained and the well screen slot opening width. This information is based upon test results which are deemed to be accurate and reliable for filter sand selection.



Key to Graph Labels

(1) ..... CA Sand	(6) .... #2/12 Sand
(2) ..... 6 x 12 Sand *	(7) .... #2/16 Sand
(3) ..... MA Sand	(8) ..... #1C Sand
(4) ..... #8/16 Sand	(9) .... #1/20 Sand
(5) ..... #3 Sand	(10) .... #0/30 Sand

* Note: 6 x 12 Sand is a Non-Stock Item — Available Upon 2–3 Days Notice

DIVERSIFIED WELL PRODUCTS, INC.

2176 Pacific Street
Orange, CA 92665
(714) 637-2383
In California (800) 854-2827

2389 Tripaldi Way
Hayward, CA. 94545
(415) 887-5511
Outside California (800) 225-WELL

202061300

LONE STAR FILTER SANDS

LAPIS LUSTRE MONTEREY TYPE KILN DRIED SANDS

Grade of Sand		F.O.B. Orange, CA 92665		F.O.B. Hayward, CA 94545	
		Less Than 35 Bags	35+ Bags	Less Than 35 Bags	35+ Bags
CA	4 x 12 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
MA	6 x 16 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#8/16	8 x 16 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#3	8 x 20 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#2/12	12 x 20 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#2/16	16 x 30 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#1C	16 x 40 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#1/20	20 x 40 Mesh	[illegible]	[illegible]	[illegible]	[illegible]
#0/30	30 x 50 Mesh	[illegible]	[illegible]	[illegible]	[illegible]

LAPIS LUSTRE SAND GRADING AVERAGES

Cumulative Percent Passing U.S. Sieves

Product Nominal Sieve Size		CA 4 x 12	MA 6 x 16	#8/16 8 x 16	#3 8 x 20	#2/12 12 x 20	#2/16 16 x 30	#1C 16 x 40	#1/20 20 x 40	#0/30 30 x 50
#1/4	6.350 mm									
#4	4.750 mm	98 – 100	100							
#6	3.350 mm	63 – 77	79 – 85	100	100					
#8	2.360 mm	7 – 13	40 – 52	93 – 97	91 – 97	100				
#12	1.700 mm	0 – 4	13 – 19	33 – 41	52 – 68	98 – 100	100	100		
#16	1.180 mm	0 – 2	2	1 – 5	9 – 15	31 – 49	91 – 93	95 – 97	100	
#20	0.850 mm			0 – 2	0 – 2	4 – 10	14 – 24	50 – 58	86 – 94	100
#30	0.600 mm			1	1	0 – 4	1 – 5	14 – 20	22 – 42	93 – 97
#40	0.425 mm							1 – 5	2 – 8	22 – 52
#50	0.300 mm									1 – 11
#70	0.212 mm									0 – 1

• Note: Pallet Deposits Apply for Pallet Quantities and are Refundable upon Return of Pallets
Fresh Water Washed and Kiln Dried • Uniformly Graded for Better Filtration • Pallet Quantity — 35 Bags per Pallet
Available in 100 lb. Bags or Bulk • 2,000 lb. and 4,000 lb. Jumbo Sacks Available • One 100 lb. Bag Fills Approx. 1 Cubic Foot
See Attached Graph to Aid in Selection of Material versus Slot Width • Truck Load (Approx. 24 Tons) Pricing Available on Request

DIVERSIFIED WELL PRODUCTS, INC.
2176 Pacific Street
Orange, CA. 92665
(714) 637-2383
In California (800) 854-2827 ☎ Outside California (800) 225-WELL

2389 Tripaldi Way
Hayward, CA. 94545
(415) 887-5511

201030690

Appendix E

Physical Parameters of the Well Purge Water

Physical Parameters for Well Purge Water, MW-1 Malibu High School May 3,1995						
Time	Gallons Purged	Conductivity	Temperature	pH	Turbidity	Comments
0905		2760	68.5	6.74	61	START
0912	12	2830	67.1	7.13	35.5	
0914	17	2800	66.1	7.32	30.1	
0919	25	2830	66.0	7.45	20.3	
0924	34	2860	66.6	7.38	16.5	
0926	40	2830	66.2	7.37	14.4	
0930	50	2820	66.5	7.35	11.8	
0932	53	2820	66.1	7.38	8.9	
0934	55					STOP
0937						DTW 27.88'
1000						Collect Sample

Physical Parameters for Well Purge Water, MW-2
Malibu High School
May 3,1995

Time	Gallons Purged	Conductivity	Temperature	pH	Turbidity	Comments
1150	2	2430	73.5	7.47	32.0	START
1156	10	2320	72.2	7.46	34.1	Slowed Pump
1200	20	2320	71.5	7.35	49.2	Slowed Pump
1204	25	2360	74.2	7.25	42.9	Slowed Pump
1208	30	2350	75.4	7.02	21.5	
1218	40	2340	72.9	7.11	18.2	
1223	45	2310	72.2	7.04	23.6	
1229	50	2360	72.4	7.10	21.2	
1234	55	2310	72.6	7.05	21.6	
1244	60	2320	72.9	7.12	30.6	
1250	70	2390	73.3	7.12	31.5	Speeded Pump
1302	80	2440	73.6	7.14	42.2	
1308	90	2340	74.0	7.13	83.6	Slowed Pump
1319	100	2390	74.0	7.13	26.2	STOP
1320						DTW 29.75'
1330						Collect Sample

Physical Parameters for Well Purge Water, MW-3
Malibu High School
May 3,1995

Time	Gallons Purged	Conductivity µmohs/cm	Temperature °F	pH	Turbidity NTU's	Comments
1025	2	2850	67.8	7.52	36.0	START
1030	10	2580	68.1	7.40	46.9	Diesel Odor
1035	15	2560	68.4	7.00	66.9	Slowed Pump
1040	20	2550	68.8	7.22	36.0	
1044	30	2530	68.7	7.23	20.5	
1049	35	2520	68.9	6.95	11.5	
1055	40	2530	69.6	7.02	16.4	Slowed Pump
1100	45	2570	69.7	7.09	12.3	
1104	50	2610	70.0	7.12	9.90	
1106	55	2580	70.2	7.07	8.88	STOP
1111						DTW 29.33'
1130						Collect Sample

Physical Parameters for Well Purge Water, MW-4
Malibu High School
May 3,1995

Time	Gallons Purged	Conductivity	Temperature	pH	Turbidity	Comments
1355						START
1359	5	6530	82.2	6.90	7.0	
1406	10	6540	77.9	6.95	4.2	
1409	14					Pumped Dry DTW 35.92'
1450	20					Bailed Dry DTW 40.00'
1455						DTW 38.49
1600						Collect Sample

Appendix F

Laboratory Reports and Chain of Custody Documentation

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

ANALYTICAL REPORT

---M8015(Diesel)/M8020(BTEX)---

Client Name: Vector III Environmental
Project Manager: Damian Waldner
Project Name: Santa Monica Sch. Dist

Date Sampled: 4-10/11-95
Date Analyzed: 4-12-95
Date Reported: 4-12-95

Sample Identification		Result (mg/kg or ppm)				
C&E ID	Sample ID	M8015 Diesel	M8020 Benzene	M8020 Toluene	M8020 Ethylbenzene	M8020 Xylenes
50412B-1	MW1@5'	ND	ND	ND	ND	ND
50412B-2	MW1@10'	ND	ND	ND	ND	ND
50412B-3	MW1@15'	ND	ND	ND	ND	ND
50412B-4	MW1@20'	ND	ND	ND	ND	ND
50412B-5	MW1@25'	ND	ND	ND	ND	ND
50412B-6	MW1@30'	ND	ND	ND	ND	ND
50412B-7	MW2@5'	ND	ND	ND	ND	ND
50412B-8	MW2@10'	ND	ND	ND	ND	ND
50412B-9	MW2@15'	ND	ND	ND	ND	ND
50412B-10	MW2@20'	ND	ND	ND	ND	ND
50412B-11	MW2@25'	ND	ND	ND	ND	ND
50412B-12	MW2@30'	ND	ND	ND	ND	ND
50412B-13	MW3@5'	ND	ND	ND	ND	ND
50412B-14	MW3@10'	ND	ND	ND	ND	ND
50412B-15	MW3@15'	ND	ND	ND	ND	ND
50412B-16	MW3@20'	ND	ND	ND	ND	ND
50412B-17	MW3@25'	ND	ND	ND	ND	ND
50412B-18	MW3@30'	ND	ND	ND	ND	ND
50412B-19	MW3@35'	ND	ND	ND	ND	ND
50412B-20	MW3@40'	ND	ND	ND	ND	ND
50412B-21	MW3@27'	ND	ND	ND	ND	ND
50412B-22	MW3@50	ND	ND	ND	ND	ND
50412B-23	MW1@35'	ND	ND	ND	ND	ND
50412B-24	MW1@40'	ND	ND	ND	ND	ND
Detection Limit:		10	0.005	0.005	0.005	0.015

ND = Not detected at the indicated detection limit.

14096 E. Firestone Blvd., Santa Fe Springs, CA 90670 Tel: 310 921-8123, Fax: 310 921-7974

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

ANALYTICAL REPORT

---M8015(Diesel)/M8020(BTEX)---

Client Name: Vector III Environmental
Project Manager: Damian Waldner
Project Name: Malibu School Dist.

Date Sampled: 4-12-95
Date Analyzed: 4-14-95
Date Reported: 4-17-95

Sample Identification		Result (mg/kg or ppm)				
C&E ID	Sample ID	M8015 Diesel	M8020 Benzene	M8020 Toluene	M8020 Ethylbenzene	M8020 Xylenes
50413B-1	MW4@5'	ND	ND	ND	ND	ND
50413B-2	MW4@10'	ND	ND	ND	ND	ND
50413B-3	MW4@15'	ND	ND	ND	ND	ND
50413B-4	MW4@20'	ND	ND	ND	ND	ND
50413B-5	MW4@25'	ND	ND	ND	ND	ND
50413B-6	MW4@32'	ND	0.444	0.019	0.212	0.193
50413B-7	MW4@35'	ND	0.443	0.063	0.090	0.158
50413B-8	MW4@42'	ND	0.008	ND	0.010	ND
Detection Limit:		10	0.005	0.005	0.005	0.015

ND = Not detected at the indicated detection limit.

14096 E. Firestone Blvd., Santa Fe Springs, CA 90670 Tel: 310 921-8123, Fax: 310 921-7974

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

ANALYTICAL REPORT

---M8015(Diesel)/M602(BTEX)---

Client Name: Vector III Environmental
Project Manager: Tim Buro
Project Name: Santa Monica/Maliba

Date Sampled: 5-3-95
Date Analyzed: 5-5/10-95
Date Reported: 5-12-95

Sample Identification		Result (mg/L or ppm)				
C & E ID	Sample ID	M8015 Diesel	M602 Benzene	M602 Toluene	M602 Ethylbenzene	M602 Xylenes
50504A-1	MW-1	ND	ND	ND	ND	ND
50504A-2	MW-2	ND	ND	ND	ND	ND
50504A-3	MW-3	1.2	0.0429	0.0163	0.0069	0.0415
50504A-4	MW-4	0 8	0.0034	0.0025	0.0038	0.0053
50504A-7	MW-3Decon	ND	0.0068	0.0049	0.0035	0.0165
50504A-8	MW-4Decon	ND	ND	ND	ND	ND
50504A-9	Trip Blank1	ND	ND	ND	ND	ND
50504A-10	Trip Blank2	ND	ND	ND	ND	ND
Detection Limit:		0.5	0.0003	0.0003	0.0003	0.0005

ND = Not detected at the indicated detection limit.

14096 E. Firestone Blvd., Santa Fe Springs, CA 90670 Tel: 310 921-8123. Fax: 310 921-7974

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

QA/QC REPORT

--- M8015(D)/M8020 ---

I. Matrix Spike (MS)/Matrix Spike Duplicate(MSD)

Date Performed: 4-12-95
Batch #: 917
Lab Sample I.D.. 50412B

Unit: mg/kg

ANALYTE	SPK CONC	MS (mg/kg)	MS %	MSD (mg/kg)	MSD %	RPD	ACP %MS	ACP RPD
Benzene	0.020	0.018	92	0.019	94	1.6	80-120	20
Toluene	0.020	0.017	86	0.017	85	1.2	80-120	20
Ethylbenzene	0.020	0.018	90	0.019	96	6.5	80-120	20
Xylenes	0.020	0.019	93	0.019	95	2.7	80-120	20
Diesel	500	462	92	479	96	3 6	70-120	20

II. Laboratory Quality Control Check Sample

ANALYTE	SPK CONC	RESULT	%RECOVERY	ACP %
Benzene	0.020	0.019	97	80-120
Toluene	0.020	0.018	92	80-120
Ethylbenzene	0.020	0.018	90	80-120
Xylenes	0.020	0.018	91	80-120
Diesel	500	484	97	80-120

14096 E. Firestone Blvd., Santa Fe Springs, CA 90670 Tel: 310 921-8123, Fax: 310 921-7974

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

QA/QC REPORT

--- M8015(D)/M8020 ---

I. Matrix Spike (MS)/Matrix Spike Duplicate(MSD)

Date Performed: 4-14-95
Batch #: 920
Lab Sample I.D : 50413B

Unit: mg/kg

ANALYTE	SPK CONC	MS (mg/kg)	MS %	MSD (mg/kg)	MSD %	RPD	ACP %MS	ACP RPD
Benzene	0.020	0.019	94	0.019	97	2.6	80-120	20
Toluene	0.020	0.020	101	0.019	97	4.1	80-120	20
Ethylbenzene	0 020	0.018	92	0.021	103	11.3	80-120	20
Xylenes	0 020	0.021	103	0.020	99	4.0	80-120	20
Diesel	500	506	101	481	96	5.1	70-120	20

II. Laboratory Quality Control Check Sample

ANALYTE	SPK CONC	RESULT	%RECOVERY	ACP %
Benzene	0.020	0.018	91	80-120
Toluene	0.020	0.018	89	80-120
Ethylbenzene	0.020	0.017	86	80-120
Xylenes	0.020	0.019	97	80-120
Diesel	500	465	93	80-120

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CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

QA/QC REPORT

--- M8015(D)/M602 ---

I. Matrix Spike (MS)/Matrix Spike Duplicate(MSD)

Date Performed: 5-5-95
Batch #: 958
Lab Sample I D 50504A

Unit: mg/L

ANALYTE	SPK CONC	MS (mg/L)	MS %	MSD (mg/L)	MSD %	RPD	ACP %MS	ACP RPD
Benzene	0.0200	0.0201	101	0.0189	95	6.2	80-120	20
Toluene	0.0200	0.0210	105	0.0195	98	7.4	80-120	20
Ethylbenzene	0.0200	0.0189	95	0.0196	98	3.6	80-120	20
Xylenes	0.0200	0.0203	102	0.0191	96	6.1	80-120	20
Diesel	500	517	103	524	105	1.3	70-120	20

II. Laboratory Quality Control Check Sample

ANALYTE	SPK CONC	RESULT	%RECOVERY	ACP %
Benzene	0.0200	0.0195	98	80-120
Toluene	0.0200	0.0186	93	80-120
Ethylbenzene	0.0200	0.0179	90	80-120
Xylenes	0.0200	0.0190	95	80-120
Diesel	500	479	96	80-120

CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

5041 2 B

CHAIN OF CUSTODY RECORD

Nº 32486

Client: Vector Tel	Site Address: Morning View Dr.
Project No/Name: Santa Monica Sch. Dist.	
Project Manager: Damian Waldner	Sampled By: Damian Waldner, Tim Bueb
Tel. 909-627-0627 Fax.	Date 4-10 - 4-11 Page 1 of 2

	SAMPLE ID	DATE	TIME	TYPE	CONTAINER TYPE	ANALYSES REQUIRED
1	MW 1@5'	4-10-		~~Flow~~ Core	2" Brass Sleeve	8015 Diesel 8020
2	MW 1@10'	"		"	"	"
3	MW 1@15'	"		"	"	"
4	MW 1@20'	"		"	"	"
5	MW 1@25'	"		"	"	"
6	MW 1@30'	"		"	"	"
7	MW 2@5'	"		"	"	"
8	MW 2@10'	"		"	"	"
9	MW 2@15'	"		"	"	"
10	MW 2@20'	"		"	"	"
11	MW 2@25'	"		"	"	"
12	MW 2@30'	"		"	"	"
13	MW 3@5'	4-11		"	"	"
14	MW 3@10'	"		"	"	"
15	MW 3@15'	"		"	"	"
16	MW 3@20'	"		"	"	"
17	MW 3@25'	"		"	"	"
18	MW 3@30'	"		"	"	"
19	MW 3@35'	"		"	"	"
20	MW 3@40'	"		"	"	"

Remarks:

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	4-12-95	10:10	[signature]	4-12-95	10:10 am
Relinquished By:	Date	Time	Received By:	Date	Time

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CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

5412B

CHAIN OF CUSTODY RECORD

№ 32487

Client: Vector III	Site Address:
Project No/Name: SANTA MONICA SCH. DIST	
Project Manager:	Sampled By:
Tel: Fax:	Date Page 2 of 2

	SAMPLE ID	DATE	TIME	TYPE	CONTAINER TYPE	ANALYSES REQUIRED
21	MW3@27'	11-4		CORE	2" BRASS SLEEVE	8015 8020 Diesel
22	MW3@50	"		GRAB SMP	8 oz. JAR	8 " "
23	MW1@35'					"
24	MW1@40'					"

Remarks:

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	4-12-95	10 10	[signature]	4-12-95	10:10 am
Relinquished By:	Date	Time	Received By:	Date	Time

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CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

5-4136

CHAIN OF CUSTODY RECORD

Nº 32488

Client: MALIBU HIGH SCHOOL	Site Address: 30215 MORNING VIEW DR.
Project No/Name MALIBU SCHOOL DIST.	MALIBU, CA
Project Manager: DAMIAN WAGONER	Sampled By: DAMIAN WAGONER
Tel: 901 627-0672 Fax:	Date 4-12-95 Page 1 of 1

SAMPLE ID	DATE	TIME	TYPE	CONTAINER TYPE	ANALYSES REQUIRED
MW 4 @ 5'	4-12	7:35	CORE CH. SAMPLER	2" BRASS SLEEVE	8015 gas Diesel 8020 BTEX
MW 4 @ 10'	"	8:00	"	"	"
MW 4 @ 15'	"	8:15	"	"	"
MW 4 @ 20'	"	8:35	"	"	"
MW 4 @ 25'	"	8:40	"	"	"
MW 4 @ 32'	"	9:25	"	"	"
MW 4 @ 35'	"	9:35	"	"	"
MW 4 @ 42'	"	10:05	"	"	"

Remarks:

Relinquished By:	Date	Time	Received By:	Date	Time
Damian Wagoner	4-13-95	10:45	Ahren Dus	4-13-95	10:45
Relinquished By:	Date	Time	Received By:	Date	Time

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CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

№ 32536

Client: Vector Three	Site Address: Malibu Hsh Bus Barn
Project No/Name: Santa Monica/Malibu	
Project Manager: Tim	Sampled By: Chris
Tel: (909) 627-0622 Fax: 627-4464	Date Page of

SAMPLE ID	DATE	TIME	TYPE	CONTAINER TYPE	ANALYSES REQUIRED
MW-1	5-3-95	10.00	H_2O	1 Ltr Bottle	8015 Diesel
MW-1		10.00		40 mL Vile	8020
MW-2		1.30		1 Ltr Bottle	8015
MW-2		1:30		40 mL Vile	8020
MW-3		11:30		1 Ltr Bottle	8015
MW-3		11:30		40 mL Vile	8020
MW-4		4:10		1 Ltr Bottle	8015
MW-4		4:10		40 mL Vile	8015(Ox)/8020
MW-1 Decon				40 mL Vile	8015(Ox)/8020
MW-2 Decon					
MW-3 Decon					
MW-4 Decon					
Trip Blank #1					
Trip Blank #2					

Remarks:

Relinquished By:	Date	Time	Received By:	Date	Time
T. Fuse	5-4-95	10:10 am	[illegible]	5-4-95	10:30 am
Relinquished By:	Date	Time	Received By:	Date	Time

14096 E. Firestone Blvd., Santa Fe Springs, CA 90670 Tel: 310 921-8123, Fax: 310 921-7974

Appendix G

Non Hazardous Waste Manifests

DUMP TRUCK FREIGHT BILL
HOURLY - ZONE - TONNAGE

BILL NO. C- 0024008

PRINCIPAL OR OVERLYING CARRIER: W. A WOODS IND. INC. DATE: JULY 19, 1995

ADDRESS: 10120 W. FRONTAGE ROAD

CITY STATE: SOUTH GATE, CA. ZIP: 90280

UNDERLYING CARRIER (IF ANY): —

TRUCK#: 112

TRAILER#: 218

CAL-T#: 884121

SHIPPER CONSIGNOR: SCHOOL DISTRICT SANTA MONICA-MALIBU UNIFIED

STREET OR BOX: 1651 16TH STREET

CITY/STATE ZIP: SANTA MONICA, CA

CONSIGNEE: AVALON ENVIRONMENTAL / TPS TECHNOLOGIES

STREET OR BOX: 14700 S AVALON BLVD / 12328 HIBISCUS

CITY/STATE/ZIP: GARDENA, CA / ADELANTO, CA.

NAME AND ADDRESS OF DEBTOR IF OTHER THAN CONSIGNOR

VECTOR III ENVIRONMENTAL, 11605 EAST END AVE., CHINO, CA. 91710

PT OF ORIGIN: MALIBU, CA.

PT OF DESTINATION: GARDENA, CA. / ADELANTO, CA.

ZONE RATES ONLY — PRODUCTION AREA LETTER | DELIVERY ZONE NO | DISTANCE RATES MILEAGE

☐ HOURLY ☐ TONNAGE RATE @

JOB NO.

BROKER NO.

TAG NO.	WEIGHT	COMMODITY	LOADING ARRIVE	LOADING DEPART	UNLOADING ARRIVE	UNLOADING DEPART	STAND BY TIME	BREAKDOWN / REASON FOR DELAY

- PICK UP TEN (10) DRUMS NON-HAZ. PURGE WATER AND DELIVER TO AVALON FOR RECYCLING. (NON-HAZ. MANIFEST # 00001 / DRUM TICKET # 1276)
- PICK UP FIVE (5) EMPTY DRUMS.
- PICK UP EIGHT (8) DRUMS NON-HAZ. SOIL AND DELIVER TO W.A. WOODS' YARD FOR CONSOLIDATION AND DISPOSAL TO TPS. (NON-HAZ MANIFEST #00)

PICK UP SITE: MALIBU HIGH SCHOOL
30215 MORNING VIEW DRIVE
MALIBU, CA. 90265

TYPE OF DUMP TRUCK EQUIPMENT

TRUCK: ☐ 2 AXLE ☐ 3 AXLE
TRACTOR: ☐ 2 AXLE ☑ 3 AXLE
TRAILER(S): ☐ NONE ☐ BOTTOM DUMP DBL ☐ TRANSFER ☐ END DUMP SEMI ☑ VAN

REPORTING TIME	ENDING TIME	TOTAL TIME	TOTAL TONS
0900			ACCESSORIAL OTHER CHARGES
START DRIVING TIME LAST TRIP	ARRIVAL TIME AT DUMP LAST TRIP	DEDUCTIBLE TIME	SUB TOTAL
END UNLOADING LAST TRIP	RUNNING TIME LAST TRIP	NET TIME —	TOTAL CHARGES

X W A WOODS IND. INC
CARRIER

X Douglas R. Benson
DRIVER SIGNATURE

X
CONSIGNEE SIGNATURE

TEAMS A SERVICE CHARGE OF 1½% WILL BE ASSESSED TO ALL ACCOUNTS PAST DUE 30 DAYS AS PERMITTED BY LAW COURT COSTS ATTORNEY FEES AND ALL COSTS THAT ARISE FROM ANY EFFORTS FOR THE COLLECTION OF AMOUNTS DUE THE ABOVE CARRIER FOR WORK DONE BY THE ABOVE CUSTOMER WILL BE PAID BY THE ABOVE CUSTOMER ATTENTION UNDERLYING CARRIERS NO ... WILL BE MADE FOR TICKETS NOT COMPLETELY FILLED OUT

PUBLIC UTILITIES COMMISSION REQUIRES PAYMENT FOR THESE CHARGES NOT LATER THAN THE 25th DAY OF THE MONTH FOLLOWING DATE OF THIS BILL

TPS Technologies Inc.

ıifest No.: 07-05477 Time In 15:09 Time Out 15:09 Date 07-24-95

omer Name: SANTA MONICA-MALIBU
30215 MORNINGVIEW DR
MALIBU, CA

Gross: 7512 lb INB KEY
Tare : 3089 lb KEY
==========
Net : 4423 lb

Load No.: 001
Transporter: W.A. WOODS
river's Name: SAMUEL BFOOR
ansaction No.: 027078

Net Tons : 2.21

DUMP TRUCK FREIGHT BILL
HOURLY - ZONE - TONNAGE

BILL NO. C- 0024008

PRINCIPAL OR OVERLYING CARRIER: W A WOODS IND INC DATE JULY 19, 1995
ADDRESS: 10120 W FRONTAGE ROAD
CITY STATE: SOUTH GATE, CA ZIP 90280
UNDERLYING CARRIER (IF ANY): —

TRUCK# 112
TRAILER# 218
CAL-T# 884121

SHIPPER CONSIGNOR: SCHOOL DISTRICT SANTA MONICA-MALIBU UNIFIED
STREET OR BOX: 1651 16TH STREET
CITY STATE ZIP: SANTA MONICA, CA

CONSIGNEE: AVALON ENVIRONMENTAL / TPS TECHNOLOGIES
STREET OR BOX: 14700 S AVALON BLVD / 12328 HIBISCUS
CITY/STATE/ZIP: GARDENA, CA / ADELANTO, CA.

NAME AND ADDRESS OF DEBITOR IF OTHER THAN CONSIGNOR

VECTOR III ENVIRONMENTAL, 11605 EAST END AVE CHINO CA 91710

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #	Given by TPS:	Load #
7-24-95	Consolidated TRANSPORTER	114-214	07	05477	010

Generator and/or Consultant

Generator's Name and Billing Address:	Generator's Phone #:	Generator's US EPA ID No.
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT 1651 16TH ST., SANTA MONICA, CA 90404	Person to Contact:	
	FAX#:	Customer Account Number with TPS
Consultant's Name and Billing Address:	**Consultant's Phone #:**	
VECTOR THREE ENVIRONMENTAL 11605 EAST END AVE., CHINO, CA 91708	Person to Contact:	
	FAX#:	Customer Account Number with TPS
Generation Site (Transport from): *(name & address)*	**Site Phone #:** ( ) –	BTEX Levels
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT 30215 MORNINGVIEW DR., MALIBU, CA 90265 (8)	Person to Contact:	TPH Levels
	FAX#: ( ) –	AVG. Levels
Designated Facility (Transport to): *(name & address)*	**Facility Phone #:** (800) 862-8001	Facility Permit Numbers
TPS Technologies Inc. 12328 Hibiscus Avenue Adelanto, California 92301	Person to Contact: Darren Bartlett	
	FAX# (619) 246-8004	
Transporter Name and Mailing Address:	**Transporter's Phone #:** (310) 927-1367	Transporter's US EPA ID No.:
W.A. Woods Industries 10120 W. Frontage Rd. South Gate, CA 90280	Person to Contact: Ron Benson	Transporter's DOT No.:
	FAX# (310) 806-1857	Customer Account Number with TPS

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐			7512	3089	4424
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					2.21

List any exception to items listed above

Generator's and/or consultant's certification. I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

FOR SANTA MONICA-MALIBU UNIFIED

Print or Type Name	Generator ☐ Consultant ☐	Signature and date	Month	Day	Year
R. BENSON		R. Benson	7	24	95

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name	Signature and date:	Month	Day	Year
SAMUEL B. FOOR	Samuel B Foor	7	24	95

Recycling Facility

Discrepancies

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name	Signature and date:
Darren R. Bartlett	Darren R. Bartlett 7-24-95

Please print or type.

TRANSPORTER'S COPY

AVALON ENVIRONMENTAL MANAGEMENT
A DIVISION OF CHEMTRANS
14700 South Avalon Blvd., GARDENA, CA 90248
Ph: 310-523-2555 Fax: 310-523-2552
EPA# CAD983623794

RECEIPT FOR INCOMING WASTEWATER AND TRUCK WASH

RECEIVER: Mpm
REFERENCE #: 127(
DATE: July 19, 1995
TIME IN: 1010
TIME OUT: 1045
CUSTOMER: W.E. Woods
CONTACT: D. Benson
OF MANIFESTS W/LOAD: 1
TRANSPORTER: W.E. Woods
TRUCK# / TANKER#: W5 / 215
MANIFEST#1: 0001
MANIFEST#2:
GENERATOR: Santa Monica Malibu Sch. Dist
PROFILE#1 :
PROFILE#2 :

WASTEWATER RECEIVED:

HOLDING TANK: _____

BULK QUANTITY: _____ GALLONS

DRUM QUANTITY: 10 X 55

DESCRIPTION: Pumping wells

END INCH	
START INCH	
TOTAL	

TANK WASH? ___YES ___NO
TIME ON RACK: _____

TANK CLEANING RECEIPT #: ____
TRUCK#/TANK #: _____/_____
TYPE WASH: _____
TIME OFF RACK: _____

CUSTOMER SIGNATURE: D. Benson
DATE: 7-19-95

CUSTOMER RECEIPT = Pink Copy | Accts. Rec. = White | File = Yellow

LAB REVIEW INITIALS: _____ ACCEPT _____ ; REJECT _____

pH: _____ Solids: _____%
Color: _____ Clarity: _____
Odor: _____ Other: _____
Comments: _____

Alum: _____
Poly: _____
Other1: _____
Other2: _____
Comments: _____

DATE TO A.R.: _____ INITIALS: _____ WWT: _____
ENT:RECEIPT2 WSH+LB+TR: _____+_____+_____

Drums Dropped off.
Acceptance will be determined after Lab Sampling and test by contents.
Mpm. 7-19-95

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: EXEMPT
Manifest Document No.: 0001
2. Page 1 of 1

3. Generator's Name and Mailing Address
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT
1651 16TH ST., SANTA MONICA, CA 90404
4. Generator's Phone (310) 450-8338 X302

5. Transporter 1 Company Name: W. A. WOODS INDUSTRIES INC.
6. US EPA ID Number: CAA D. 0. 0. 9. 6. 5. 7. 5. 4. 5

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
AVALON ENVIRONMENTAL MANAGEMENT
14700 S. AVALON BLVD.,
GARDENA, CA 90248
10. US EPA ID Number: C. A. D. 9. 8. 3. 6. 2. 3. 7. 9. 4

A. Transporter's Phone (310) 927-1367
B. Transporter's Phone
C. Facility's Phone (310) 523-2555

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. PURGE WATER, NON-HAZARDOUS WASTE, LIQUID	0 0 1	D M	0 0 0 0	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11a PURGING WELLS

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT WHEN HANDLING
BILLING INVOICE TO: W. A. WOODS INDUSTRIES INC. EMERG. PHONE # (310) 806-1857

APPROVAL #_____

16 GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: [illegible] Signature: [signature] Month 12 Day 15 Year 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] Signature: [signature] Month [illegible] Day [illegible] Year [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Signature: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19
Printed/Typed Name: Signature: Month Day Year

GENERATOR — TRANSPORTER — FACILITY

GENERATOR'S COPY

12-BLS-C5 Rev. 11/89