WINNING ACTION
INVESTMENTS, INC.

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SUITE 208
DUBLIN, CA 94568

ENVIRONMENTAL ASSESSMENT REPORT
FOR
AMERICAN CITY TRUCK STOP
6310 HOUSTON PLACE
DUBLIN, CALIFORNIA

BY

NSI TECHNOLOGY SERVICES CORPORATION

This report was prepared in accordance with the current procedures and guidelines established by the governing regulatory agency at that time.

This report was prepared by:

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7/18/90
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7-18-90
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ENVIRONMENTAL ASSESSMENT REPORT
AMERICAN CITY TRUCK STOP
6310 HOUSTON PLACE
DUBLIN, CALIFORNIA

1.0 INTRODUCTION

This report summarizes the results of NSI Technology Services Corporations's (NSI) environmental assessment of the shallow soils and ground water at the American City Truck Stop located at 6310 Houston Place in Dublin, California.

1.1 SITE HISTORY

Two 12,000-gallon diesel tanks, one 8,000-gallon diesel tank, and one 500-gallon waste oil tank were removed from the site on March 31, 1989 by H. G. Winters Company. Soil samples that followed tanks removal indicated no Total Petroleum Hydrocarbons (TPH) as diesel concentrations. However, Total Oil and Grease (TOG) concentrations in the collected soil samples ranged from non-detected by the instrument used for analysis to 24 parts per million (ppm) with one soil sample at 240 ppm. Ground water samples collected from the excavation pits, from three diesel tanks and one waste oil tank excavation pits, indicated concentrations of TPH as diesel of 8.5, 95, 380 (from the diesel tanks excavation), and 9.7 ppm (from the waste oil tank pit).

On August 9, 19~~90~~89, three 4-inch diameter monitoring wells (MW-1, MW-2, and MW-3) were installed by Safety Specialists, Inc. Soil samples, due to monitoring wells installation, showed TOG and TPH as diesel with Benzene, Toluene, Ethylebenzene, and total Xylenes (BTEX) concentrations were mostly non-detected by the instrument used for analysis.

Initial ground water sampling and quarterly monitoring and sampling indicated the continuous presence of TPH as diesel and TOG constituents. Volatile Organics Compounds (VOC's) were not detected in the ground water since initial sampling event. Thus, BTEX compounds and TPH as gasoline concentrations disappeared after initial sampling of the ground water (see Table 1). High concentrations of TOG and TPH as diesel in the ground water beneath the site are the major concern of the project.

1.2 *PURPOSE AND SCOPE*

The purpose of this investigation was to explore the extent of shallow soil and ground water at the site for the presence of petroleum products. To complete this task, one soil boring (MW-4) was drilled on the property, and monitoring well (MW-4) was constructed in the soil boring. A third-party sampler, Christopher French, R.G., was subcontracted to collect soil samples from the soil boring, observe the monitoring well construction, and prepare a field log for the soil boring describing the materials encountered using the Unified Soil Classification System (USCS).

As required by the Regional Water Quality Control Board (RWQCB) for ground water sampling and quality assurance, it was necessary to sample the previously existing monitoring wells, MW-1, MW-2, and MW-3.

Chemical analyses of soil samples from soil boring MW-4, and ground water samples from the four monitoring wells (MW-1 through MW-4) were conducted by Chromalab, Inc. at their certified environmental laboratory in San Ramon, California. All soil and ground water samples were analysed for benzene, toluene, ethylebenzene, and total xylenes (BTEX), high boiling point hydrocarbons (diesel), and total oil and grease (TOG).

Field activities and available information regarding regional hydrogeology setting and chemical analyses results are summarized below.

1.3 SITE DESCRIPTION

The site is located at 6310 Houston Place in Dublin, California. It is surrounded by commercial properties on all sides. At the time of this investigation, the service station was out of operation.

Existing structures at the site include a service building, one pump island, and one 12,000-gallon underground diesel tank. Three monitoring wells, MW-1, MW-2, and MW-3, exist in the site as shown in the site plan, Figure 1.

2.0 HYDROGEOLOGIC SETTING

The site is located in the Amador Subbasin of the Livermore Valley Basin. The uppermost members of the Livermore Valley Basin primarily consist of Quaternary sediments including gravel deposits, valley fill materials, stream channel deposits, alluvial fan deposits, and basin deposits.

These units are generally loose deposits of sands, gravel, and boulders (stream channel deposits), unconsolidated deposits of clay, silt, sand, and gravel (alluvium deposits), and semiconsolidated deposits of sand and gravel in a matrix of clayey sand (alluvial fan deposits). The thickness of these units ranges from 0 to 200 feet. Stream channel deposits are highly permeable but are limited to the extent and thickness. Basin deposits are generally impermeable, while alluvium and alluvial fan deposits are permeable and represent the major water-bearing formations.

The Amador basin is bordered on the east by the middle zone of Livermore Fault and on the west by the Pleasanton Fault. Ground water occurs in the Amador Subbasin in unconfined to confined conditions. Unconfined ground water is found in the near-surface zones, however, in the deeper zones, ground water is, to some extent, confined. The deeper zone ground water of the Amador Subbasin is good to excellent quality, while the shallow ground water is considered poor quality.

A hydraulic surface map showing the regional ground water elevation contours for the area (File No. 13320, March 16, 1989) was provided by the Alameda County Flood Control and Water Conservation District (Zone 7). This map shows regional ground water flowing westerly to northerly in the vicinity of the site, with a moderately flat gradient. The major ground water-producing aquifer is located at approximately 90 feet below grade, with varying gradient throughout the basin.

Information provided by Zone 7 indicates that the water supply wells were constructed from the ground surface to 130 feet in depth below the grade with 36-inch casing, and from 130 to 647 feet below grade with 28-inch casing. The surface seal extended from the ground surface to 130 feet below grade, while perforated portion extends from 165 to 647 feet below grade.

3.0 FIELD PROCEDURES

3.1 PERMITTING

Prior to commencement of the drilling activities, Alameda County Flood Control Water District Well Construction Permit No. 90341 was filed and approved. A copy of the permit is included in Appendix A.

3.2 SOIL BORING

Soil boring MW-4 was drilled on May 17, 1990 at the location shown in Figure 2. The soil boring was drilled using a truck-mounted CME-75 drilling rig equipped with 10-inch diameter, hollow stem, continuous flight augers. Christopher French, R.G., a third party sampler, observed the drilling and prepared a field log for the soil boring. Well log is presented in Appendix B. Exploration Geoservisere of San Jose, a State-licenced driller, was contracted to drill and construct the monitoring well MW-4.

Soil boring MW-4 was drilled to a total depth of 20 feet. The top of the first ground water zone was encountered at a depth of approximately 9 feet below the surface grade in the boring. Ground water was stabilized in the soil boring at an approximate depth of 8.5 feet.

3.3 SOIL SAMPLING

Soil samples were collected at 4-foot intervals starting from the surface grade by advancing a modified California sampler through the hollow stem of the augers. The sampler was either pushed in the soil using the hydraulic system on the rig, or driven a maximum of 18-inches, using a 140-pound hammer with a 30-inch drop. The number of blow counts or the hydraulic pressure, in psi, required to drive or push the sampler are shown on the well log.

The soil samples were retained in three, six-inch long, two-inch diameter brass sleeves within the samples. The brass sleeves were labeled A through C from bottom to top. Soil sample A was retained for laboratory analysis by covering both ends of the liner with teflon sheets and sealing with plastic end caps and tape. When standing water was encountered, soil samples were only collected

to observe changes in lithology. The samples were later transported on ice to the analytical laboratory using the proper chain-of-custody documentation.

Soil samples B and C were described by the Registered Geologist using the Unified Soil Classification System. The descriptions are shown on the well logs presented in Appendix B.

3.4 MONITORING WELL CONSTRUCTION

At the completion of drilling, the boring was converted into monitoring well MW-4. The well was constructed of 4-inch diameter schedule 40, flush threaded PVC well casing with a 6-inch threaded bottom cap. The casing was screened from 6 to 20 feet in depth below grade with 0.020-inch slotted casing. The casing was flushed with the ground surface with a blank casing. To construct the well, the casing was placed down the hollow stem of the augers. The augers were then pulled from the borehole slowly as the #3 sand filled the annulus. The sand pack was installed from the base of the borehole to approximately 1 foot above the top of the screened casing. The well was then sealed by adding one foot of bentonite pellets on the top of the sand pack and filling the remaining portion of the annulus above the hydrated bentonite pellets with cement grout. A locking lid was placed over the casing, and a vault box was placed over the locking lid. The well construction details are shown in the well construction diagram in Appendix B.

3.5 MONITORING WELL DEVELOPMENT

After the monitoring well grout had been allowed to set for a minimum of 72 hours, the monitoring well was developed by over pumping until the discharged water was clear. The field parameters of pH, electrical conductivity, temperature, and visual turbidity were monitored during well development. Water discharged from the monitoring well was stored in sealed 55-gallon open head DOT-approved drums and stored on site labeled "Analysis Pending". Well development and water sampling field survey form, which was filled in the field, is attached in Appendix C.

3.6 WELLS MONITORING PROCEDURES

The ground water level in each monitoring well (MW-1 through MW-4) was measured by using a clean stainless steel graduated tape, with attached sounding device. Water levels were recorded in the wells from the top of the casing to the nearest 0.01 foot. Table 2,

attached, lists water table levels in each well.

When water level in each well was determined, a clean, dedicated, and clear bailer was used to detect the presence of floating products in each well. Water discharged from each monitoring well was stored individually in sealed 55-gallon open head DOT-approved drums. The drums were then properly labeled and stored in the facility. Each well was then purged with a clean nitrogen driven bladder pump. Field parameters, such as, pH, conductivity, temperature, visual turbidity, and color, were observed. Field parameters and notes for each well are included in Appendix C.

3.7 WELLS SAMPLING PROCEDURES

Purging was terminated after more than 5 casing volumes of ground water were purged from each well and stabilization of pH, conductivity, and temperature was achieved. Depth to ground water in each well was then allowed to reach the original level; i.e., before pumping.

Water samples were collected using a stainless steel bailer cleaned with a trisodium phosphate solution (TSP) with triple rinse with deionized water. Samples were collected in a 40-milliliter Volatile Organic Analysis (VOA) bottles fitted with teflon-lined screw type caps, and in one-liter amber bottles. The sample containers complied with the appropriate preservation techniques in reference to the LUFT manual, dated October 18, 1989. The samples were labeled, then placed in a cooler with ice, and sent to a State-certified laboratory, accompanied by the chain-of-custody records.

4.0 RESULTS

4.1 SOIL DESCRIPTION

As shown on the log in Appendix B, the materials encountered below the site consisted predominantly of clay to silty clay materials to a total depth of 20 feet below grade, the maximum depth drilled for this investigation.

In monitoring well MW-4, the soil samples consisted of dark olive grey silty clay (12 feet) underlain by gray silty to clayey sand (2 feet) followed by more than five feet of light olive brown silty clay. Ground water was first encountered at the borehole at approximately 14 feet below grade. No hydrocarbon odor was noticed

on any of the two soil samples from well MW-4.

Site lithology could be best interpreted by correlating the results from MW-4 with boring logs of MW-1 through MW-3. A cross section A-A' was prepared to correlate the results of this investigation to previous investigations performed earlier (see Figure 2). The results of the cross section A-A' is shown in Figure 3.

4.2 LABORATORY SOIL ANALYSIS

Soil samples from well MW-4 at depth of 4 and 8 feet (MW4-4' and MW4-8') were analyzed by Chromalab, Inc. for BTEX, TPH as diesel, and TOG using EPA Methods 8020 and 8015 and DOHS Test Method 503 D&E, respectively.

All soil samples indicated the presence of BTEX, TPH as diesel and TOG at concentrations below the instrument detection limit (N.D.).

4.3 LABORATORY GROUND WATER ANALYSIS

Ground water samples from all existing wells (MW-1 through MW-4) were sampled and analysed for BTEX, TPH as diesel, and TOG using EPA Methods 602 and 3510/8015 and DOHS Method 503 D&E, respectively.

BTEX concentrations in all water samples were below the instrument detection limit. Samples MW-1 and MW-4 showed 7.2 and 8.6 parts per million (ppm) concentration for TOG. TPH as diesel concentrations in water samples MW-1, MW-2, MW-3, and MW-4 were 3.4, 1.2, not-detected, and 22 ppm, respectively. Table 1, attached, summarizes the analytical results for the ground water sampling analysis with a comparison to previous sampling events.

A hard copy of the analytical report as received from the laboratory attached with chain of custody records are enclosed in Appendix D.

4.4 GROUND WATER FLOW DIRECTION

The depth to ground water in all wells at the site was measured on June 5, 1990. The results of the elevation survey and water depth sounding are summarized in Table 2.

A State-licensed surveyor, Kier & Wright, was subcontracted to survey the elevation of the monitoring well with respect to an

established bench mark. Table of wells elevation is included in Appendix E.

The ground water surface head elevations from wells MW-1 through MW-4 was utilized to construct a ground water contour map (Figure 4). The contour orientations indicate a general southeasterly ground water flow with a gradient of approximately 0.03.

5.0 DISCUSSION AND CONCLUSION

A comparison table, Table 1, is prepared to compare previous sampling results with this sampling event. This sampling event shows lower dissolved hydrocarbon constituents in the ground water. An explanation for this occurrence could be attributed to previous development of the wells. While developing monitoring wells MW-1 through MW-3, very dark colored silts and sheen were discharging from the pump. Because of the adsorption of the hydrocarbons on the silts surface, the prior sampling results could have been artificially high. When the discharge was clear, well monitoring and sampling procedures were followed as described earlier.

As a result of field observations and laboratory testing, it is believed that the monitoring wells were not developed properly. To ascertain the results of this sampling event, another set of ground water sampling is recommended to evaluate the concentrations of the hydrocarbons beneath the site.

TABLES

TABLE 1

Well No.	TPH-G	TPH-D	B	T	E	X	TOG	VOC'S
All concentrations in Parts Per Billion (ppb)								
AUGUST 15, 1989								
MW-1	4400	10600	16	N.D.	2.4	3.1	N/A	N/A
MW-2	N/A	47000	N.D.	N.D.	N.D.	N.D.	50000	N.D.
MW-3	2000	2000	N.D.	N.D.	N.D.	N.D.	N/A	N/A
DECEMBER 13, 1989								
MW-1	N.D.	60000	N.D.	N.D.	N.D.	N.D.	N/A	N/A
MW-2	N/A	34000	N.D.	N.D.	N.D.	N.D.	95000	N.D.
MW-3	N.D.	1700	N.D.	N.D.	N.D.	N.D.	N/A	N/A
JUNE 20, 1990								
MW-1	N/A	4300	N.D.	N.D.	N.D.	N.D.	7200	N/A
MW-2	N/A	1200	N.D.	N.D.	N.D.	N.D.	N.D.	N/A
MW-3	N/A	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N/A
MW-4	N/A	22000	N.D.	N.D.	N.D.	N.D.	8600	N/A

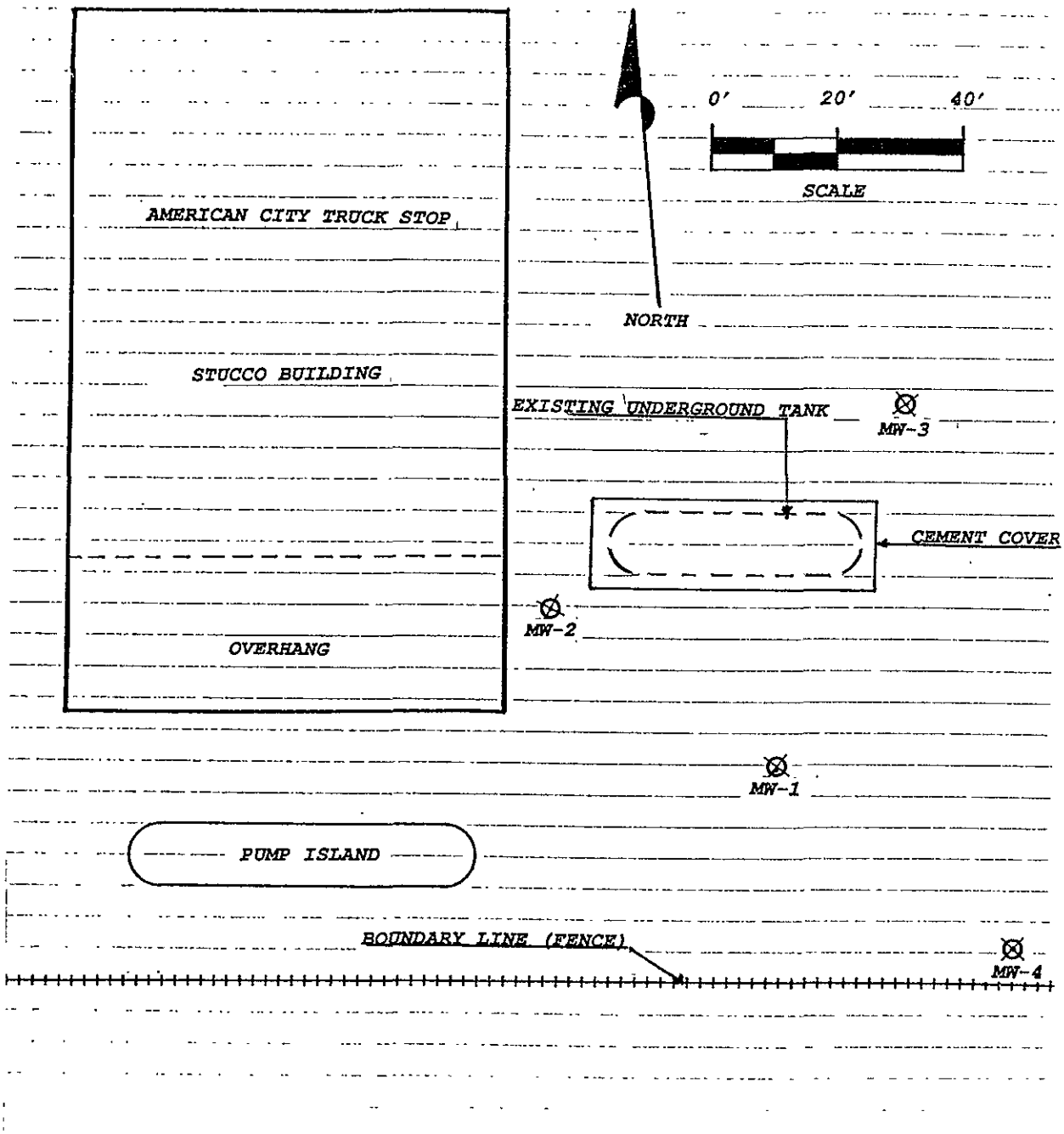
LEGEND:

TPH-G	=	Total Petroleum Hydrocarbons as Gasoline.
TPH-D	=	Total Petroleum Hydrocarbons as Diesel.
B	=	Benzene.
T	=	Toluene.
E	=	Ethylbenzene.
X	=	Xylene.
TOG	=	Total Oil and Grease.
VOC's	=	Volatile Organic Compounds (EPA 8240).
N.D.	=	Not Detected by instrument of analysis.
N/A.	=	Not Analysed.

TABLE 2

Monitoring Well No.	Well Elevation Survey (Ft)	Depth to Ground Water (Ft)	Ground Water Head (Ft)
MW-1	332.47	8.84	323.63
MW-2	332.58	8.82	323.76
MW-3	332.40	8.57	323.83
MW-4	331.55	8.06	323.49

FIGURES



NSI
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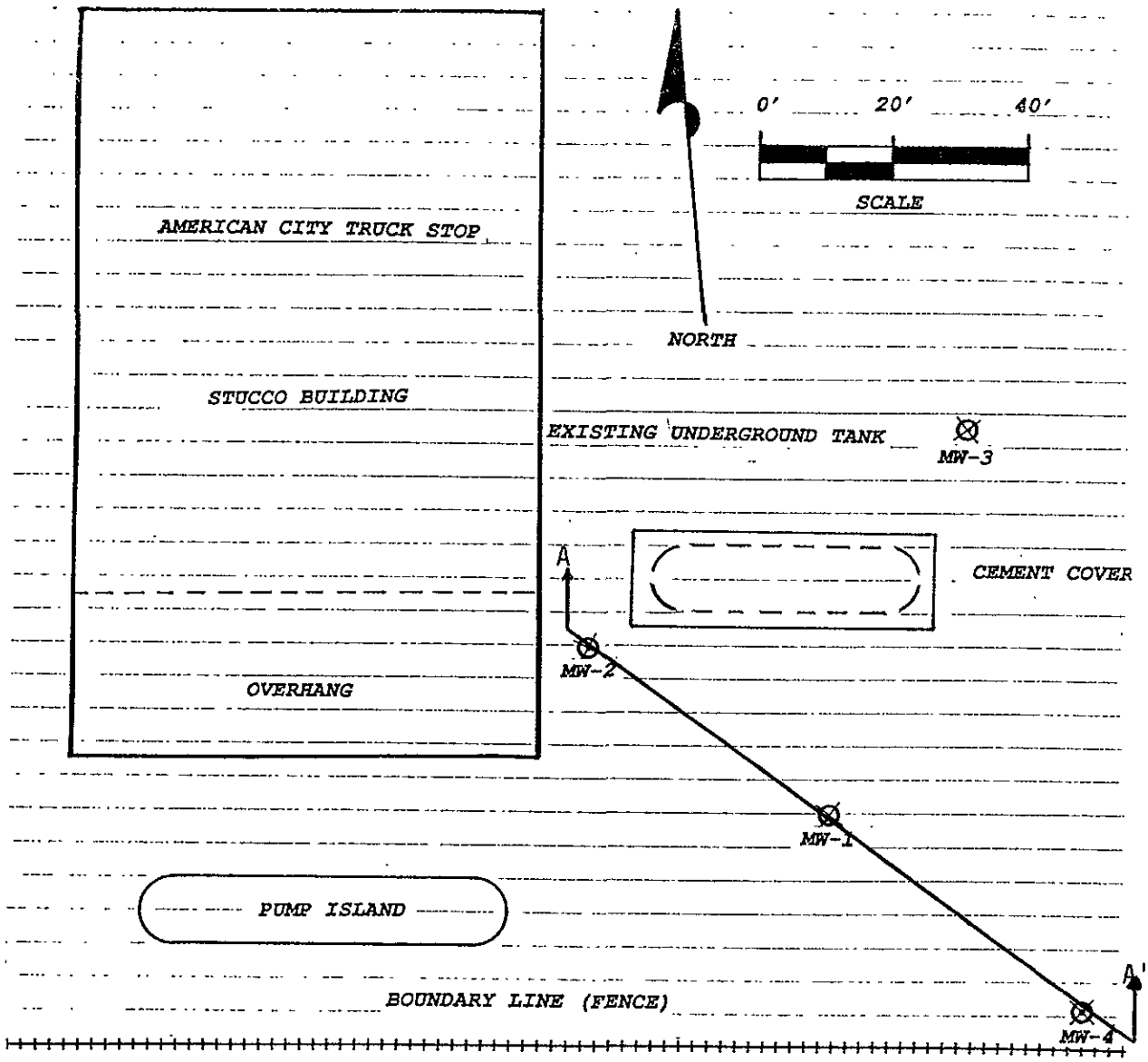
A ManTech International Company

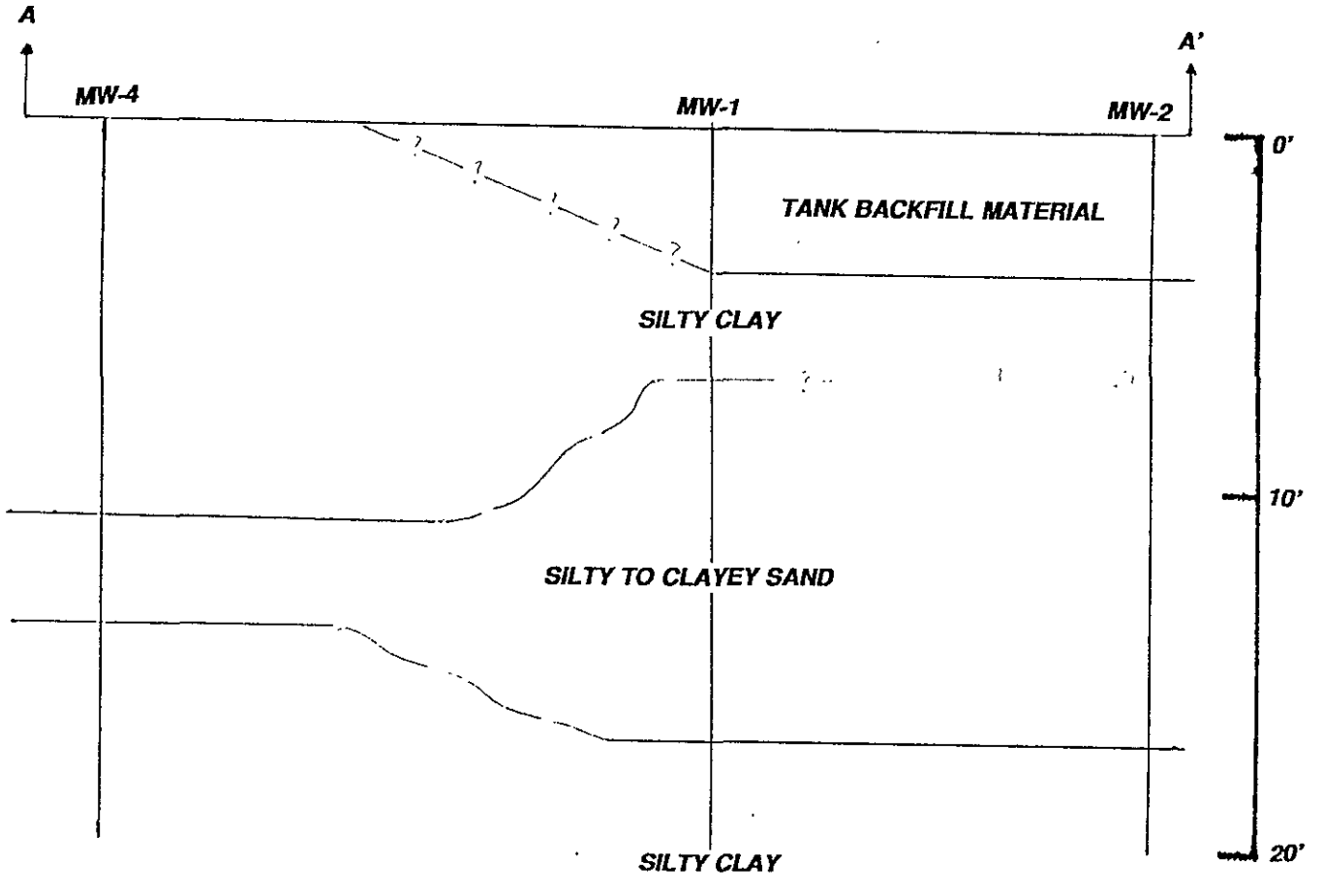
FIGURE 1:

SITE PLAN



NSI
Technology Services Corporation
A ManTech International Company

FIGURE 2:
Monitoring Wells Location Map
Showing Cross-Section A-A'



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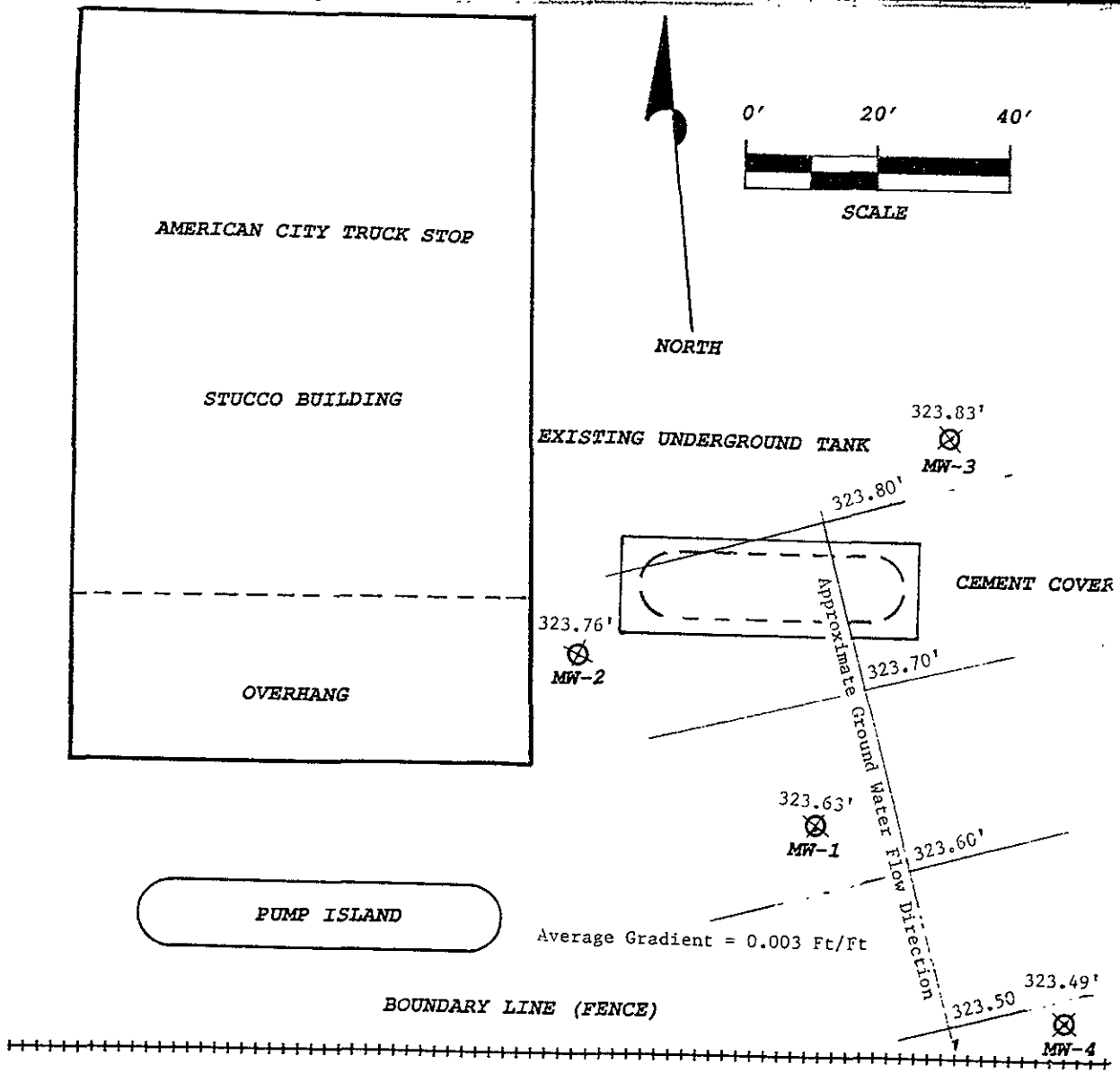
Technology Services Corporation
A ManTech International Company

FIGURE 3: Site Lithology For Cross-Section A-A'.



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A ManTech International Company

FIGURE 4: Ground Water Flow Direction Map.

APPENDIX A

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3060 Houston Place
Dublin, CA.

CLIENT
Name Winning Action Inc.
Address 7080 Donlon Way Phone (415) 828-4253
City Dublin Zip 94568

APPLICANT
Name NSI Tech. Services Corp.
Address 155A Moffett Park Phone (408) 745-6345
City Sunnyvale Zip 94089

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. ___

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 8 in.* Depth 20 ft.
Surface Seal Depth 5 ft.* Number 1

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

ESTIMATED STARTING DATE 6/4/90
ESTIMATED COMPLETION DATE Same

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

APPLICANT'S SIGNATURE [signature] Date 5/24/90

FOR OFFICE USE

PERMIT NUMBER 90341
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

E. WELL DESTRUCTION. See attached.

* Casing diameter changed to 4 inches and surface seal depth changed to 8 feet as discussed with NSI representative Youseff El-Shoubary.

Approved Wyman Hong Date 29 May 90
Wyman Hong

121989

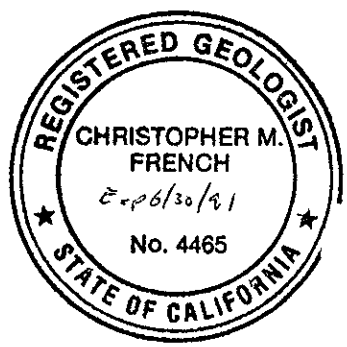
APPENDIX B

Amerigas City
Truck Stop
Pleasanton, CA
6/6/90

Field Notes

4'	9 13 14	CH/CL	SILTY CLAY; dark olive gray (5Y, 3/2); 5% sand; firm to stiff; very tough; non dilatant; high dry strength; no odor; damp.
8'	6 9 10	CL	SILTY CLAY, SANDY, to SANDY CLAY; olive gray (5Y, 4/2) to brown (10YR, 5/3); 15% to 35% sand; very fine; stiff; low to medium dilatancy; medium tough; damp to very moist.
N/R		SM-SC	@12-14': SILTY to CLAYEY SAND; gray (5Y, 6/1); 40% silt and clay; very fine; very well sorted; portions sandy clay to sandy silt; odor; wet. @14': wet.
15'	4 16 20	CL-ML	SILTY CLAY; gray (5Y, 6/1) to light olive brown (2.5Y, 5/4); medium to high dilatancy; low toughness; low dry strength; macropores; odor; wet.
20'	9 14 20	CL	SILTY CLAY; olive brown (2.5Y, 4/4); low dilatancy; medium to high toughness; stiff to very stiff; medium dry strength; odor; damp to moist.

H20 rec. to 8.75 feet
T.D.= 20 feet.
Product sheen



N S I
Technology Services Corporation

LOG OF EXPLORATORY BORING

Project # Fred Houston
Boring # MW-4
Location 6310 Houston Place, Dublin, CA
Drilling Method Hollow-Stem Augers

Date May 17, 1990
Logged By Christopher French, RG.
Driller Exploration Geoservices
Client Winning Action Investment
Hole Diameter 10"

Blows/ft or Pressure PSI	Type of Sample	Sample Number	Depth	Sample	Soil Group Symbol (u.s.c.s)	Description
27	Soil	MW4-4	4'		CH/CL	SILTY CLAY; dark olive gray (5Y, 3/2); 5% sand; firm to stiff; very tough; non dilatant; high dry strength; no odor; damp.
18	Soil	MW4-8	8'		CL	SILTY CLAY, SANDY, to SANDY CLAY; olive gray (5Y, 4/2) to brown (10YR, 5/3); 15% to 35% sand; very fine; stiff; low to medium dilatancy; medium tough; damp to very moist.
N/R	Soil		12'		SM-SC	@12-14': SILTY to CLAYEY SAND; gray (5Y, 6/1); 40% silt and clay; very fine; very well sorted; portions sandy clay to sandy silt; odor; wet. @14': wet.
36	Soil		15'		CL-ML	SILTY CLAY; gray (5Y, 6/1) to light olive brown (2.5Y, 5/4); medium to high dilatancy; low toughness; low dry strength; macropores; odor; wet.
34	Soil		20'		CL	SILTY CLAY; olive brown (2.5Y, 4/4); low dilatancy; medium to high toughness; stiff to very stiff; medium dry strength; odor; damp to moist.

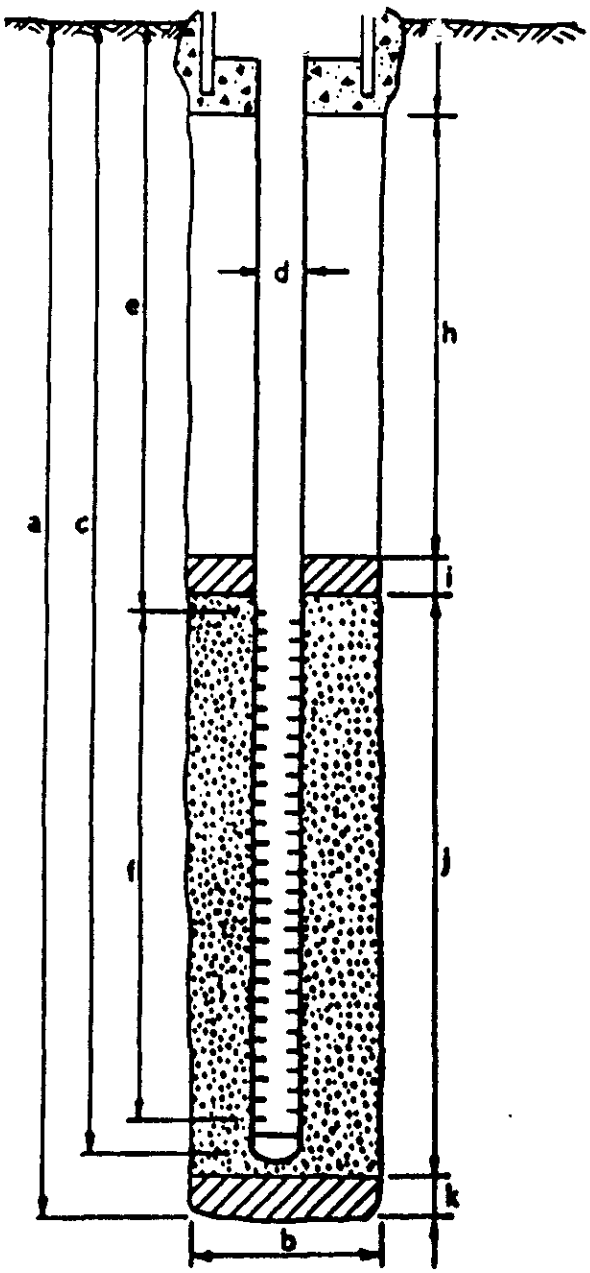
H2O rec. to 8.75 feet
T.D.= 20 feet.

REGISTERED GEOLOGIST
CHRISTOPHER M. FRENCH
Exp 6/30/91
No. 4465
STATE OF CALIFORNIA

WELL DETAILS

PROJECT NUMBER Winning Action Investement
PROJECT NAME Fred Houston
COUNTY Alameda
WELL PERMIT NO. _____

BORING / WELL NO. MW 4
TOP OF CASING ELEV. _____
GROUND SURFACE ELEV. _____
DATUM _____



EXPLORATORY BORING

a. Total depth 20 ft.
b. Diameter 10 in.
Drilling method Hollow-Stem Augers

WELL CONSTRUCTION

c. Casing length 20 ft.
Material Scedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 6 ft.
f. Perforated length 14 ft.
Perforated interval from 6 to 20 ft.
Perforation type Machine Slotted
Perforation size 0.02-inch
g. Surface seal 0 ft.
Seal material _____
h. Backfill 4 ft.
Backfill material Neat Cement
i. Seal 1 ft.
Seal material Bentonite
j. Gravel pack 15 ft.
Pack material #3 Sand
k. Bottom seal 0 ft.
Seal material _____

PLATE

APPENDIX C

→ Well Development ←

NSI Technology Services Corporation

Well Development and Water Sampling Field Suvey

Project: Fed Houston Sampler: RASmi Date: 6/11/90

Well: MW-4 Site Name & Adress: 6310 Houston Place, Dublin, GA

Sampling Method: Nitrogen Driven Pump & ~~Bailer~~

Decontamination Procedure: Tripple Rinse W/ TSP Solution

Well Development / well Sampling Data

Well Depth: 20 Time: AM Water Level Before Purging: 8.08

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.92	feet X	0.16	(0.65)	7.748	5	39

Free Product Discription: No free Product Noticed

Elapsed Time (min)	Volume (gal)	pH	Conductivity (Micro-Siemens)	Temperature (°C)	Notes
Start	0	6.5	20×10^3	41.3	Clear/No odor
5	10	6.7	13×10^3	38.3	"
6	20	6.9	9×10^3	39.4	"
10	30	7.0	9×10^3	39.6	"
8	40	7.1	9×10^3	39.6	"

NSI Technology Services Corporation

Well Development and Water Sampling Field Suvey

Project: Fred Houston Sampler: CA Smith Date: 6/12/90

Well: MW-1 Site Name & Adress: 6310 Houston Place, Dublin, CA

Sampling Method: Nitrogen driven Pump / Hand Bailer

Decontamination Procedure: Triple rinse w/ TSP Solution

Well Development / well Sampling Data

Well Depth: 20' Time: AM Water Level Before Purging: 8.84'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.59	feet X	0.16	(0.65)	7.534 gallons	5	38 gallons

Free Product Discription: No free product noticed.

Elapsed Time (min)	Volume (gal)	pH	Conductivity (Micro-Siemens)	Temperature (°C)	Notes
START	0	6.87	$7 \times 10^{+3}$	40.1	Silty / No odor.
5	10	6.89	$32 \times 10^{+3}$	40.0	"
7	20	6.90	$39 \times 10^{+3}$	39.6	"
6	30	6.90	$46 \times 10^{+3}$	39.3	"
8	40	6.91	$46 \times 10^{+3}$	39.2	"

Water Table allowed To rise Before Sampling.

Water level Before Sampling: 8.90'

NSI Technology Services Corporation

Well Development and Water Sampling Field Suvey

Project: Fred Houston Sampler: Kasmi Date: 6/12/90

Well: MW-2 Site Name & Adress: 6310 Houston Place, Dublin, CA

Sampling Method: Nitrogen driven pump / Hand Bailer

Decontamination Procedure: Tripple rinse w/ TSP Solution

Well Development / well Sampling Data

Well Depth: 20' Time: AM Water Level Before Purging: 8.82'

Water Column		Casing Diameter 2-inch	Casing Diameter 4-inch	Volume	Factor	Volume to Purge
11.18	feet X	0.16	(0.65)	7.267	5	36

Free Product Discription: No free product Noted

Elapsed Time (min)	Volume (gal)	pH	Conductivity (Micro-Siemens)	Temperature (°C)	Notes
START	0	6.71	$24 \times 10^{+3}$	39.1	Silty / cloudy
6	10	6.68	$25 \times 10^{+3}$	39.2	"
7	20	6.63	$26 \times 10^{+3}$	39.3	"
7	30	6.60	$26 \times 10^{+3}$	39.3	"
5	40	6.57	$26 \times 10^{+3}$	39.3	"

Water Table allowed to rise before Sampling

water level before Sampling: 8.99'

NSI Technology Services Corporation
Well Development and Water Sampling Field Suvey

Project: Fred Hanster Sampler: RASmi Date: 6/12/90

Well: MW-3 Site Name & Adress: 6310 Hanster Place, Dublin, CA

Sampling Method: Nitrogen Driven Pump / Hand Bailer

Decontamination Procedure: Triple Rinse w/ TSP Solution

Well Development / well Sampling Data

Well Depth: 20 Time: PM Water Level Before Purging: 8.57'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.43	feet X	0.16	(0.65)	7.43	5	37

Free Product Discription: No free Product Noticed

Elapsed Time (min)	Volume (gal)	pH	Conductivity (Micro-Siemens)	Temperature (°C)	Notes
START	0	6.93	3×10^3	39.9	Silty/Turbid
5	10	6.76	20×10^3	40.1	"
5	20	6.73	32×10^3	39.7	"
5	30	6.40	37×10^3	39.3	"
7	40	6.40	38×10^3	39.3	"

Water Table Allowed to rise Before Sampling

Water Table level Befor Sampling: 9.13'

NSI Technology Services Corporation

Well Development and Water Sampling Field Suvey

Project: Fred Houston Sampler: RASMI Date: 6/12/90

Well: MW-4 Site Name & Adress: 6310 Houston Place, Dublin, CA

Sampling Method: Nitrogen Driven Pump / Hand Bailer

Decontamination Procedure: Tripple Rinse w/ TSP Solution.

Well Development / well Sampling Data

Well Depth: 20 Time: PM Water Level Before Purging: 8.06'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.94	feet X	0.16	(0.65)	7.761	5	38.8 gallon

Free Product Discription: No free Product Noticed.

Elapsed Time (min)	Volume (gal)	pH	Conductivity (Micro-Siemens)	Temperature (°C)	Notes
start	0	6.93	14×10^3	39.9	clear / No odor
2	10	6.99	10×10^3	39.8	"
7	20	7.01	7×10^3	39.7	"
5	30	7.03	3×10^3	39.1	"
6	40	7.05	3×10^3	39.1	"

Water Table Allowed to Rise Before Sampling

Water level Before Sampling. 8.76'

APPENDIX D

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

June 20, 1990 ChromaLab File No.: 0690122

NSI TECHNOLOGY, INC.

Attn: Rasmi

RE: Four water samples for BTEX, Diesel and Oil & Grease analyses

Project Name: FRED HOUSTON
Project Number: CC-90-017
Date Sampled: June 13, 1990 Date Submitted: June 13, 1990
Date Extracted: 6/16-20/90 Date Analyzed: 6/16-20/90

RESULTS:

Sample No.	Diesel (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	Oil & Grease (mg/L)
MW1	3.4	N.D.	N.D.	N.D.	N.D.	7.2
MW2	1.2	N.D.	N.D.	N.D.	N.D.	N.D.
MW3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW4	22	N.D.	N.D.	N.D.	N.D.	8.6
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	85.6%	98.3%	101.0%	97.0%	98.9%	----
DUP SPIKE RECOVERY	92.3%	91.4%	97.6%	88.2%	109.5%	----
DETECTION LIMIT	0.5	1.0	1.0	1.0	1.0	5.0
METHOD OF ANALYSIS	3510/ 8015	602	602	602	602	503 D&E

ChromaLab, Inc.

David Duong
Senior Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
415/831-1788 • Facsimile 415/831-8798
Federal ID #68-0140157

CHROMALAB FILE # 690122

NSI Technology Services Corporation

A Subsidiary of
ManTech International Corporation
Commercial Environmental Services
155A Moffett Park Drive, Suite 220
Sunnyvale, CA 94089
Telephone (408) 745-6345
Facsimile (408) 747-1918

SAMPLE CHAIN OF CUSTODY

Survey #: [illegible]
Collector: [illegible] Date Sampled: [illegible] Time: [illegible]
Sampling Location: [illegible]
Project Name: [illegible] Project Number: [illegible]
Container Used: [illegible]
Laboratory: [illegible]

Sample ID	Type	Location	Analysis Requested
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Remarks: [illegible]

Results Required By: [illegible]

Travel Blank:	✓ YES	NO
Duplicate Samples:	YES	NO
Field Blank:	YES	NO
Background Sample:	✓ YES	NO

RELEASED BY: [illegible] TIME: [illegible] DATE: [illegible]
RECEIVED BY: [illegible] TIME: [illegible] DATE: [illegible]

RELEASED BY: [illegible] TIME: [illegible] DATE: [illegible]
RECEIVED BY: [illegible] TIME: [illegible] DATE: [illegible]

RELEASED BY: _____ TIME: _____ DATE: _____
RECEIVED BY: _____ TIME: _____ DATE: _____

Send Results and Invoice To: NSI Technology Services Corporation
155A Moffett Park Drive
Suite 220
Sunnyvale, CA 94089
Attn:

Lab Copy

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

June 13, 1990 ChromaLab File No.: 0690048

NSI TECHNOLOGY, INC.

Attn: Rasmi

RE: Two soil samples for BTEX, Diesel and Oil & Grease analyses

Project Name: FRED HOUSTON
Project Number: C003-90
Date Sampled: June 6, 1990 Date Submitted: June 6, 1990
Date Extracted: June 9-12, 1990 Date Analyzed: June 9-12, 1990

RESULTS:

Sample No.	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)	Oil & Grease (mg/Kg)
MW4-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW4-8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKED RECOVERY	92.3%	98.3%	101.0%	97.0%	98.9%	----
DUP. SPIKED RECOVERY	105.9%	91.4%	88.2%	99.6%	109.5%	----
DETECTION LIMIT	5	5	5	5	5	50
METHOD OF ANALYSIS	3550/ 8015	8020	8020	8020	8020	503 D&E

ChromaLab, Inc.

David Duong
Senior Chemist

Eric Tam
Laboratory Director

2239 Omega Road,#1 • San Ramon, California 94583
415/831-1788 • Facsimile 415/831-8798

NSI Technology Inc.

ENVIRONMENTAL SERVICES

CHROMALAB FILE # 690048

CHAIN OF CUSTODY RECORD

PROJECT NO.	SITE NAME & ADDRESS
C003-90	FRED Houston, 3060 Houston Way Dublin

WITNESSING AGENCY / INSPECTOR NAME / DATE

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	TPH (Gasoline) & B, T, X, & E	TPH (Diesel) & [illegible]	Total Oil & Grease	Halogenated HC's	B, T, X & E	Heavy Metals		REMARKS
MW4-4	6-6	AM	X		Monitoring Well #4 @ 41	X	X	X					
MW4-8	6-6	AM	X		" " @ 81	X	X	X					

ANALYSES REQUESTED

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	6/6/90 1:15	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Rec'd for Laboratory by: (Signature)
	06/06/90 1:15	[signature]

The following MUST BE completed by the laboratory accepting samples for analysis:

1. Have all samples received for analysis been stored in ice?
2. Will samples remain refrigerated until analyzed?
3. Did any samples received for analysis have head space?
4. Were samples in appropriate containers and properly packaged?

Signature _____ Title _____ Date _____

Rev: 12-88

APPENDIX E

KIER & WRIGHT
Civil Engineers & Surveyors, Inc.

June 21, 1990

Job No. 90-217

Table of Elevations
American City Trucking Company
6310 Houston Place
Dublin, CA 94568

Well No.	Elevation
MW - 1	332.47 Cut Cross On North Rim of Christy Box
MW - 2	332.58 Cut Cross On North Rim of Christy Box
MW - 3	332.40 Cut Cross On North Rim of Christy Box
MW - 4	331.55 Cut Cross On North Rim of Christy Box

City of Dublin Benchmark: Dough-SL, Chisled square on the top of curb at centerline catch basin, northerly curb return on the Northwest corner, Dougherty Rd. & Sierra Way.

Elevation = 331.728 MSL Datum

5880 West Las Positas Boulevard, Suite 34 • Pleasanton, California 94566 • (415) 734-8060 • FAX (415) 734-8064