

10/4/89

ads environmental (formerly
A.D. Selditch and Assoc. Inc.
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Proposed Plan
Groundwater Cleanup
Montgomery Ward
7575 Dublin Blvd.
Dublin, CA 94568

Introduction

This proposed plan for remedial activity at the above referenced site supplements and further defines the actions and equipment necessary to implement and accomplish the groundwater cleanup discussed in Exhibit I (July 16 and 26, 1989 Closure Plan).

Discussion

The Closure Plan (Exhibit I) discusses the conditions, actions, analytical results, conclusions and recommendations which lead to the preparation of this Plan. It is the intent of this document to detail and display only those field activities, analytical results and engineering evaluations and conclusions which lead to this plan. Past history, site description, site specific geological, groundwater analytical results of samples gathered, and activities completed prior to July 26, 1989 can be found in Exhibit I.

The Closure Plan submitted (Exhibit I) presented a broad work plan for continued site remediation which included the installation of a groundwater depression well, two additional monitoring wells and a waste water treatment system. This document discusses the actions accomplished to date and further describes the actions required to install, operate and monitor the groundwater cleanup program.

Monitoring Well

In order to meet the objectives of the proposed Closure Plan (Exhibit I), two monitoring wells, MW-15 and MW-16, were installed, utilizing a truck mounted 8" hollow core auger. Figure 1 indicates the approximate location of these installed wells. These wells to groundwater were installed in accordance with the Alameda Flood Control and Water Conservation District (Zone 7), San Francisco Bay Area Regional Water Quality Control Board (RWQCB), the Alameda County Department of Health Services (ACDHS) guidelines and appropriate EPA Protocols.

Well logs for these wells (MW-15 and MW-16) form Exhibit II.

Sample Collection and Analysis

Soil samples were obtained using a California Modified split-barrel dry sampler containing four clean brass liners. The drive sampler was driven ahead of the borehole to obtain an undisturbed soil sample. Upon removal of the soil sampler from the bore hole, the ends of each brass tube containing the soil samples were covered with aluminum foil sheets and capped with plastic caps. Plastic caps were then taped shut to form an airtight seal. Sample label displaying the unique sample identification number, the sample depth, and the time and date when the sample was obtained, was attached to each brass tube. Soil samples were then placed on ice in coolers for transportation to the California approved laboratory.

Soil samples were collected at 5 foot intervals at all locations. All soil samples were field screened with a GasTech Model 1314 Hydrocarbon Analyzer, and selected samples, based on field values will be submitted for chemical analysis. Soil samples with low field values were preserved, identified and transported to the California Approved Laboratory where they were composited for analysis. Soil samples with high field values were analyzed by the laboratory as discrete samples. Soil samples were analyzed utilizing EPA methods 602 and 8015. Laboratory analytical results form Exhibit III.

The screening method utilized to determine which samples would be composited versus which samples would be maintained as discrete is as follows:

The screening method involves placing a small amount of soil from each of the brass tubes adjacent to selected sample brass tube into a laboratory clean glass jar. In the event of significant soil change, the screening sample will also include a small amount of soil from the appropriate end of the brass tube selected for possible analysis. The screening method involves placing a small amount of soil from the end of each of the adjacent brass tubes into a clean zip-lock bag which is then zipped closed and placed into a laboratory cleaned amber glass jar. Glass jars were sealed utilizing a sheet of aluminum foil and tape and put aside for approximately one hour to permit volatilization to occur. The head space in the sealed glass jar and zip-lock bag were then measured for volatized petroleum hydrocarbon compounds utilizing a GasTech Model 1314 Hydrocarbon Analyzer.

Table 1

Sample Analysis Results
Montgomery Ward - Dublin
mg/kg

Well I.D.	TPH	B	T	E	X	Media
MW15-2-1						Soil
MW15-2-2						Soil
MW15-2-3 composite		0.34	0.84	0.60	6.5	Soil
MW15-2-4						Soil
MW15-2-5	10.2	<0.01	<0.01	<0.01	<0.01	Soil
MW16-2-1						Soil
MW16-2-2						Soil
MW16-2-3 composite		0.57	1.0	0.26	0.42	Soil
MW16-2-4						Soil
MW16-2-5	6.3	<0.01	<0.01	<0.01	<0.01	Soil

Groundwater Cleanup Method Reassessment

To assure that Montgomery Ward would follow the most practical and achievable method of groundwater cleanup, a review of groundwater cleanup methods was undertaken.

Based upon the data accumulated during well installation, purging and proving, and several recharge rate tests, the following methods were considered to be most practical for review. Calculations to determine recharge rate of MW-12 are shown in Exhibit IV.

Vapor Extraction - Well Logs (Exhibit II) indicate that soil in the contaminated zone is primarily dense clay. Extraction of contaminated vapors (gases) from the dense clay:

- is possible at higher vacuum levels;
- may require more than one system to restrain contamination from spreading;
- estimate two to three weeks installation time (disruption of normal business activity);
- requires extended time frame for completion of cleanup;
- high maintenance cost;
- high design cost;
- may also require groundwater extraction;
- long permitting cycle;
- costly.

Biodegradation - Exhibit II indicates that the contaminated zone is primarily dense clay which hinders the movement (spread) of bacteria through the soil. This method is:

- possible with multiple bacteria input points;
- estimate 2-3 weeks installation time (disruption of normal business activities);
- requires extended time frame for completion;
- subject to temperature variations;
- high design costs;
- may not restrain spread of contamination;
- moderate maintenance costs;
- has permitting difficulties;
- costly.

Groundwater removal and treatment - Based upon the release rate of water from clays in the contaminated zone and discussion with the Dublin-San Ramon Services District (POTW) this method:

- is practical;
- can be installed in one week;
- normal business disruption of one to two days;
- will restrain spread of contamination;
- lower maintenance cost;
- least costly.

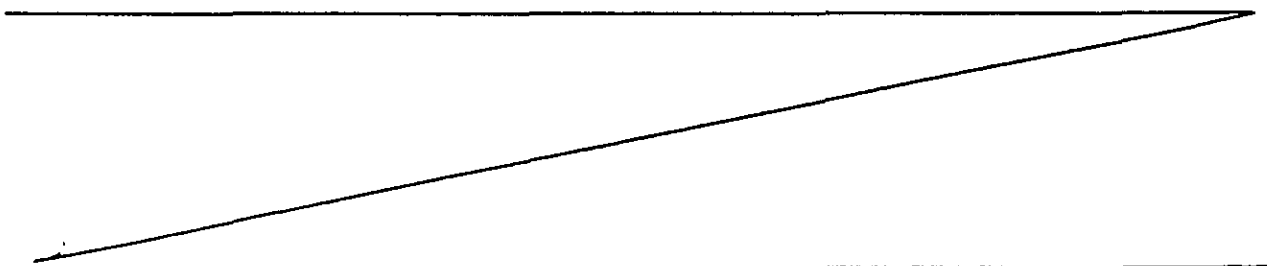
Other Methods - Other methods (i.e., soil and water removal and disposal, various in-situ chemical district methods, in-situ incineration, etc.) were considered and discarded because of:

- economics (high cost);
- long term disruption of business activities;
- permitting problems;
- some are not proven in situations similar to this.

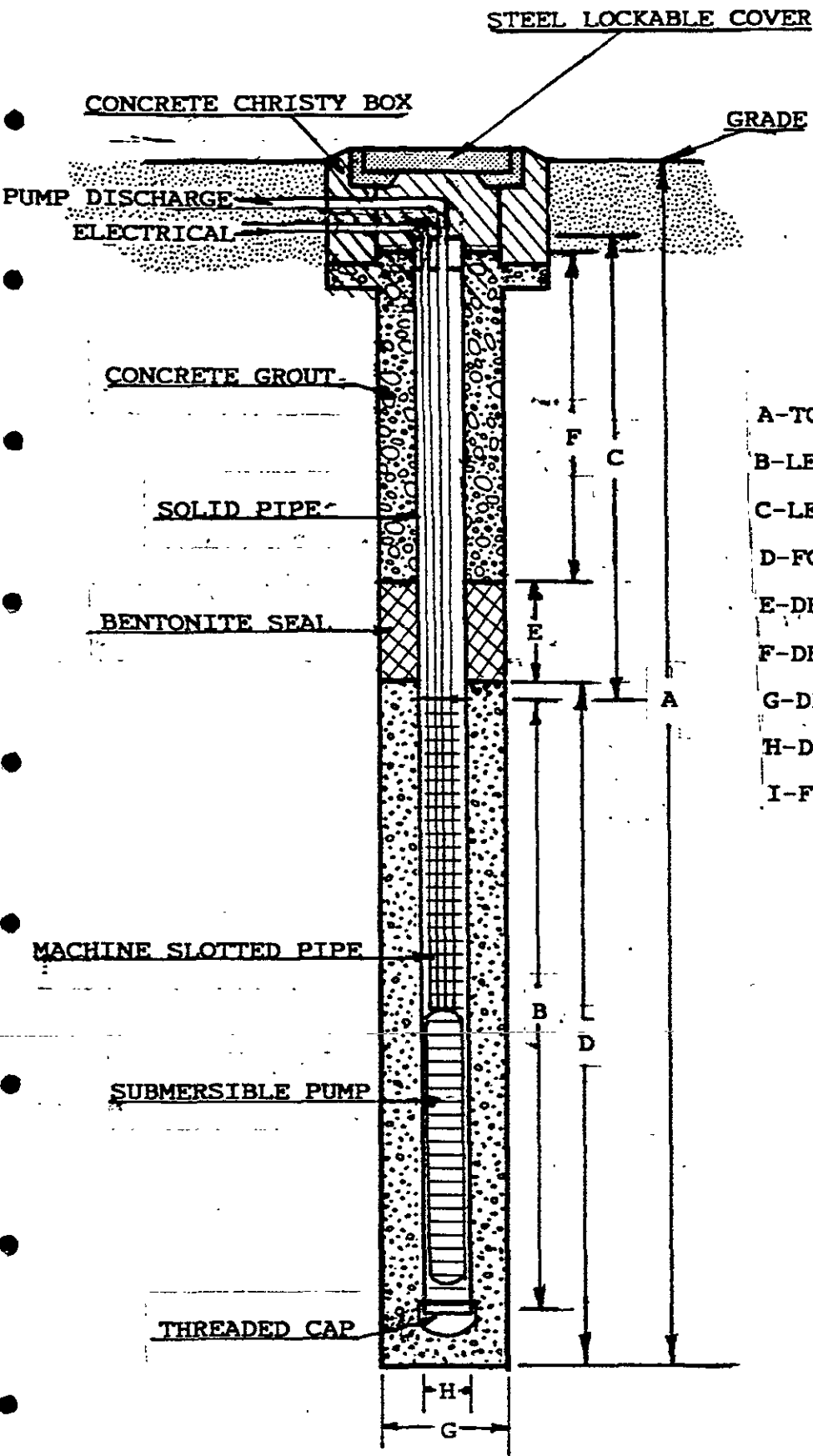
Based upon the above we believe that groundwater removal, treatment and disposal offers a practical, timely and economical remedial program for site decontamination.

Groundwater Depression and Removal System

The following sketch depicts the groundwater depression well. It is anticipated that this groundwater depression well will be located in the vicinity of MW-12.



A.D. Selditch and Assoc. Inc.



A-TOTAL DRILL DEPTH	30'
B-LENGTH OF SLOTTED CASING	28' 22" OBS
C-LENGTH OF SOLID CASING	10'
D-FOOTAGE OF FILTER PACK	21'
E-DEPTH OF BENTONITE SEAL	7'
F-DEPTH OF CONCRETE GROUT	8'
G-DIAM. OF BORE	24"-26"
H-DIAM. OF CASING	16"
I-FILTER MEDIA	1/4" GRAVEL

CONSTRUCTION DETAILS
WELL

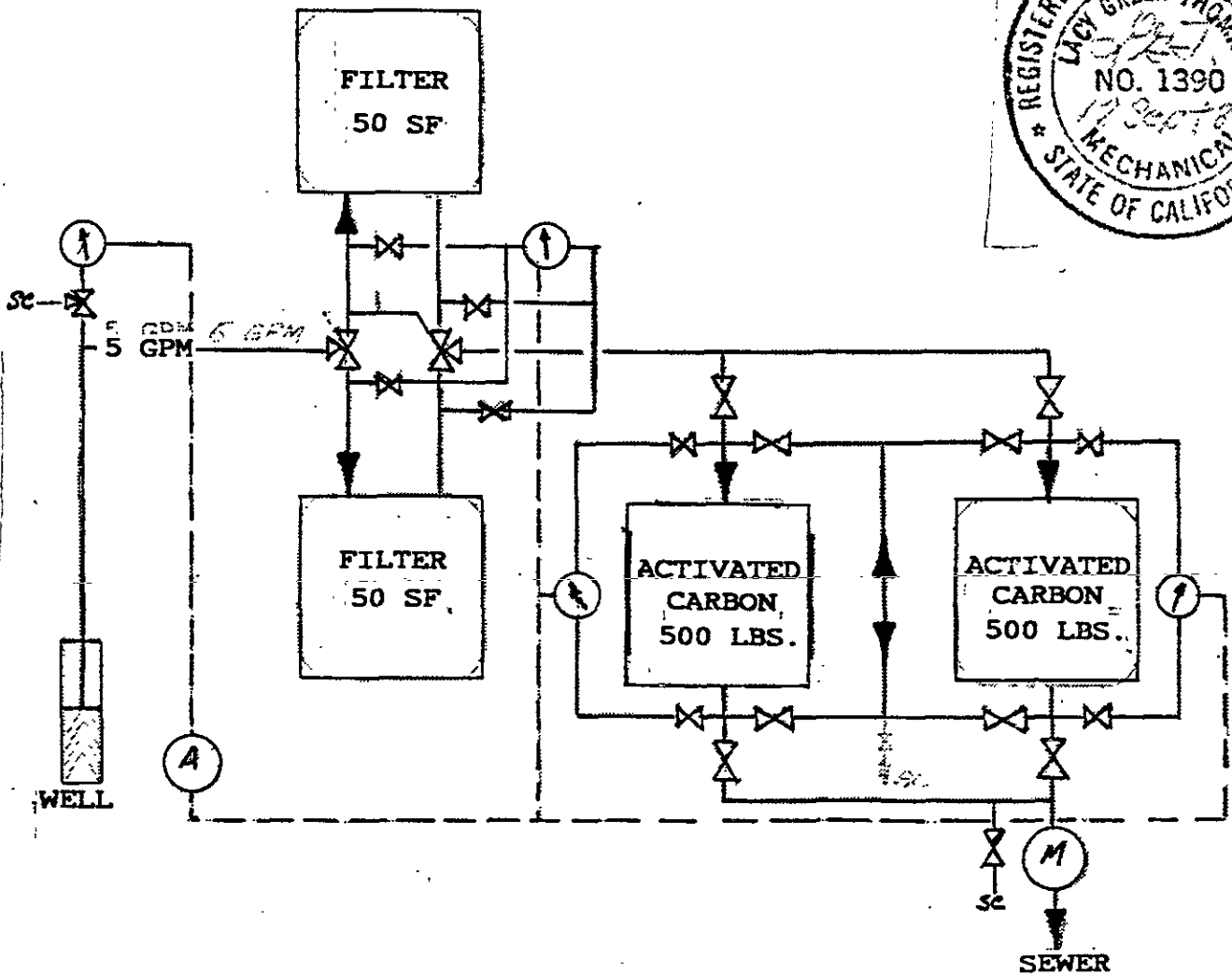
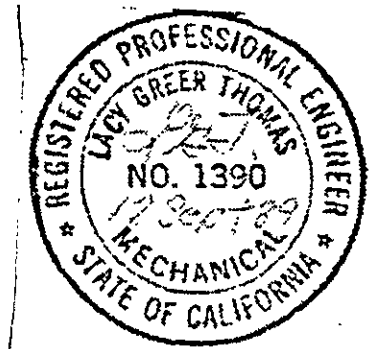
MONITORING & CONTROL ASSOCIATES, Inc.

FIGURE ONE

Waste Water Treatment System

Discussions with San Ramon-Dublin Services District indicate that groundwater meeting their disposal constituent and flow requirements will be permitted to enter the existing Montgomery Ward wastewater treatment system for disposal via sewer system. The wastewater treatment system shown below is designed to achieve 5 gpm discharge with a TPH content not exceeding 10 ppm.

PIPING AND INSTRUMENT DIAGRAM



LEGEND

- (A) PRESSURE INDICATOR & SWITCH
- (A) AUDIBLE & VISUAL ALARM
- (M) TOTALIZING FLOW METER
- SC SAMPLE CONNECTION

FIGURE TWO

A.D. Selditch and Assoc. Inc.

Monitoring Plan

The following monitoring plan is suggested.

Time Period	Frequency	Well Di:	TPH
<u>Start Up</u>			
Day 1	Daily		x
Day 3	"		
Day 7	"		
Week 2-4	Weekly (Friday)		
Week 4			x
Weeks 5-10	Bi-Weekly (Monday)		
Week 10 on	Monthly (1st of month)		
	Quarterly		x
			x

Handwritten notes:
 All reports also sent to water board, (Pester Feldman)
 ↓

Reporting

Upon completion of the initial start-up period and receipt of signed written analyses from the laboratory, a report detailing the analytical results will be prepared and submitted to the Alameda County Department of Health Services, Environmental Health Division. Thereafter a report detailing the analytical results and groundwater disposed will be submitted monthly to ACDHS after receipt of signed, written analysis from the laboratory.

PERMITTING AND REGULATORY REQUIREMENTS

Remedial activities (groundwater cleanup) will require prior approval by the appropriate regulatory agencies. We anticipate that in addition to the Alameda County Department of Health, Environmental Health Division, permits will be required from the RWQCB, the Dublin/San Ramon Services District (waste water discharge). In addition, California DHS will require a treatment facility permit. Unless a waiver from the treatment facility standards is obtained, the remediated site would be subject to post-closure monitoring and financial responsibility requirements.

A. Wastewater Discharge Permit

The Dublin/San Ramon Services District have indicated that a permit to discharge treated groundwater is obtainable. ads environmental will prepare the documentation, engineer, construct and install the waste water treatment system and conduct tests required as part of the permit application to the Dublin/San Ramon Services District.

B. California Department of Health Services
Waiver from Treatment Facilities Permit

Any of the treatment classifications used to treat the contaminated soil can result in the site being classified as a treatment facility, requiring a treatment permit. The acquisition of a treatment permit is a lengthy process. With the filing of a proper application, the DHS may issue a waiver from the full permitting requirement because of the temporary nature of the site. Processing of this document has begun (Exhibit I).

C. Alameda County Department of Health Services, Environmental Health Division (ACDHS) Requirements.

It is necessary to obtain ACDHS approval of work plan before work on groundwater remediation begins. Work plan provisions and conditions will need to be reviewed with ACDHS and also SFRWQCB. This report continues that activity.

D. Health and Safety Manual

In accordance with regulatory requirements, a Health and Safety Plan was prepared for this project. This plan is attached as a part of Exhibit I.

E. Closure Plan

An initial closure plan for tank removal and excavation remediation has been filed and approved by the ACDHS (Exhibit I). This document presents a plan for the remediation of the groundwater.

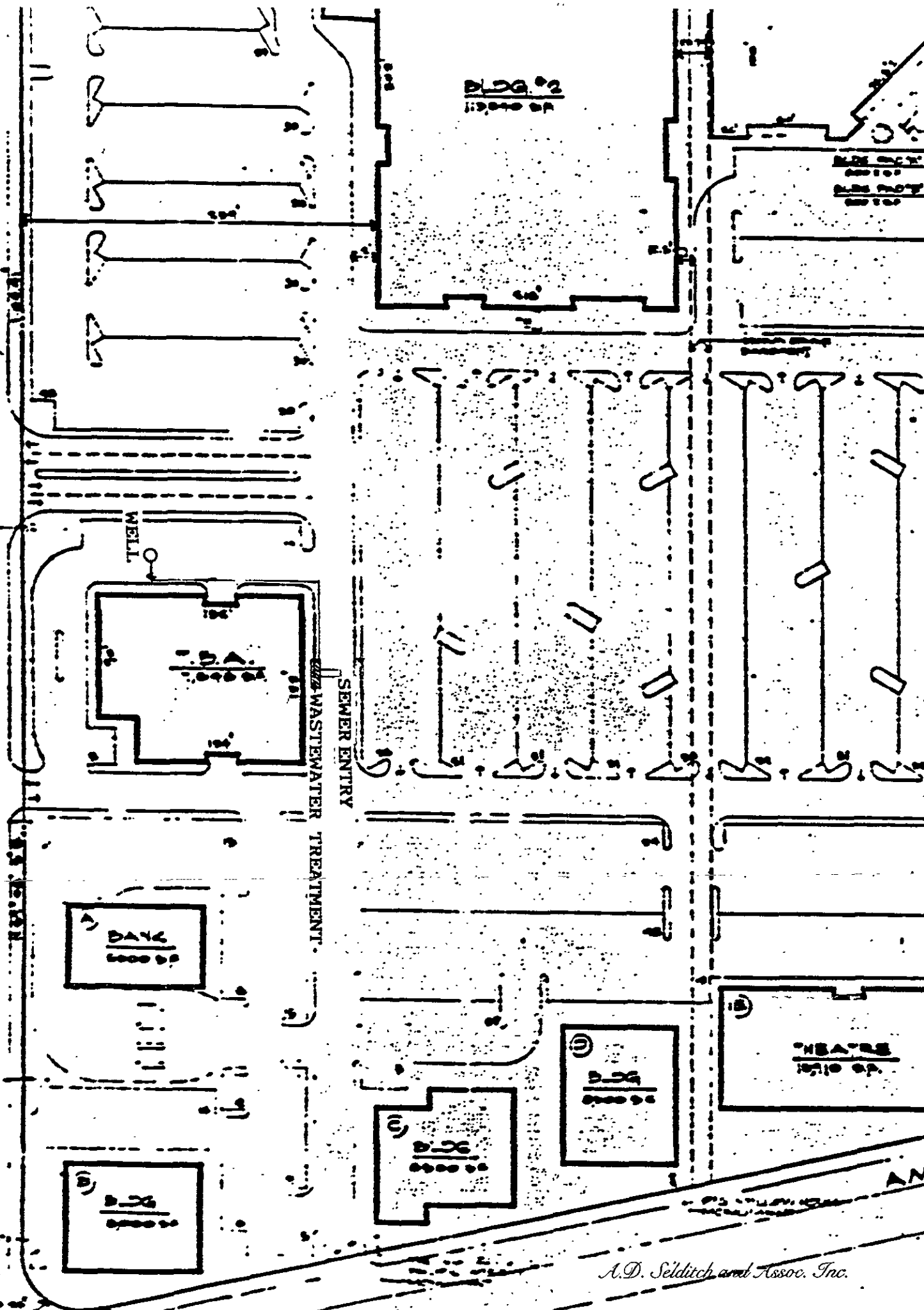
mw(dub).223/mc

BLOYD.

NILIN

Building shown around

FIGURE THREE



05

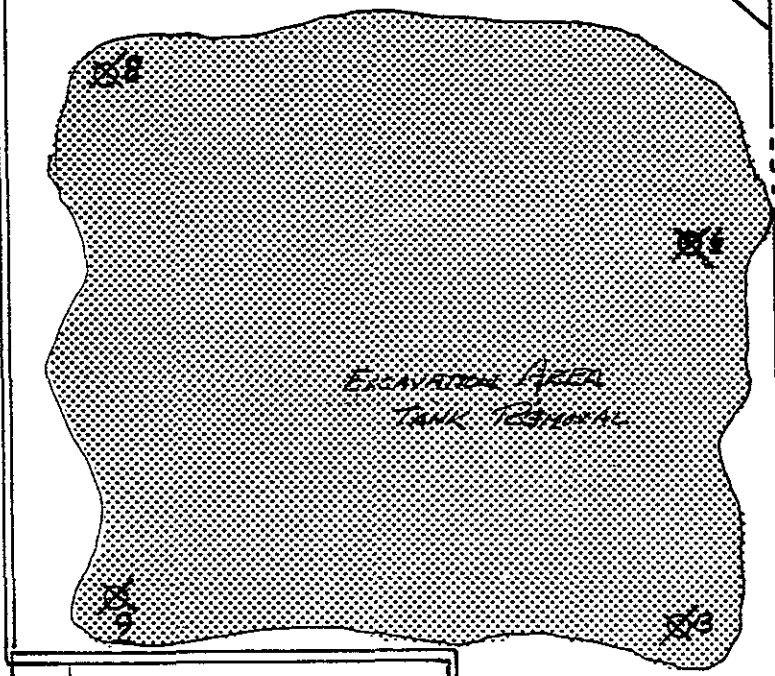
STREET DRIVE

FIRE MAIN

- ^R MONITORING WELL
- ⊗ ABANDONED WELL
- APPROXIMATE LOCATION GROUNDWATER DEPRESSION WELL

Well No.	5	6	10	12	15	16
5		43.4	244	489	1034	823
6	43.4		573	156	545	73.1
10	244	573		685	1211	836
12	489	156	685		545	94.5
15	1034	545	1211	54.5		1255
16	823	73.1	836	94.5	1255	

ALL DIMENSIONS IN FEET



05

010

06



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DUBLIN BLVD.
 FIGURE FOUR

MONTGOMERY WADE &
 DUBOIS, CA, CA
 Site Location, Soil Sampling, Monitoring Wells
 2/5/89

Exhibit I
7/16/89
Closure Plan

Closure Plan
Remedial Action Addendum

INTRODUCTION

This remedial activity addendum to approved closure plan (Exhibit I) is designed to describe the activities anticipated in the performance of the continued site specific groundwater remediation.

SITE LOCATION

Site is located on the northern side of Dublin Blvd. approximately 1/2 mile east of San Ramon Road. Site is currently in use as a Tire, Battery Accessory and Auto Maintenance Shop. Site currently houses, in addition to a retail tire, battery and accessory shop, a mechanical auto maintenance facility. Until late November 1988, the site housed a gasoline dispensing operation consisting of three 10,000 gallon underground storage tanks and dispensing pumps. These tanks held unleaded, premium unleaded and regular gasoline. In late November the 10,000 gallon unleaded tank was determined to be leaking. Montgomery Ward management elected to close down the gasoline dispensing portion of this facility. Closure and remedial activities are under way now.

BACKGROUND

Montgomery Ward is not aware of any prior incidents at this site. Further, tank test data reveals that tanks have met the criteria of NFPA 329 each time they were tested. Tanks and dispensing pumps have been removed from the site.

The logs of borings installed by J. H. Kleinfelder and Associates in January, 1978, indicate a fairly consistent stiff clay lens extending throughout the southwestern corner of the Montgomery Ward TBA site. This stiff gray to gray-brown clay extending from 3-1/2 feet to 10-20 feet below grade offers a reasonable resistance to horizontal and vertical spread of contaminants.

Kleinfelder, in their report, display groundwater levels found through the Montgomery Ward site. ~~We have found them to be consistent with borings installed at this time and consistent with historic groundwater data for this area.~~ Groundwater gradient through the Dublin area is to the east by south-east. Kleinfelder's Boring Logs can be found in Exhibit X. These logs display groundwater levels at the time of boring installation by Kleinfelder

GEOLOGY

Dublin is located within the western portion of Livermore Valley, an intermountain valley of the Diablo Range. Geological units underlying the project area are comprised of sediments of the Tassajara Formation and surficial valley fill materials.

Tassajara Formation

The Tassajara Formation is of Pliocene age. Depths to this bedrock are from approximately 200 to 500 feet. These sediments consist of beds of sandstone, tuffaceous sandstone, tuff and shale.

Valley Fill Materials

The valley fill materials are of Holocene age. Thickness ranges from approximately 500 feet. These unconsolidated sediments consist of sand and gravel. The deeper sediments are poorly bedded units of clay, silt, sand and gravel.

GROUNDWATER

Groundwater was encountered in the borings at depths ranging from 11'6" to 16' below existing grade. Boring Logs displaying groundwater encountered at time of drill can be found in Exhibit IX. No effort has been made at this time to ascertain aquifer thickness.

These measured groundwater levels are consistent with historic groundwater data for the area. Seasonal groundwater variations are generally small, on the order of 1-1/2 to 2-1/2 feet. According to the United States Geological Service the generalized groundwater gradient thru this area is east by south-east, between 15 to 25 feet per mile.

EXISTING PRIVATE, COMMERCIAL AND/OR MUNICIPAL WELLS

A search of public records, City of Dublin, Alameda County Flood Control and Water Conservation District (Zone 7), California Department of Water Resources, Alameda County Department of Health Services and other private and public organizations is underway to ascertain whether public or private wells are, or have been, operating within a one-half mile radius of this site.

ACTIVITIES PERFORMED

Immediately upon determination of the existence of a leak in the 10,000 gallon unleaded tanks, an Underground Storage Tank, Unauthorized Release (Leak)/Containment Site Report was filed and investigative efforts begun to determine its impact. Concurrently with the above, remedial planning/engineering began. The continued investigation and effort to date has achieved the following:

- cessation of gasoline dispensing operations and removal of all underground gasoline storage tanks;
- removal and aeration of gravel backfill surrounding removed tanks;
- removal and disposal of dispensing pumps;
- enclosure of aeration and tank excavation areas to reduce safety hazards and control access;
- installation of borings 5, 6, 7, 8, 9, 10, 12, 13 and their conversion to observation wells capable of being modified for vapor extraction;
- removal of covering slab, three underground storage vessels and gravel backfill from excavation;

- cleaning and disposal of the three storage vessels;
- aeration of approximately 350-360 cubic yards of 1/4" pea gravel;
- collection and analysis of soil and water samples from borings, wells, sumps and excavation sidewalls;
- initial dewatering of the excavation and disposal of removed ground-water.

Tank Removal

Three (3) 10,000 gallon reinforced fiberglass gasoline storage vessels have been removed from the excavation, cleaned and rendered inert and transported for disposal in accordance with applicable regulations.

Backfill

Backfill excavation bottom measures approximately 30' x 40' x 12'. Side walls are dense self-supporting clay. A concrete slab 26' x 26' x 12' rests in the backfill bottom and acted as a hold down anchor for the three reinforced fiberglass tanks. The backfill material is pea gravel. A 20' x 20' x 9' reinforced concrete slab and surrounding black top acted as the backfill cover. At this time there are indications that the major portion of the released product was contained in the backfill area.

Gravel used as tank backfill was removed from the excavation and aerated in accordance with approved Notification to Aerate filed with the San Francisco Bay Area Air Quality Management District (Exhibit III). After approximately two months of aeration, samples were gathered, identified and packed into an insulated travel container containing frozen blue-ice packages and transferred to Scientific Environmental Laboratories, Palo Alto, CA for compositing and analysis. The analyses of the composite indicates the aerated gravel is Class III material. Based upon this and the suggestion of the SFRWQCB and Alameda County Health, this gravel (approximately 375 cubic yards) will be transferred to the Eastern Alameda County Disposal Site, 4001 N. Vasco Road, Livermore, CA for disposal commencing July 24, 1989.

Table 1

Summary of Analytical Results
Aeration Samples

Sample Date	Sample ID No.	TPH mg/kg (ppm)
7/6/89	1188002R-1)	
	-2)	
	-3)	
	-4)	
	-5) Composite No. 1188002R-10	12
	-6)	
	-7)	
	-8)	
	-9)	

Excavation will be backfilled with gravel in accordance with specifications prepared by California Registered Professional Civil Engineer Thakor (Joe) Pandit, No. 19214 (Exhibit IV).

Abandoned Wells

The following wells are no longer in use and have been abandoned either by removal or lost during installation repairs. Wells 6, 8, 9, 13 were destroyed during underground storage vessel and backfill removal. During the installation of well number 7, a 1-1/2" PVC irrigation line was pierced at the 3 foot level and well was lost during irrigation line repair.

Analytical Results

The results of the soil and water samples gathered to date follow. Location of these investigatory borings and wells are displayed in Figure 2.

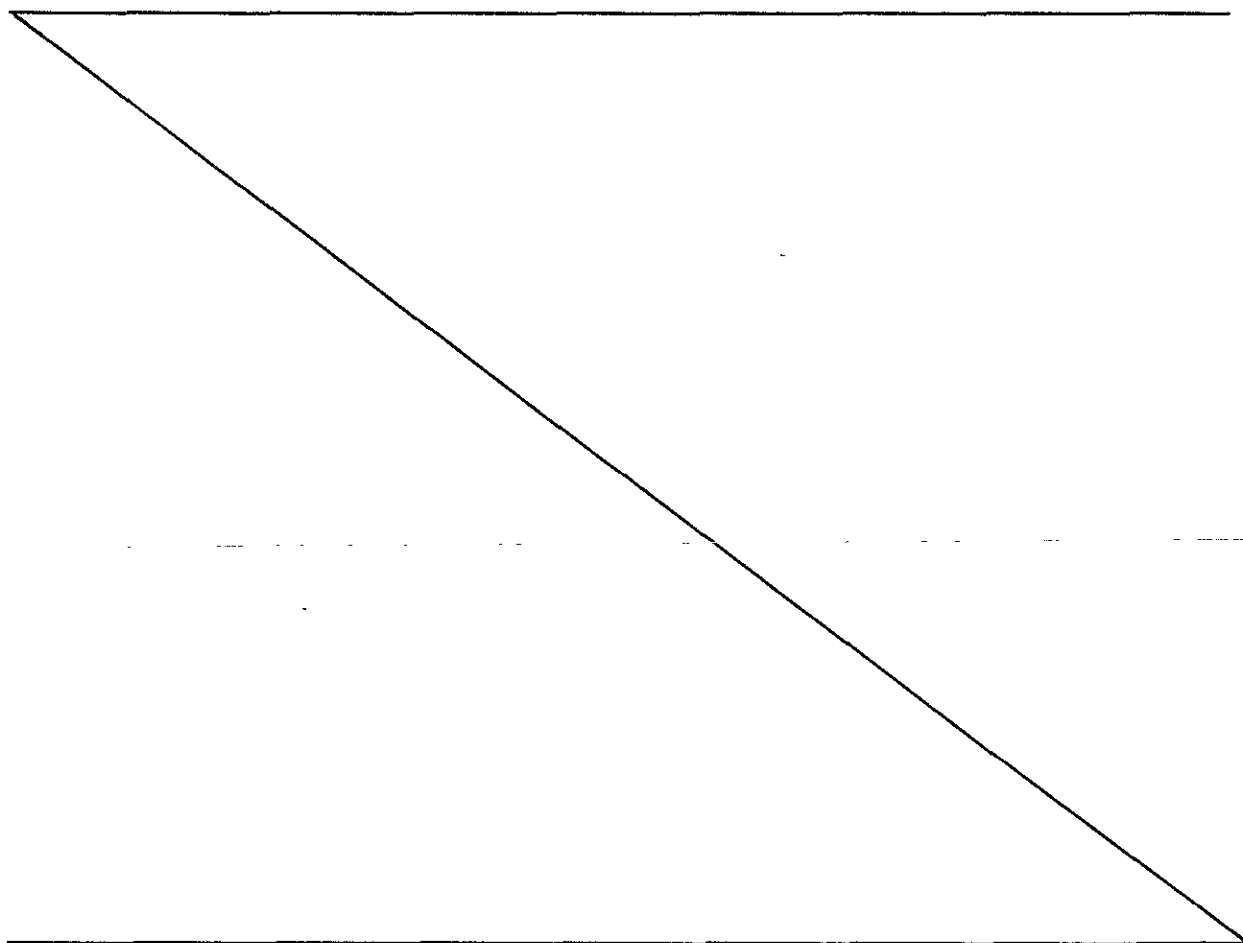


Table 2
Analytical Results of Samples Gathered
Montgomery Ward, Dublin CA

EPA Methods 8015, 8020 - $\mu\text{g}/\text{kg}(\text{ppm})$

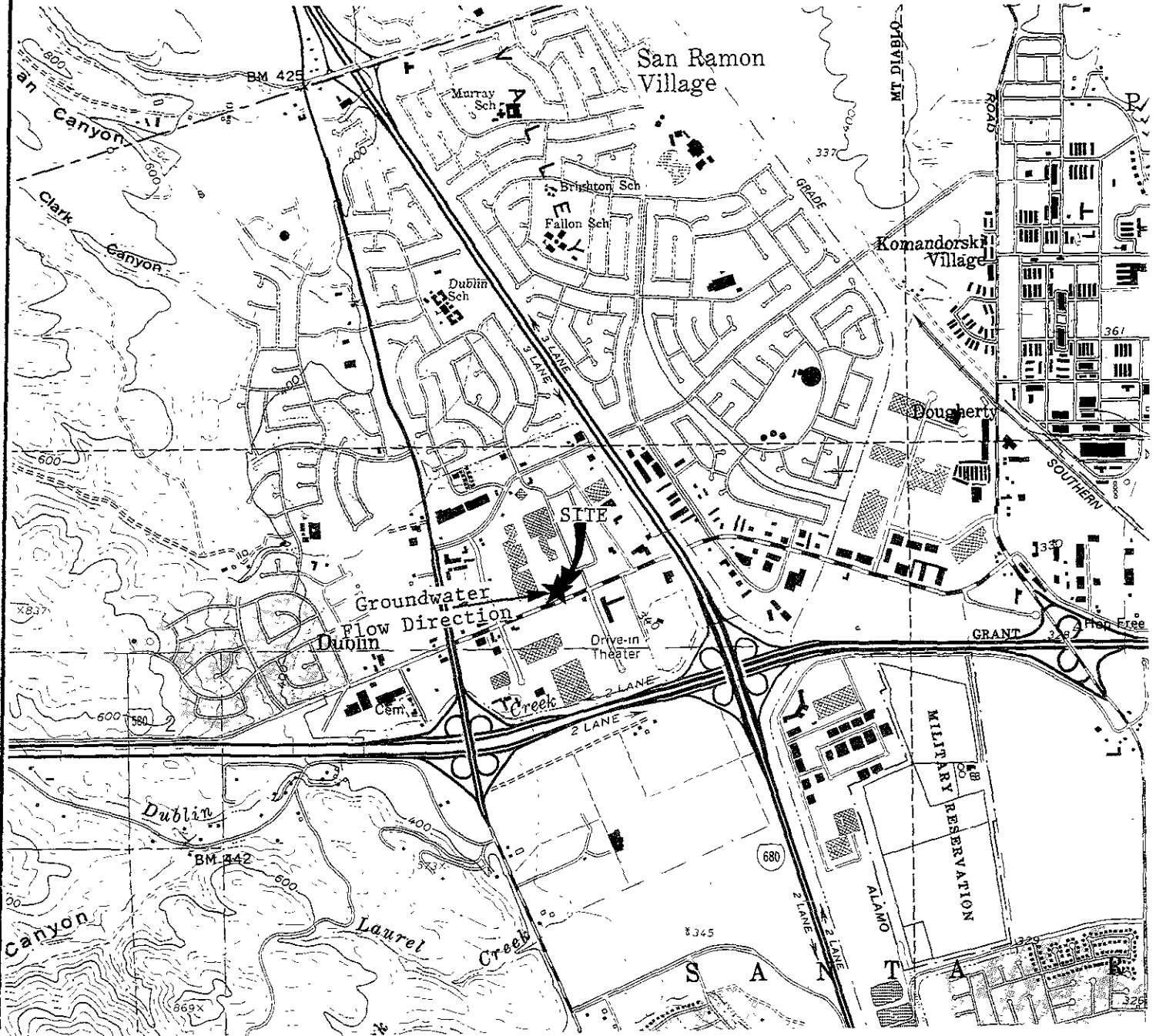
Sample Date	Sample I.D.No	Source	Matrix	TPH	Benzene	Toluene	Ethyl Benzene	Xylene	Lead
<u>Sump</u>									
5/18	1188002R SW-4	Sump	Soil	22	3.8	5.8	1.9	4.0	
5/24	1188002R SW-1	Sump	Water	88	14	13	1.6	2.3	
5/30	1188002R SW-1	Sump	Water	28	11	1.1	0.74	1.2	
6/9	1188002R SW	Sump	Water	120	16	7	4	1.5	
<u>Pit Walls</u>									
5/18	1188002R NW-3	Pit	Soil	5.1	<0.05	0.06	<0.05	0.06	
5/18	1188002R SE-2	Pit	Soil	18	0.22	1.2	0.92	2.9	
<u>Tanks</u>									
5/18	1188002R 6K	Tank	Water	196	20	15	15	13	
5/18	1188002R 20K	Tank	Water	48	11	12	0.22	2.0	
<u>MW-5</u>									
6/9	1188002R 5W	5	Water	52	6.5	7.5	2.5	2.0	
<u>MW-10</u>									
2/8/9	1188002R-10								
	10-5-1	10	Soil	0.5					
	10-10-2	10	Soil	3.3	1.1	1.2	<0.1	0.5	
	10-15-3	10	Soil	8.0	0.9	0.8	<0.1	0.3	
	10-20-4	10	Soil	1.6					
5/24	1188002R STRW	10	Water	95	14	14	1.6	2.4	
6/6	12188002R 10W	10	Water	105	20	16	2.0	2.8	
<u>MW-12</u>									
12/2	1188002R-12-1-2	12	Soil	0.7					
	12-2-2	12	Soil	87					
	12-4-2	12	Soil	4.5					
	12-5-2	12	Soil	<0.5	<0.1	<0.1	<0.1	<0.1	
12/5	1188002R-12W	12	Water**	95%					
5/18/9	1188002R D01W	12	Water	478	55	103	23	50	
5/30	1188002R N-1	12	Water	313	46	58	19	32	
6/6	1188002R 12W	12	Water	570	38	70	27	17	
<u>MW-13</u>									
12/2	1188002R 13X	13	Soil	2180	0.18	0.30	0.06	0.09	
12/5	13W	13	Water	118	13.9	18.3	2.8	4.1	
2/13/9	13W	13	Water	376	35	48	10	12	2.

**Free Product 2" A.T.D.

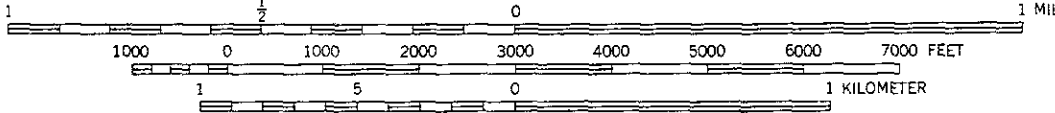
See Exhibit VI for Well Construction Details

• Unpurged

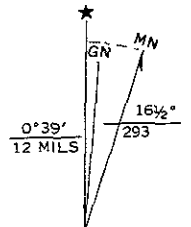
JUBLIN QUADRANGLE
 CALIFORNIA
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 NW/4 LIVERMORE 15' QUADRANGLE



SCALE 1:24000



CONTOUR INTERVAL 40 FEET
 DOTTED LINES REPRESENT 10-FOOT CONTOURS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



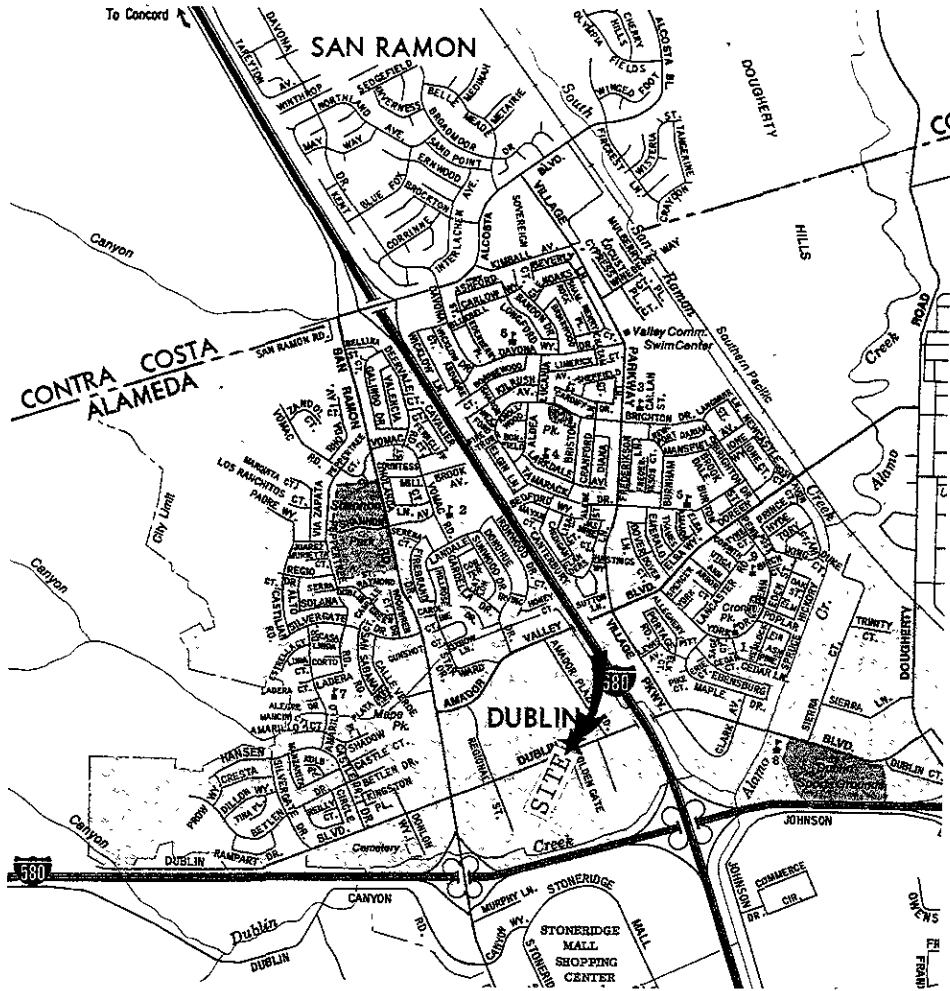
UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

A.D. Selditch and Assoc. Inc.
 6367 - Joseph Morris Inc., Newark, CA 94660
 415-890-1789
 Fax 415-770-9608
 Environmental Management and Engineering

DRAWN	DATE	MATERIAL
CHECKED	DATE	
APPROVED	DATE	

SCALE	DWG. NO.
SHT. OF	
TITLE	

SCALE	DWG. NO.	ISSI
SHT. OF	A	
TITLE	MONTGOMERY WARD DUBLIN CA	



A.D. Selditch and Assoc. Inc.
 6367 - Joseph Morris Inc., Newark, CA 94660
 415-890-1789
 Fax 415-770-9608
Environmental Management and Engineering

DRAWN <i>RR</i>	DATE 1/14/89
CHECKED <i>CS</i>	DATE 1/14/89
APPROVED <i>CS</i>	DATE 1/14/89

MATERIAL

SCALE
SHT. OF

OWG. NO. A

ISSI

TITLE AREA MAP--SITE LOCATION
 MONTGOMERY WARD
 DUBLIN CA



A.D. Selditch and Assoc. Inc.
 6287C - *Joseph Morata Inc., Newark, CA 94560*
 415-490-1759
 Fax 415-770-9608
Environmental Management and Engineering

DRAWN	DATE	MATERIAL	SCALE	DWG. NO.	ISSI
CHECKED	DATE		SHT. OF	A	
APPROVED	DATE		Aerial Photograph (5/5/78)		

Future Site
 Montgomery Ward
 Dublin, CA

Figure 6

8-18-88

12000

AV 3368



A.D. Selditch and Assoc. Inc.
 62675 - *Joaquin Murietta Ave., Newark, CA 94560*
 415-890-1789
 Fax 415-770-9608
Environmental Management and Engineering

DRAWN	DATE	MATERIAL
CHECKED	DATE	
APPROVED	DATE	

SCALE	DWG. NO.	ISSI
SHT. OF	A	

Aerial Photograph (8/18/88)
 Montgomery Ward
 Dublin, CA

Figure 7

Well Installation Field Observations

Montgomery Ward
Dublin CA

Date Sampled	Well No	Gastec Model	Sensidyne/Gastec Tube 101L	Comments
(all values ppm)				
1/11/89	1188002R-5	ND	ND	No odor
1/11/89	1188002R-6	185	25-190 ppm	Odor - refusal @ 12'6"
1/12/89	1188002R-7			Abandoned-hot PVC water line
1/12/89	1128802R-8	85	25-90	Odor - refusal @ 12'6"
1/20/89	1188002R-9	BDL	BDL	Slight odor - refusal @ 12'6"
12/1/88	1188002R-11	90	25-100	Odor - refusal # 13'6"
12/2/88	1188002R-12	210	15 ft - 70 25 ft - 200	Slight odor See Table 1
12/1/88	1188002R-13	175	13'6"-165	

ND = None detected
BDL = Below detection level

Monitoring Wells 6, 7, 8, 9, 11 were installed at positions displayed in Figure 3 in an attempt to ascertain the extent of volatilization and to allow slab removal engineering. Volatilized gasoline was detected at levels shown above.

OBJECTIVE

This document presents the work plan for the continued remediation of this site as requested by the Alameda County Department of Health, Environmental Health Division. This plan contains all elements deemed necessary at this time to perform groundwater cleanup.

The purpose of this work plan is to provide an orderly plan to begin, monitor progress and achieve clean groundwater status.

PROPOSED GROUNDWATER REMEDIATION ACTIVITIES

The Alameda County Department of Health Services, Environmental Health Division (EHD) under agreement with the SFRWQCB has requested a plan for site cleanup be prepared and submitted. The following defines planned activities and objectives for project.

This plan encompasses the following major activities:

- Disposal of aerated gravel (approximately 365 cu yds) as Class III material at the Eastern Alameda County Disposal Site, 4001 N. Vasco Road, Livermore, CA. This action will commence July 24, 1989.
- Refilling and compaction of the open 40' x 36' x 12' excavation in accordance with engineered fill specifications (Exhibit IV) filed with the City of Dublin.
- As specified in engineered fill specifications, area will be resurfaced with blacktop. Chain link fence will also be removed.
- Perform pump test.
- Installation of groundwater depression well and pump after pump test designed to determine most practical location and sphere of influence is completed.
- ~~Installation of two monitoring wells at positions shown in Figure 4.~~
Installation of monitoring wells at approximate position shown in Figure 4 and additional wells as needed to investigate lateral extent of contamination.
- ~~Preparation and filing of necessary environmental permits and applications.~~
- Design and construction of waste water treatment system.
- Preparation and submittal of monitoring plan.

Soil Borings and Monitoring Wells

In order to meet the Groundwater Remedial Action Plan, two additional monitoring wells will be installed. Figure 4 indicates the approximate locations of these monitoring wells. Scheduling of the monitoring wells and sampling of the borings and groundwater is planned to occur as soon as possible after receipt of approval of plan from the cognizant agency. Appropriate EPA protocols will be observed during soil sample gathering, well purging, water sample gathering, sample identification, preservation and transportation. Scientific Environmental Laboratories, Palo Alto, CA, a California Approved Laboratory, has been selected to perform the analyses.

PROPOSED GROUNDWATER REMEDIATION ACTIVITIES

The Alameda County Department of Health Services, Environmental Health Division (EHD) under agreement with the SFRWQCB has requested a plan for site cleanup be prepared and submitted. The following defines planned activities and objectives for project.

This plan encompasses the following major activities:

- Disposal of aerated gravel (approximately 365 cu yds) as Class III material at the Eastern Alameda County Disposal Site, 4001 N. Vasco Road, Livermore, CA. This action will commence July 24, 1989.
- Refilling and compaction of the open 40' x 36' x 12' excavation in accordance with engineered fill specifications (Exhibit IV) filed with the City of Dublin.
- As specified in engineered fill specifications, area will be resurfaced with blacktop. Chain link fence will also be removed.
- Perform pump test.
- Installation of groundwater depression well and pump after pump test designed to determine most practical location and sphere of influence is completed.
- Installation of two monitoring wells at positions shown in Figure 4.
- Preparation and filing of necessary environmental permits and applications.
- Design and construction of waste water treatment system.
- Preparation and submittal of monitoring plan.

Soil Borings and Monitoring Wells

In order to meet the Groundwater Remedial Action Plan, two additional monitoring wells will be installed. Figure 4 indicates the approximate locations of these monitoring wells. Scheduling of the monitoring wells and sampling of the borings and groundwater is planned to occur as soon as possible after receipt of approval of plan from the cognizant agency. Appropriate EPA protocols will be observed during soil sample gathering, well purging, water sample gathering, sample identification, preservation and transportation. Scientific Environmental Laboratories, Palo Alto, CA, a California Approved Laboratory, has been selected to perform the analyses.

The two additional monitoring wells, to groundwater, proposed to be installed will be done in accordance with applicable Alameda County Flood Control and Water Conservation District (Zone 7), RWQCB, and Alameda County Department of Health Services guidelines and appropriate EPA Protocols. The soil and groundwater samples from the wells will provide information as to soil geology and both soil and groundwater quality.

The monitoring wells will be installed using a truck mounted 8" hollow core auger. A modified California split-barrel drive sampler will be used for sample collection. The average depth of the well hole is expected to be approximately 25 feet.

Sample Collection and Analysis

Soil samples will be obtained using a California Modified split-barrel dry sampler containing four clean brass liners. The drive sampler will be driven ahead of the borehole to obtain an undisturbed soil sample. Upon removal of the soil sampler from the bore hole, the ends of each brass tube containing the soil samples will be covered with aluminum foil sheets and capped with plastic caps. Plastic caps were then taped shut to form an airtight seal. Sample label displaying the unique sample identification number, the sample depth, and the time and date when the sample was obtained, will be attached to each brass tube. Soil samples will be then placed on ice in coolers for transportation to the California approved laboratory.

Soil samples will be collected at 5 foot intervals at all locations. All soil samples will be field screened with a GasTech Model 1314 Hydrocarbon Analyzer, and selected samples, based on field values will be submitted for chemical analysis. Soil samples with low field values will be preserved, identified and transported to the California Approved Laboratory where they will be composited for analysis. Soil samples with high field values will be analyzed by the laboratory as discrete samples. Groundwater samples will be collected and submitted to the laboratory for chemical analysis using EPA methods 8015, 8020. Soil samples will be analyzed utilizing EPA methods 602 and 8015.

The screening method utilized to determine which samples would be composited versus which samples would be maintained as discrete is as follows:

The screening method involves placing a small amount of soil from each of the brass tubes adjacent to selected sample brass tube into a laboratory clean glass jar (Exhibit XI). In the event of significant soil change, the screening sample will also include a small amount of soil from the appropriate end of the brass tube selected for possible analysis. The screening method involves placing a small amount from the end of each of the adjacent brass tubes into a clean zip-lock bag which is then zipped closed and placed into a laboratory cleaned amber glass jar. Glass jar will be sealed utilizing a sheet of aluminum foil and put aside for approximately one hour to permit volatilization to occur. The head space in the sealed glass jar and zip-lock bag will then be measured for volatized petroleum hydrocarbon compounds utilizing a GasTech Model 1314 Hydrocarbon Analyzer.

Sample Documentation

Field documentation includes the completion of the boring logs which note lithology changes indicated by soil sampling within each borehole, soil sample intervals, water at time of drilling, and after recharge and backfilling procedures where appropriate. Well drilling logs also indicate well construction details and materials used. Chain-of-custody forms will be prepared for all samples submitted to the laboratory to document each sample obtained. Laboratory selected for analysis is Scientific Environmental Labs, Palo Alto, CA, which is certified by the California Department of Health Services for analysis of petroleum products and volatile organic compounds in both water and hazardous waste.

Sample Identification

All samples gathered and submitted to the laboratory will be identified by a discrete coded identification number. A description of the sample identification code system follows:

Soil Sample

ADS 89027 MWB-2-4-3
ADS - ads environmental
89027 - ads project number
MW/B-2 - Montgomery Ward soil boring number 2
-4 - Soil boring sample no. 4 (20 ft)
-3 - Third soil brass tube

Water sample

ADS 89027 MWW-2W
ADS - ads Environmental
89027 - ads project number
MWW-2W - Montgomery Ward monitoring well no. 2 - groundwater sample

Equipment Decontamination

Prior to their initial use and after each subsequent use in other boreholes, all augers, drill rods and sampling tools will be cleaned utilizing either an Alconox or TSP solution to avoid cross contamination. Further, the California modified soil sampler will be washed in a TSP solution and double rinsed in fresh water between each sampling interval to avoid potential cross contamination from sample gathering to sample gathering.

Disposal of Soil Cuttings and Backfilling Procedures

Soil cuttings and other waste materials produced during sampling of the boreholes and wells will be placed in drums and sealed. Temporary identifications designating the drums as potential hazardous material will be attached and corrected as soon as sample analyses are received. Material will be disposed in accordance with current applicable regulations. Proper disposal of drums, materials is the responsibility of Montgomery Ward.

Upon completion of the sampling, all borings will be backfilled with a mixture of neat cement grout containing 3 to 5% bentonite powder. After the cement grout mixture has settled, boreholes will be capped off until they are flush with the ground surface with matching material. Thickness of either the asphalt cold patch or the concrete patch will be similar to that of the original material.

Reporting

Upon completion of the field investigation and receipt of signed written analyses from the laboratory, a report detailing the findings will be prepared and submitted to the Alameda County Department of Health Services, Environmental Health Division.

PREPARATION AND HEALTH AND SAFETY PLAN

The preparation of a health and safety plan is required by law prior to any on-site remediation or activities where exposure to contamination is reasonably expected. ads environmental has prepared a health and safety plan for this project. The health and safety plan provides guidelines for our personnel and subcontractors working on this project.

PERMITTING AND REGULATORY REQUIREMENTS

Remedial activities (groundwater cleanup) will require prior approval by the appropriate regulatory agencies. We anticipate that in addition to the Alameda County Department of Health, Environmental Health Division, permits will be required from the RWQCB, the Dublin/San Ramon Services District (waste water discharge). In addition, California DHS will require a treatment facility permit. Unless a waiver from the treatment facility standards is obtained, the remediated site would be subject to post-closure monitoring and financial responsibility requirements.

A. Wastewater Discharge Permit

The Dublin/San Ramon Services District have indicated that a permit to discharge treated groundwater is obtainable. ads environmental will prepare the documentation, engineer, construct and install the waste water treatment system and conduct tests required as part of the permit application to the Dublin/San Ramon Services District.

B. California Department of Health Services Waiver from Treatment Facilities Permit

Any of the treatment classifications used to treat the contaminated soil can result in the site being classified as a treatment facility, requiring a treatment permit. The acquisition of a treatment permit is a lengthy process. With the filing of a proper application, the CDHJS may issue a waiver from the full permitting requirement because of the temporary nature of the site. Processing of this document has begun (Exhibit II).

- C. Alameda County Department of Health Services, Environmental Health Division (ACDHS) Requirements.

~~The ACDHS will issue a permit before work on groundwater remediation can begin. Permit conditions will need to be negotiated with the ACDHS and approved by SFRWQCB. This report initiates this activity. It is necessary to obtain ACDHS approval of work plan before work on groundwater remediation begins. Work plan provisions and conditions will need to be reviewed with ACDHS and also SFRWQCB. This report initiates this activity.~~

It is necessary to obtain ACDHS approval of work plan before work on groundwater remediation begins. Work plan provisions and conditions will need to be reviewed with ACDHS and also SFRWQCB. This report initiates that activity.

- D. Health and Safety Manual

In accordance with regulatory requirements, a Health and Safety Plan must be prepared for this project. This plan is attached as Exhibit V.

- E. Closure Plan

An initial closure plan for tank removal and excavation remediation has been filed and approved by the ACDHS (Exhibit I). This document presents a plan for the remediation of the groundwater.

Figure 1
Plot (Site) Plan

A.D. Selditch and Assoc. Inc.
 62675- Joaquin Murietta Ave., Newark, CA 94360
 415-490-1739
 Fax 415-770-9608
 Environmental Management and Engineering

DRAWN	DATE
RR	1/14/89
CHECKED	DATE
<i>[Signature]</i>	1/14/89
APPROVED	DATE
<i>[Signature]</i>	1/14/89

MATERIAL

SCALE
 SHT. OF

DWG. NO.
A FIGURE TWO

ISSUE

TITLE
 PLOT PLAN
 MONTGOMERY WARD
 DUBLIN CA

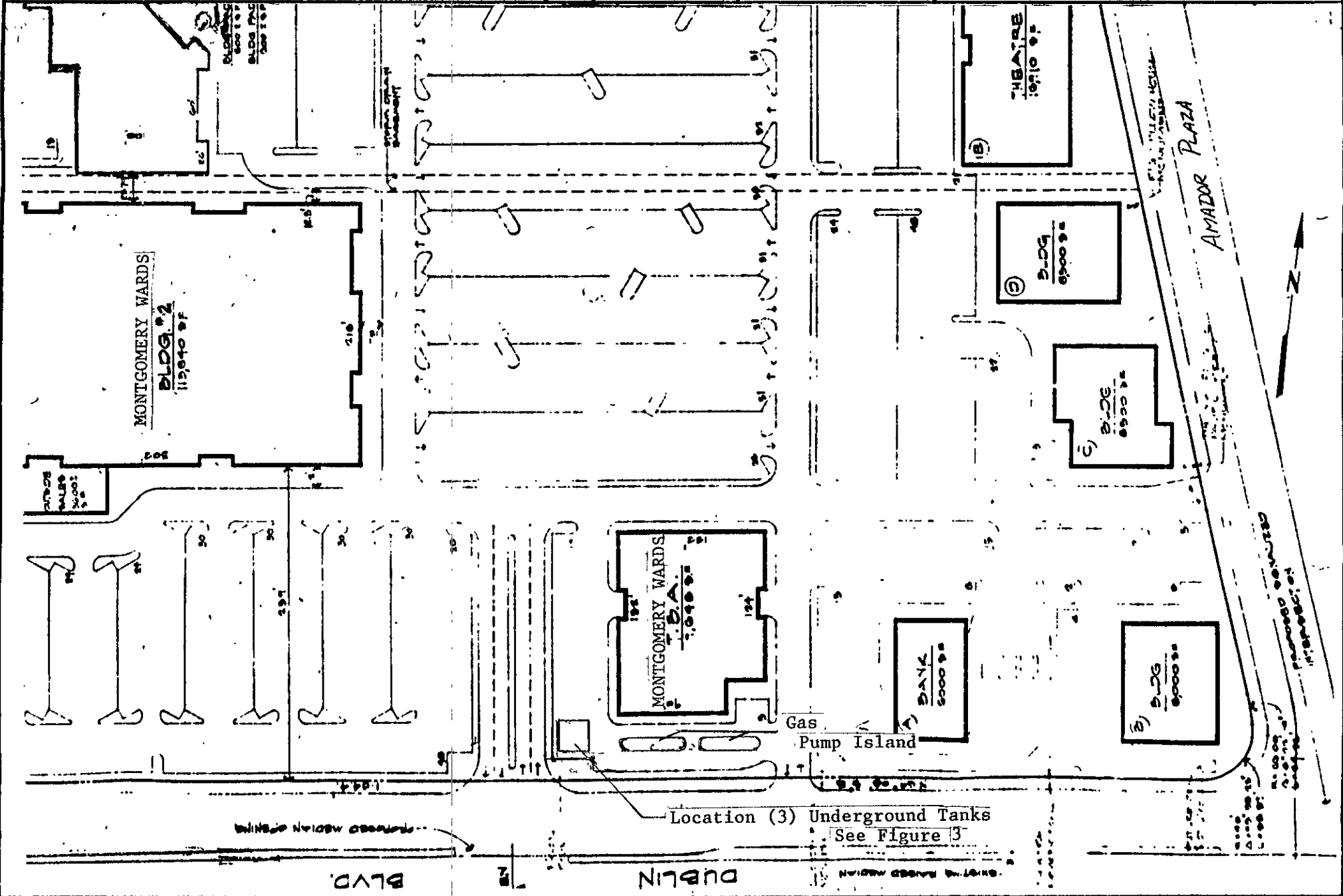
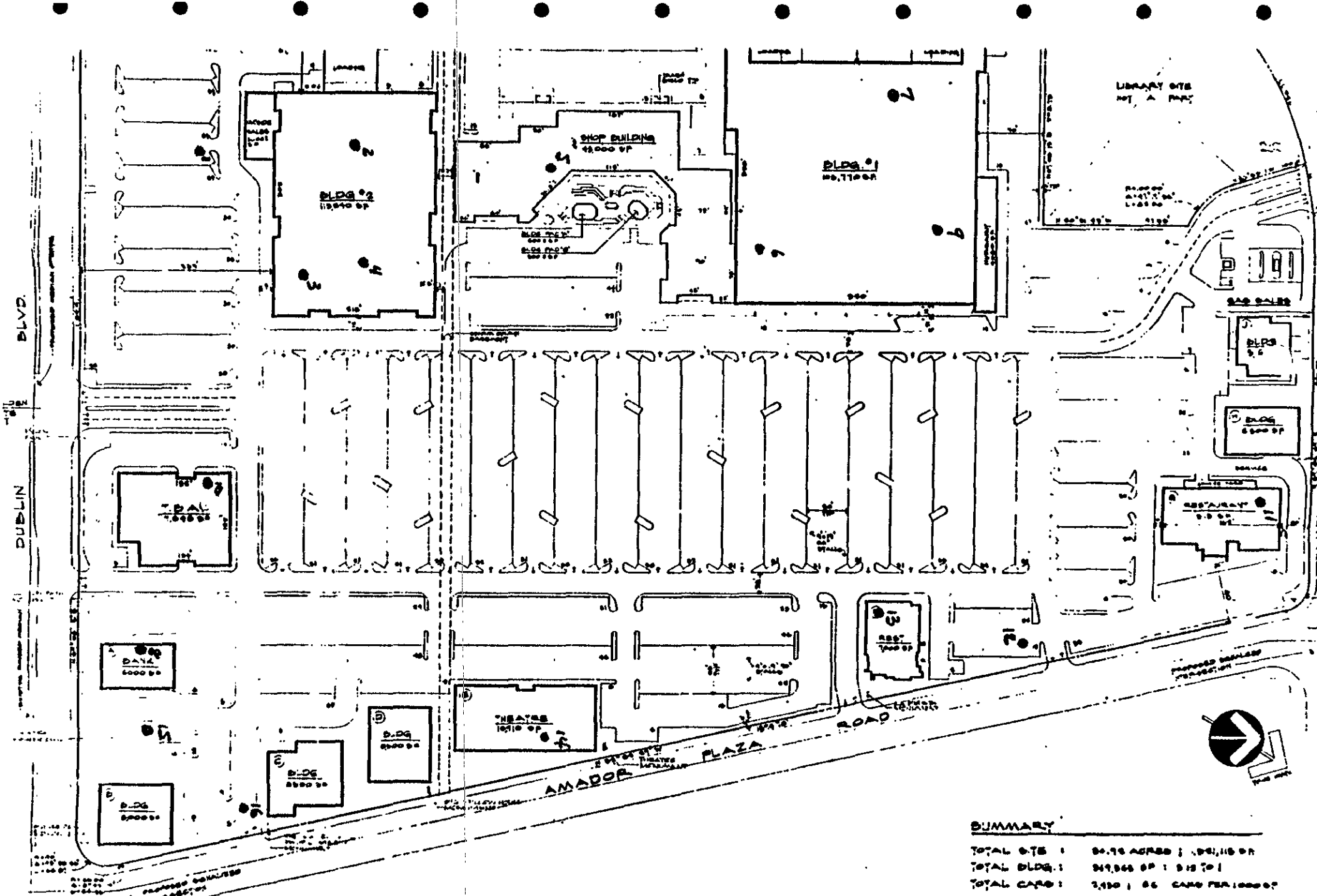


Figure 2

Location of J. H. Kleinfelder Borings



SUMMARY

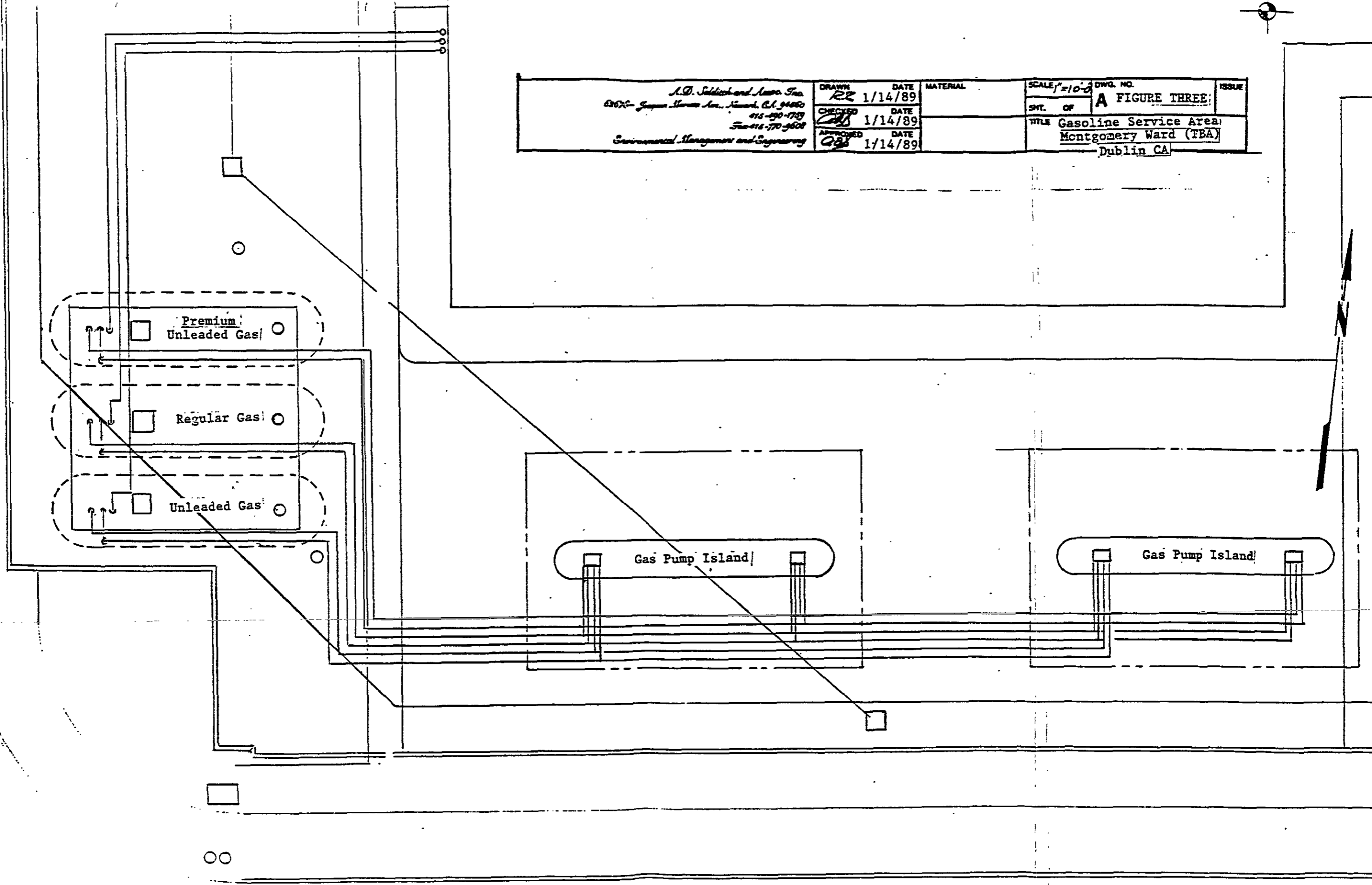
TOTAL SITE	84.74 ACRES	1,861,115 SF
TOTAL BLDG.	349,865 SF	1,512 TO
TOTAL CAR:	2,100	86 CAR/10000 SF

Location of Borings
 J. H. Kleinfelder & Assoc.
 Figure 2

Figure 3

Location of Preliminary Investigative Borings & Wells

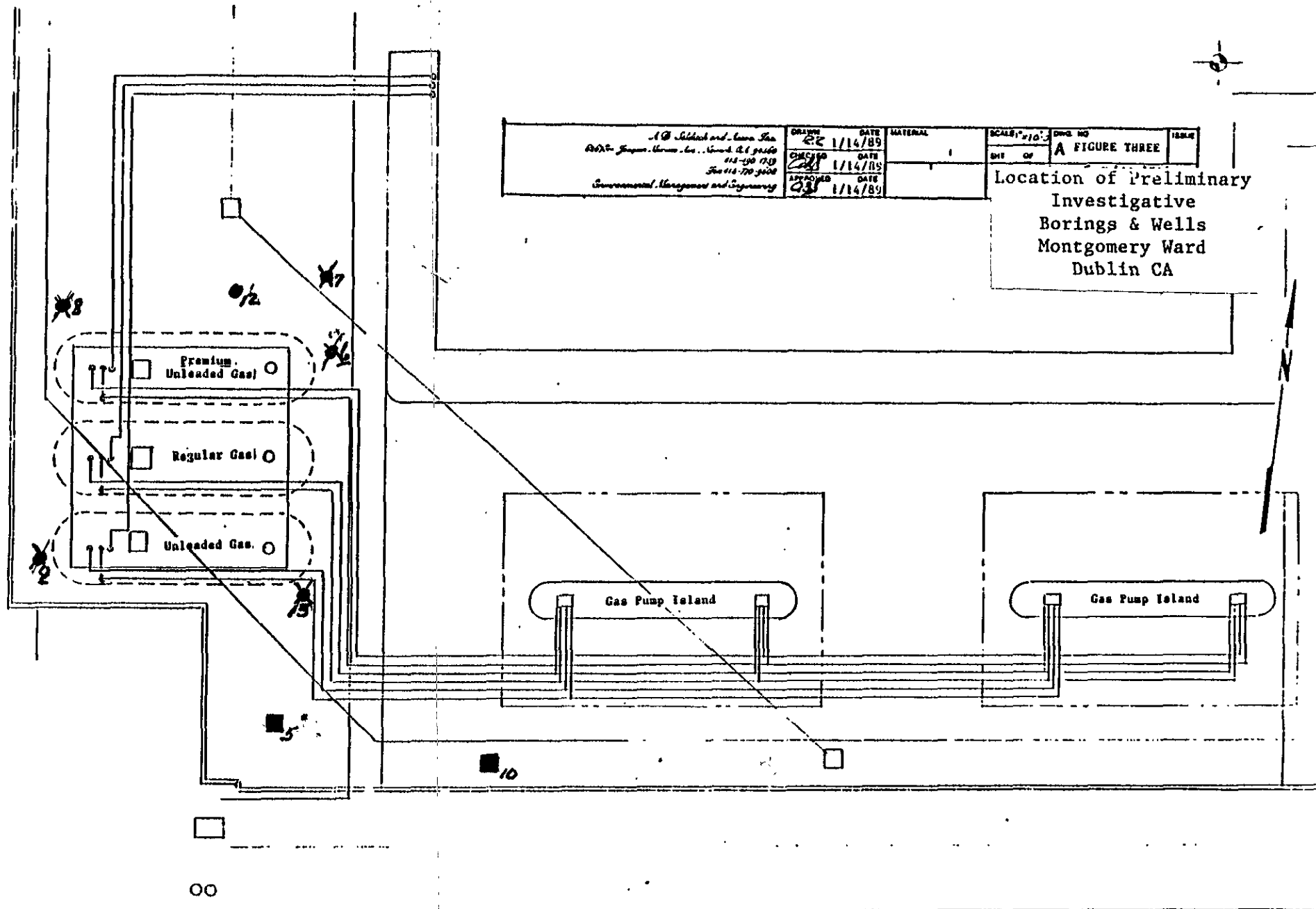
<i>A.D. Selditch and Assoc. Inc.</i> <i>6307 - Laguna Street San, Newark, Ct. 06102</i> <i>415-290-1713</i> <i>Fax-415-770-2608</i> <i>Environmental Management and Engineering</i>		DRAWN <i>RR</i>	DATE 1/14/89	MATERIAL	SCALE = 1" = 10'-0" DWG. NO. A FIGURE THREE	ISSUE
		CHECKED <i>[Signature]</i>	DATE 1/14/89		SHT. OF	
		APPROVED <i>[Signature]</i>	DATE 1/14/89		TITLE Gasoline Service Area Montgomery Ward (TBA) Dublin CA	



Dublin Blvd.

<i>A. Q. Schick and Assoc. Inc.</i> <i>2025 - Joplin, Missouri, Inc. - Newark, N.J. 07102</i> <i>412-590-1700</i> <i>For 414-700-9000</i> <i>Environmental Management and Engineering</i>		DRAWN <i>EC</i>	DATE 1/14/89	MATERIAL 	SCALE: 1"=10'	DWG. NO. A FIGURE THREE	ISSUE
		CHECKED <i>CS</i>	DATE 1/14/89		SHEET OF		
		APPROVED <i>CS</i>	DATE 1/14/89				

Location of Preliminary
Investigative
Borings & Wells
Montgomery Ward
Dublin CA



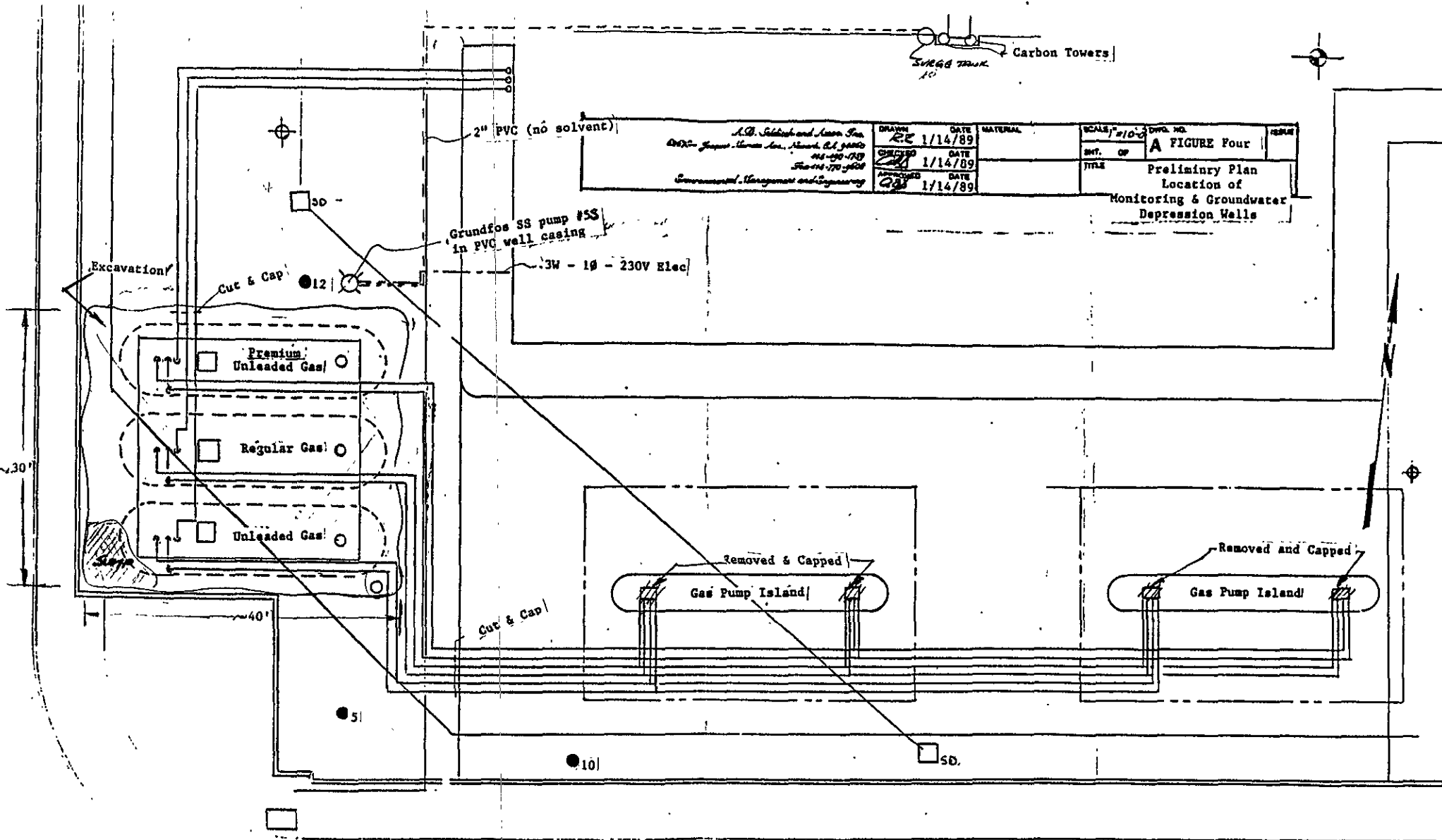
- Vapor/Product Removal Well
- Monitoring Well
- ✕ Abandoned

Dublin Blvd.

Figure 3

Figure 4

Proposed Monitoring Wells & Groundwater Depression Pump



A.C. Schick and Assoc. Inc. 2000 - Jupiter Inland Ave., Miami, FL 33160 305-998-7100 Fax: 305-770-9600 Environmental Management and Engineering		DRAWN RE	DATE 1/14/89	MATERIAL	SCALE 1"=10'-0"	DWG. NO. A FIGURE Four	ISSUE
		CHECKED [Signature]	DATE 1/14/89		SMT. OF	TITLE Preliminary Plan Location of Monitoring & Groundwater Depression Wells	
		APPROVED [Signature]	DATE 1/14/89				

- Existing Monitoring Well
- ⊕ Proposed 4" Monitoring Well
- Proposed Groundwater Depression Well

Dublin Blvd.
Figure 4f

Not To Scale

Exhibit I

Approved Underground Tank Closure/Modification Plans
Closure Plan

A.D. Selditch and Assoc. Inc.
6267C- Joaquin Murietta Ave., Newark, CA 94560

January 27, 1989

Alameda County Department of Health Services
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Attn: Mr. Tom Peacock

Tom:

In accordance with our conversation, please accept the attached
Closure Plan for the Montgomery Ward site located at 6900 Amador
Plaza Road, Dublin, CA 94568.

Cordially,



Dr. Alan D. Selditch, P.E., R.E.A.

Attachment

ads/mc

cc: Tom Hathcox, Fire Captain
Dublin-San Ramon Services District
Headquarters Station
9399 Fircrest Lane
San Rmaon CA 94583

Hossain Kazemi, Sanitry Engr. Assoc.
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson St.
Room 6040
Oakland CA 94607

ACCEPTED

DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone: (415) 874-7237

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and local health laws. Changes to your plans indicated by this Department are to ensure compliance with State and local laws. The project proposed herein is now related for issuance of any required building permits for construction.

One copy of these accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any change or alterations of these plans and specifications must be submitted to this Department and to the Fire and Building Inspection Department to determine if such changes meet the requirements of State and local laws. Notify this Department at least 48 hours prior to the following required inspections:

- _____ Removal of Tank and Piping
- _____ Sampling
- _____ Final Inspection

Issuance of a permit to operate is dependent of compliance with accepted plans and all applicable laws and regulations.

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

James [Signature]
7-13-89

ALameda COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO 415/271-4320

RECEIVED
JAN 10 1989

HAZARDOUS MATERIALS,
WASTE PROGRAM

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name Montgomery Ward - Auto Express
Business Owner Montgomery Ward
2. Site Address 6900 Amador Plaza Road
City Dublin Zip 94568 Phone 415/833-3256
3. Mailing Address Montgomery Ward - Attn: Charles West
City 39201 Fremont Blvd., Fremont Zip 94538 Phone 415/794-2337
4. Land Owner Montgomery Ward
Address 39201 Fremont Blvd. Fremont City, State CA Zip 94538
5. EPA I.D. No. CAC 000 137 685
6. Contractor Erickson, Inc. Bigge Crane & Rigging Co.
Address 255 Parr Blvd. Richmond CA 94801 10700 Bigge Ave. San Leandro CA 94577
City 415/235-1393 Phone 415/638-8180
License Type _____ ID# CA-163
7. Consultant A. D. Selditch & Assoc., Inc.
Address 6267E Joaquin Muriata
City Newark CA 94560 Phone 415/490-1759

4522248

663.02

2 24-89

8. Contact Person for Investigation

Name Charles West Title Field Engineering Manager
A. D. Selditch Consultant
415/794-2337
Phone 415/490-1759

9. Total No. of Tanks at facility 3

10. Have permit applications for all tanks been submitted to this office?
Yes [] No []

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

b) Rinsate Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

c) Tank Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

d) Contaminated Soil Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

12. Sample Collector

Name A. D. Selditch
Company A. D. Selditch & Associates, Inc.
Address 6267E Joaquin Murieta
City Newark State CA Zip 94560 Phone 415/490-1759

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
SW corner of Site			
Capacity	Historic Contents (past 5 years)		
10,000 gal	Regular Gasoline	Gasoline	11'6" from slab to tank bottom
10,000 gal	Unleaded Gasoline	Gasoline	11'6" from slab to tank bottom
10,000 gal	Premium Unleaded Gasoline	Gasoline	11'6" from slab to tank bottom
			All tanks located under 20' x 20' x 9" reinforced concrete slab in SW corner of

14. Have tanks or pipes leaked in the past? Yes [] No [x] Remove

If yes, describe. The only known incident occurred in late November 1988 -

15. NFPA methods used for rendering tank inert? Yes [x] No []

If yes, describe. To be done upon removal - insert dry ice 24 hours

prior to tank/slab removal

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name Scientific Environmental Lab

Address 924 Industrial Ave.

City Palo Alto State CA Zip 94303

State Certification No. 241

17. Chemical Method to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
Total Petroleum Hydrocarbons as Gasoline	EPA-8013	EPA-8015
Benzene	EPA-8020	EPA-8020
Toluene	EPA-8020	EPA-8020
Ethyl Benzene	EPA-8020	EPA-8020
Xylene	EPA-8020	EPA-8020
Lead (Total)	EPA-7420	EPA-7420

18. Submit Site Safety Plan

19. Workman's Compensation: Yes No

Copy of Certificate enclosed? Yes No

Name of Insurer Provided by outside contractor

20. Plot Plan submitted? Yes No

21. Deposit enclosed? Yes No

22. Please forward to this office the following information within 60 days after receipt of sample results.

- a) Chain of Custody Sheets
- b) Original Signed Laboratory Reports
- c) TSD to Generator copies of wastes shipped and received
- d) Attachment A summarizing laboratory results

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

ATTACHEMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units) all units mg/kg (ppm)
Well #12 Soil	TPH (g)	5 ft.	.7
	TPH (g)	10 ft.	87.
	TPH (g)	20 ft.	4.5
	TPH (g)	25 ft.	0.5
	Benzene	25 ft.	<0.1
	Toluene	25 ft.	<0.1
	Xylene	25 ft.	<0.1
	Ethyl Benzene	25 ft.	<0.1
Well #12 Water	TPH (g)	12-13 ft.	95%
Well #13 Soil	TPH (g)	13 ft.	2180
	Benzene	13 ft.	0.18
	Toluene	13 ft.	0.30
	Xylene	13 ft.	0.09
	Ethyl Benzene	13 ft.	0.06
Well #13 Water	TPH (g)	13 ft.	118
	Benzene	13 ft.	13.9
	Toluene	13 ft.	18.3
	Ethyl Benzene	13 ft.	2.8
	Xylene	13 ft.	4.1

A.D. Selditch and Assoc. Inc.
6267E- Joaquin Murietta Ave., Newark, CA 94560

Closure Plan

A.D. Selditch and Assoc. Inc.
62678- Joaquin Murietta Ave., Newark, CA 94560

Closure Plan
Montgomery Ward
Dublin Blvd.
Dublin, CA

INTRODUCTION

This preliminary closure plan designed to describe the activities anticipated to be required in the performance of the site remedial activities. This closure plan will be altered as state of the project uncovers additional or changed information which indicates the need for revision. All program alterations will be reviewed with cognizant agencies prior to incorporation except in the event of an emergency.

SITE LOCATION

Site is located on the northern side of Dublin Blvd. approximately 1/2 mile east of San Ramon Road. Site is currently in use as a Tire, Battery Accessory and Auto Maintenance Shop. Site currently houses, in addition to a retail tire and accessory shop, a mechanical auto maintenance facility. Until late November 1988, the site housed a gasoline dispensing operation consisting of three 10,000 gallon underground storage tanks. These tanks held unleaded, premium unleaded and regular gasoline. In late November the 10,000 gallon unleaded tank was determined to be leaking. As a result, management elected to close down the gasoline dispensing portion of this facility. Remedial activities are under way now.

DISCUSSION

Montgomery Ward is not aware of any prior incidents at this site. Further, tank test data reveals that tanks have met the criteria of NFPA 329 each time they were tested.

The logs of borings installed by J. H. Kleinfelder and Associates in January, 1978, indicate a fairly consistent stiff clay lens extending throughout the southwestern corner of the Montgomery Ward TBA site. This stiff gray to gray-brown clay extending from 3-1/2 feet to 10-14 feet below grade offers a reasonable resistance to horizontal and vertical spread of contaminants.

Kleinfelder, in their reports, displays a Table of Groundwater levels found through the Montgomery Ward site. We have found them to be consistent with borings being installed at this time and consistent with historic groundwater data for this area. Groundwater gradient through the Dublin area is to the south by southeast. Kleinfelder's Table of Groundwater levels follows. Location of their borings is displayed in Exhibit I. Figure 8.

Groundwater Levels

<u>Boring No.</u>	<u>Depth to Groundwater (Feet)</u>
1	No free groundwater
2	12
3	12
4	14
5	10
6	10
7	10
8	10
9	10
10	10
11	10
12	8.5
13	8.5
14	8.5
15	11
16	8

SERVICES PERFORMED

Immediately upon determination of the existence of a leak in the 10,000 gallon unleaded tank, investigative efforts to determine its impact began. This continued investigation to date consisted of:

- ~ Cessation of operation of all the underground gasoline tanks on site.
- ~ Removal of dispensing pumps.
- ~ Enclosure of tank area to reduce safety hazards and control access.
- ~ Installation of borings 5, 6, 7, 8, 9, 12 and 13.
- ~ Conversion of boring to observation wells capable of being modified for free product or vapor extraction.
- ~ Collection and analysis of soil and liquid samples from borings 12 and 13.
- ~ Begin removal and collection of free product.
- ~ Meetings with BAAQMD, Dublin City Fire Department, to establish emergency procedures and permitting requirements.
- ~ Environmental engineering, liaison and planning to develop remediation plan and evaluate alternative actions.

The results of boring and sample gathering available as of this date follow. Location of borings are displayed in Figure 3.

Borings 5, 6, 8, and 9 were installed in the pea-gravel backfill converted to 4" observation wells capable of being used for product recovery. See Well Logs, Exhibit I, for construction details. Product ranging from 1/8 to 1 1/2 inches was observed during . Converted wells are being allowed to develop prior to ascertaining free product level.

Table 1

Analytical Results of Samples Gathered
Montgomery Ward
Dublin, CA

All values mg/kg(ppm) unless otherwise noted

Well/Sample ID	TPH	Benzene	Toluene	Ethyl Benzene	Xylene	Free Product (in.)*
Soil						
12-1-2	0.7					
12-2-2	87.					
12-3-2						
12-4-2	4.5					
12-5-2	<0.5	<0.1	<0.1	<0.1	<0.1	
13x	2180					
Water						
12W	95%					2 ATD
13W	118	13.9	18.3	2.8	4.1	3-1/4 ATD

See Exhibit I for well construction details.

*Recovered free product ~ 1350 gallons is being stored on site in a skid mounted 6,000 gallon steel tank protected by a chain-link fence. This operation has been reviewed and approved by the Dublin Fire Department, Hazardous Materials Section.

BACKFILL

Backfill bottom measures 26' x 26' x 12" with 1:1 sloping sides. A concrete slab 26' x 26' x 12" rests in the backfill bottom and acts as a hold down anchor for the 3 reinforced fiberglass (10,000 gallon each) tanks. The backfill material is pea gravel. A 20' x 20' x 9" reinforced concrete slab and surrounding black top acts as the backfill cover. At this time there are indications that released product is contained in the backfill area.

Gasoline, being highly volatile, has rapidly begun to volatilize and fill the air voids formed by the pea gravel, creating a distinct fire/explosion hazard.

REMEDIAL ACTION PLAN

The following remedial action plan, though preliminary in concept, provides a framework upon which the final remedial action plan will be built. This plan, because sufficient data is lacking to complete necessary calculations required to determine most economical risk related plans/actions, is preliminary.

Basically, the plan entails:

- ~ Safe removal and disposal of free product.
- ~ Use of vapor extraction techniques for safe removal and release of treated volatilized gasoline fumes.
- ~ Removal after rendering inert and disposal of three FRP 10,000 gallon tanks.
- ~ Disconnection, removal of gasoline pumps.
- ~ Removal, treatment (cleaning) and re-use of the pea gravel backfill material.
- ~ Treatment and disposal of pea gravel wash water resulting from pea gravel cleanup.
- ~ Development of a safe method of top slab removal.
- ~ Sampling and analysis of base and side walls of backfill to determine extent of contamination, if any, and remedial activities, if needed.
- ~ Development of post closure monitoring plan as required.
- ~ Restoration of site to near original condition.
- ~ Related engineering, liaison, permit activities and project management.

VAPOR EXTRACTION

Vapor extraction of volatile materials is accomplished by mechanically moving air through the soil openings (pores) and causing liquid and/or moist material to convert to a gaseous state. Once the gaseous state has been achieved, the air in motion carries the gases to the extraction (vacuum) wells and then through treatment units should the regulations or permits require further decontamination. The more volatile the material the better the systems work.

The operating principle for a VES is to cause a flow of air through a soil mass contaminated with volatile compounds. The air flow is caused by applying vacuum to the soil mass, through extraction wells completed in the zone of contamination. It is expected that before the start of VES operations, the contaminants are present and in equilibrium, in both the liquid and vapor phases in the soil. The vapor phase contaminants are moved with the air flowing through the soils. The extracted air is replaced with atmospheric (clean) air.

Equilibrium considerations require volatilization from the liquid phase contaminants in the soil to replace the vapor phase contaminants extracted with the air.

Design and operation of the VES has advanced to the point that the performance of the installed systems, both initially and over an extended operating period, can reasonably be predicted. From the available experience, it is clear that the design must be site specific, and that it is possible to make reasonable estimates of the expected system performance in advance of operation, after field performance testing has been accomplished to determine area, contaminant levels, and flow characteristics.

Vapor Extraction System

Applying vacuum to a soil mass is a simple process. Typically, the vacuum is applied through one or more extraction wells, which differ from conventional groundwater monitoring wells in that the screened sections must extend above the water table surface. In order to enhance airflow through zones of maximum contamination, it is desirable to include air inlet wells in the installation.

If air emissions control is required for an installation, a vapor phase activated carbon adsorber system probably will be the most practical system, although catalytic oxidation units have produced promising results in recent applications.

Vapor Extraction Systems Applicability

The following describes general guidelines that should be useful for deciding if a VES is applicable at a site. Most important are contaminant and site characteristics, although cost is also important.

Character of Spilled Materials

A vapor phase vacuum extraction system is an effective remedial measure for compounds that exhibit significant volatility at ambient temperatures in the contaminated soils. Gasoline exhibits this characteristic - high volatility.

Character of Contaminated Soil

The air conductivity of the contaminated soils controls the rate at which air can be caused to flow through the soils by the applied vacuum. Grain size, moisture content and stratification probably are the most important properties in this regard. In stratified soil there generally will be significant differences in the air conductivity of the various strata. The pea gravel backfill offers high air conductivity.

Site Characteristics

The location of contamination on this property and the type and extent of development in the vicinity of the contamination favors the installation of a VES. Use of the VES will restrict contamination to the site.

SAFETY CONSIDERATIONS

Gasoline, the contaminant in question, is a highly volatile compound. The backfill is pea gravel. Pea gravel by definition, consists of small slightly porous gravel particles. It is estimated that 40-50% of the volume of the pea gravel portion of the backfill is air space now occupied by gasoline vapors. This concentration of flammable vapors has raised the risk associated with normal tank removal operations. To reduce the fire/explosion risk, we recommend the operation of a vapor removal system to evacuate the vapors prior to tank removal. Vapor extraction normally relies on the introduction of ambient air to maintain equilibrium during operation. In this situation, the introduction of ambient air adds to the risk in that, as the gaseous vapors are removed, they will be replaced with an oxygen rich air. According to the BAAQMD this occurs in gravel and sand packs where air space is high and is normally not encountered where soil is found and volume of air is minimal. To reduce this risk, we recommend that ~~the input wells of the vapor extraction be injected with a nitrogen or carbon dioxide and air mixture.~~

SOIL BORINGS

In order to ascertain the extent of spread of the contaminant, 5 soil borings and 2 monitoring wells are in the process of being installed. It is hoped that weather will hold and scheduled drilling of initial borings and monitoring wells will be completed by January 31, 1989. Appropriate EPA protocols will be observed during sample gathering, well purging, sample identification, preservation, transportation and custody control. Scientific Environmental Laboratories, a California Approved Laboratory, has been selected to perform the analysis.

SAMPLE COLLECTION AND ANALYSIS

Soil samples will be obtained using a California Modified split-barrel dry sampler containing four clean brass liners. The drive sampler will be driven ahead of the borehole to obtain an undisturbed soil sample. Upon

removal of the soil sampler from the bore hole, the ends of each brass tube containing the soil samples are covered with teflon sheets and capped with plastic caps. Plastic caps are then taped shut to form an airtight seal. Sample label displaying the unique sample identification number, the sample depth, and the time and date when the sample was obtained, is attached to each brass tube. Soil samples are then placed on ice in coolers for transportation to the California approved laboratory.

A screening method will be utilized to determine which samples will be composited.

The screening method involves placing a small amount of soil from each of the adjacent brass tubes into a laboratory clean glass jar. In the event of significant oil change, the screening sample will also include a small amount of soil from the appropriate end of the brass tube selected for possible analysis. The screening method involves placing a small amount from the end of each of the adjacent brass tubes into a clean zip-lock bag which is then zipped closed and placed into a laboratory clean glass jar. Glass jar is sealed utilizing a sheet of teflon and put aside for approximately one hour to permit volatilization to occur. The head space in the sealed glass jar and zip-lock bag are measured for volatized volatile organic compounds utilizing an Organic Vapor Analyzer (OVA) or Photo Ionization Device (PID).

REGULATORY AGENCY ACCEPTANCE AND PERMITTING

Permitting - obtaining of all necessary permits and variances from regulatory agencies.

Installation and operation of a VES requires prior approval by the appropriate regulatory agencies. Preliminary meetings with BAAQMD personnel indicates a high probability of early approval of the VES proposal.

The proposal given to the regulatory agency should include an estimate of the VOC extraction rate, a discussion of how the rate will be determined and the actions that will be taken if the estimate is significantly in error.

Bay Area Air Quality Management District (BAAQMD) permits are not quickly obtained. Permit application preparation is estimated to require 3-4 weeks and receipt of Authority to Construct and/or Operate may taken 30-60 days.

Additional permits are required from:

- ~ California Department of Health Services - relief from treatment site status.
- ~ Dublin Sanitation District - permit to discharge treated water to sewer.

SAMPLE DOCUMENTATION

Field documentation includes the completion of the boring logs which note lithology changes indicated by soil sampling within each borehole, soil sample intervals, water at time of drilling, and after recharge and back-filling procedures are appropriate. Well drilling logs also indicate well construction details and materials used. Chain-of-custody forms are prepared for all samples submitted to the laboratory to document each sample obtained. Laboratory selected for sample analysis is certified by the California Department of Health Services for analysis of volatile organic compounds in both water, soil and hazardous waste.

EQUIPMENT DECONTAMINATION

Prior to their initial use and after each subsequent use in other boreholes, all augers, drill rods and sampling tools will be steam cleaned to avoid cross contamination. Further, the California modified soil sampler is washed in a TSP solution and double rinsed in fresh water between each sampling interval to avoid potential cross contamination from sample gathering to sample gathering.

DISPOSAL OF SOIL CUTTINGS AND BACKFILLING PROCEDURES

Soil cuttings and other waste materials produced during sampling of the boreholes and wells is placed in drums and sealed. Temporary identifications designated the drums as potential hazardous material will be attached and corrected as soon as sample analyses are received. Material will be disposed in accordance with current applicable regulations. Proper disposal of drums, materials is the responsibility of Montgomery Ward.

Upon completion of the sampling, all borings will be backfilled with a mixture of neat cement grout containing 3 to 5% bentonite powder. After the cement grout mixture has settled, boreholes will be capped off until they are flush with the ground surface with matching material. Thickness of either the asphalt cold patch or the concrete patch will be similar to that of the original material.

SUMMARY

Data collected during the execution of preliminary activities designed to determine the extent of the problem can be summarized as follows:

- ~ Product recovery wells, though slow, have removed approximately 1350 gallons of gasoline to date.
- ~ Installation of additional scheduled wells and borings will provide further information regarding additional or alternative locations for product recovery and vapor extraction.
- ~ Borings installed and soil data gathered to date lead to the belief that the contamination is confined to the backfill and immediate area.

- ~ Soil characteristics, stiff, gray to gray-brown clay, surrounding the backfill indicate a resistant to contaminant flow.
- ~ Pea gravel backfill provides an excellent media for vapor extraction operation and success.

- ~ The contaminated area is secured and protected by a chain link fence.

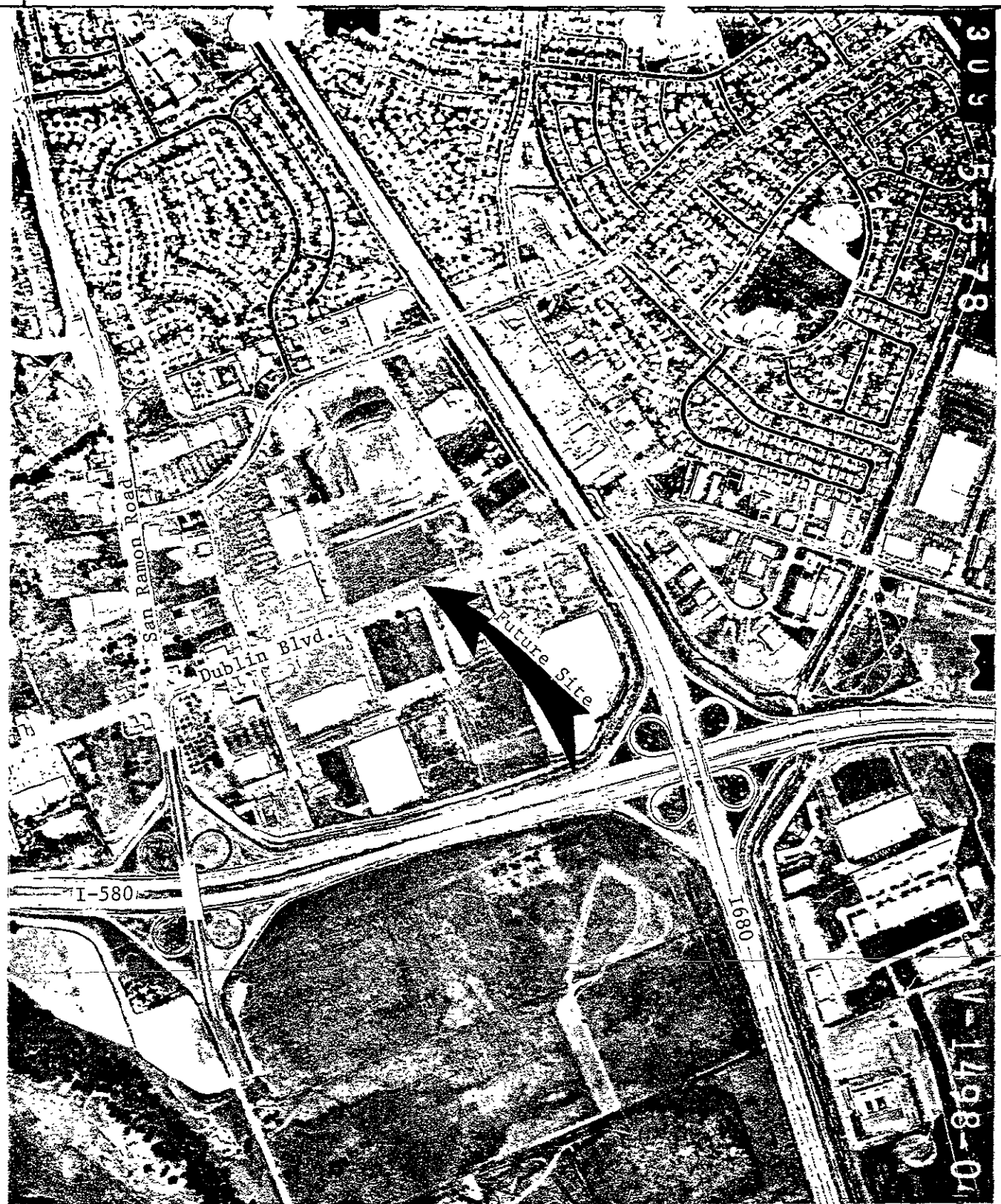
RECOMMENDATION

We recommend continuation of the product recovery operation, the installation of additional recovery/vapor extraction wells, and the engineering necessary for vapor extraction system design and operation and the obtaining of required Bay Area Air Quality Management District Permits.



Dr. A. D. Seiditch, P.E., R.E.A.

mw(dub).169/mc



<i>A.D. Selditch and Assoc. Inc.</i> 62675 - Joaquin Terrace Ave., Newark, CA 94560 415-290-1759 Fax 415-770-9608 <i>Environmental Management and Engineering</i>	DRAWN	DATE	MATERIAL	SCALE	DWG. NO.	ISSI
	CHECKED	DATE		SHT. OF	A	
	APPROVED	DATE		Title Aerial Photograph (5/5/78) Future Site Montgomery Ward Dublin, CA		

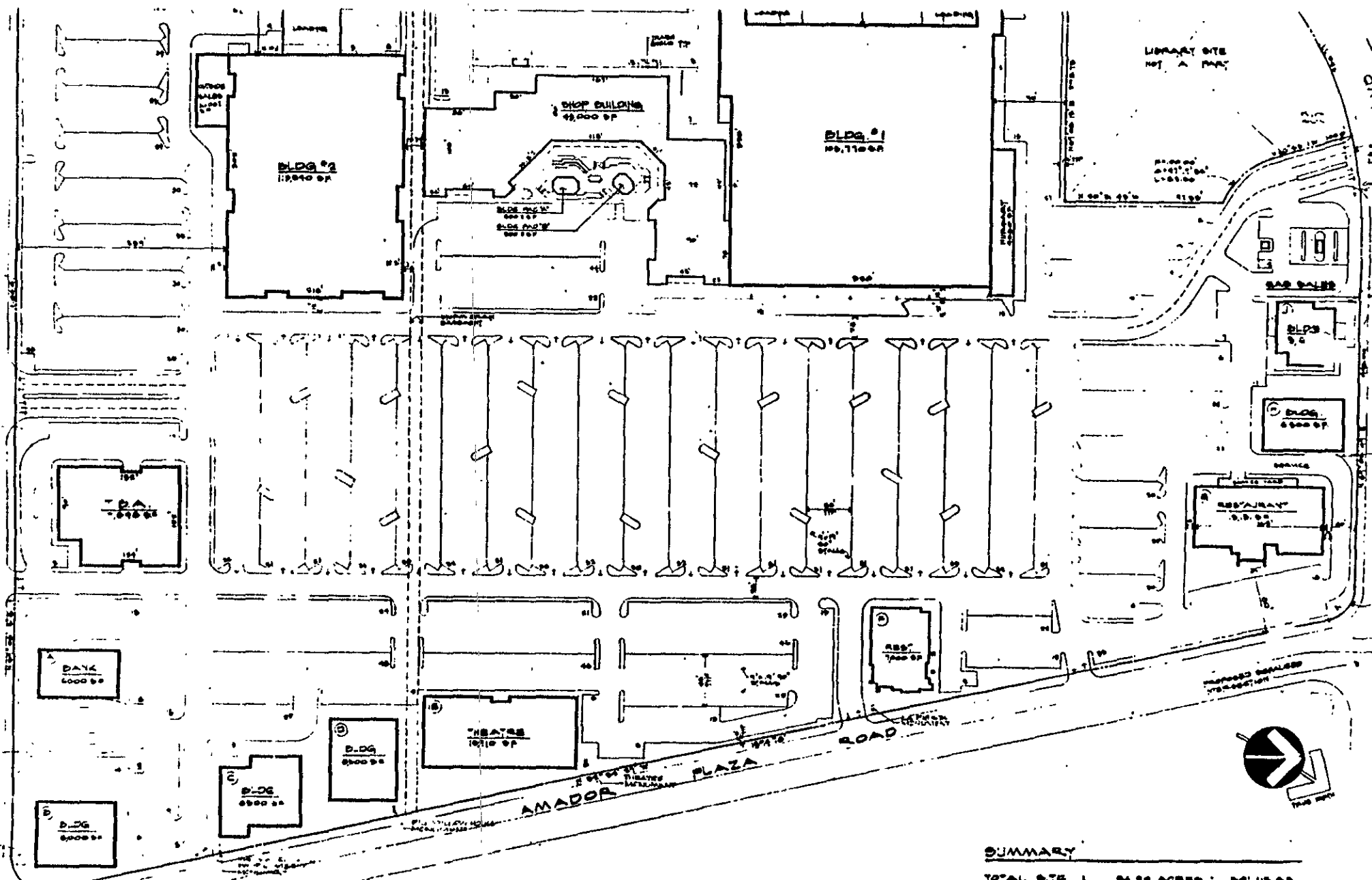
Figure 6



A.D. Selditch and Assoc. Inc.
 62675 - Jacques Marquette Ave., Newark, Ct 04560
 415-290-1789
 Fax 415-770-9608
 Environmental Management and Engineering

DRAWN	DATE	MATERIAL	SCALE	DWG. NO	ISSI
CHECKED	DATE		SHT OF	A	
APPROVED	DATE		Aerial Photograph (8/18/88) Montgomery Ward Dublin, CA		

Figure 7



SUMMARY

TOTAL SITE	94.74 ACRES ; 4,061,115 SF
TOTAL BLDG.	149,064 SF ; 1,110,701
TOTAL CAR:	1,100 ; 86 CARS PER 1,000 SF

Figure 8

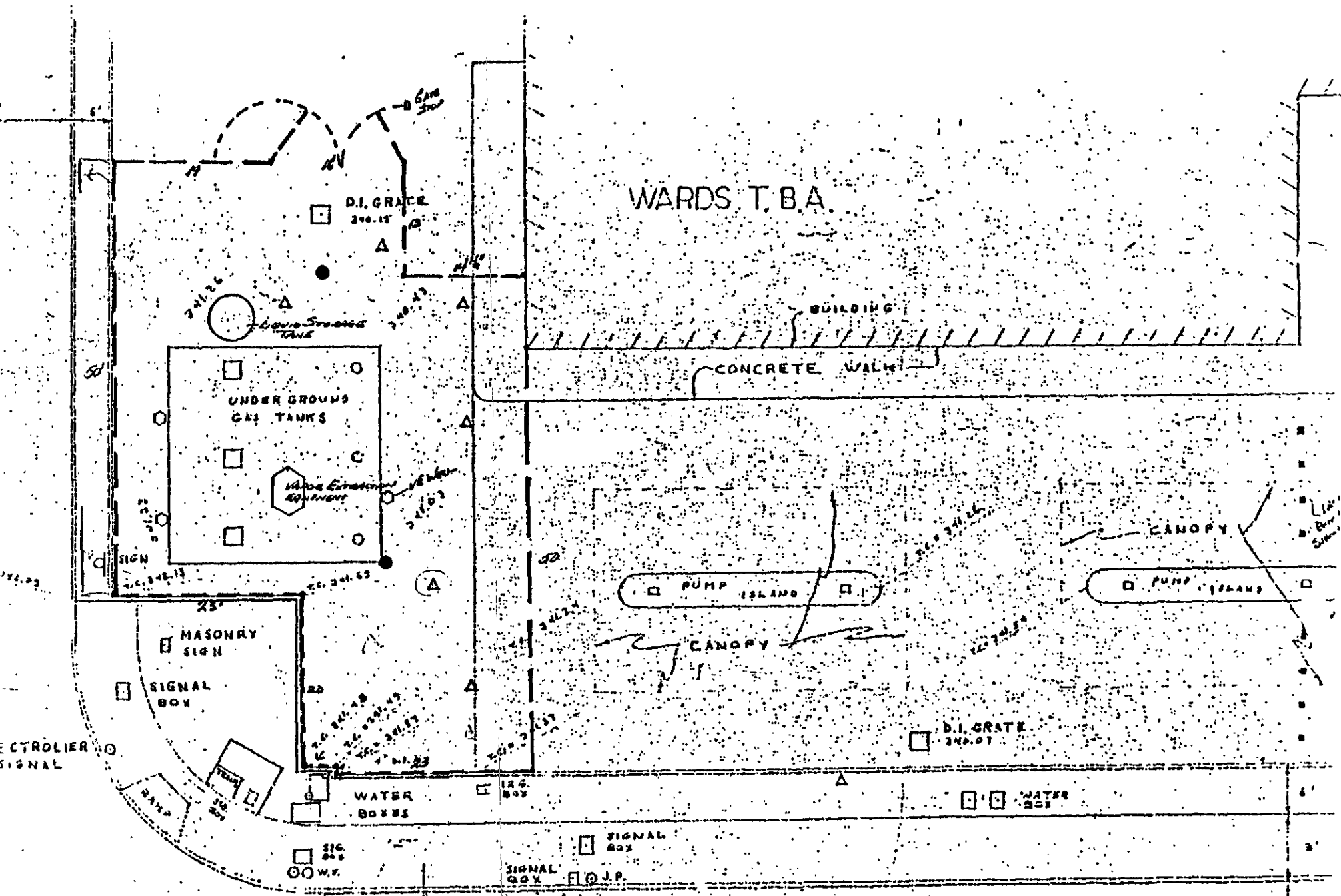


Figure 9

Chain Link Fence Location

Exhibit III

Notification/Application to Aerate

A.D. Selditch and Assoc.
62678- Joaquin Murietta Ave., Newark, CA 94560

March 29, 1989

Ms. Vicki Dvorak
Enforcement Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco CA 94109

Dear Ms. Dvorak:

As I indicated to you on the telephone, I am acting as a consultant to the Montgomery Ward Co., Inc. Because of a tank leak at their Dublin, California, facility, they will need to do some soil aeration.

Pursuant to the administrative reporting requirements of Regulation 8, Sections 40-401 and 40-402, please find the following information:

401.1 Name of persons performing tank removal:

Erickson, Inc. 255 Parr Blvd., Richmond, CA 94801

401.2 Location of site at which tank removal will occur:

6900 Amador Plaza Road, Dublin, CA 94568

401.3 Scheduled starting date of tank removal:

April 30, 1989

401.4 Procedures to be employed to meet requirements of 8-40-310:

All piping will be drained or flushed into the tank.

All liquids and sludges will be removed to the extent possible.

A hand pump will be used to remove the bottom few inches, if necessary. The tanks will be purged with dry ice. When this is done, the tanks will contain no more than 0.001 gallons of organic liquid per gallon of tank capacity.

402.1 Names of persons performing excavation:

San Jose Crane & Rigging, 660 Giguere Court, San Jose, CA 95133
Erickson, Inc., 255 Parr Ave., Richmond, CA 94801

- 402.2 Location of site at which excavation will occur:
6900 Amador Plaza Road, Dublin, CA 94568
- 402.3 Scheduled starting date of excavation:
April 30, 1989
- 402.4 Procedures to be employed to meet the requirements of 8-40-301:
Aeration will not begin until laboratory analyses are completed as required by 8-40-601 and 602. After it is determined what amount of soil may be aerated per day, the limits of Section 8-40-301 will not be exceeded. A cover will be maintained over all materials not being aerated.
- 402.5 Name of government representative (closure plan submitted)
Alameda County Department of Health Services
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621
Attn: Tom Peacock

We are aware that we are required to notify the District, by telephone, no less than 24 hours prior to excavation and/or spreading of contaminated soil.

Please contact either Norman L. Grib (415/928-5384) or Alan D. Selditch (415/490-1759) if you require further information.

Cordially,

Dr. A. D. Selditch, P.E., R.E.A.

mw(dub).190/mc



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

133 E. S STREET
SAN FRANCISCO, CALIFORNIA 94109
415-771-6000

REGULATION 8, RULE 40
Aeration of Contaminated Soil and
Removal of Underground Storage Tanks

NOTIFICATION FORM

- Removal or Replacement of Tanks
- Excavation of Contaminated Soil

SITE INFORMATION

SITE ADDRESS <u>6900 Amador Road</u>	
CITY, STATE, ZIP <u>Dublin, CA</u>	
OWNER NAME <u>Montgomery Ward Co.</u>	
SPECIFIC LOCATION OF PROJECT <u>approx. 200 ft. West of Amador Road on North side of Dublin Blvd.</u>	
TANK REMOVAL	CONTAMINATED SOIL EXCAVATION
SCHEDULED STARTUP DATE <u>5/12/89</u>	SCHEDULED STARTUP DATE <u>5/17/89</u>
VAPORS REMOVED BY:	STOCKPILES WILL BE COVERED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<input type="checkbox"/> WATER WASH	ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):
<input type="checkbox"/> VAPOR FREEING (CO ²)	<u>none</u>
<input checked="" type="checkbox"/> VENTILATION	(MAY REQUIRE PERMIT)

CONTRACTOR INFORMATION

NAME <u>Fowler & Assoc.</u>	CONTACT <u>Mike Reed</u>
ADDRESS <u>3190 So. Bascom Ave., Suite 210</u>	PHONE <u>(408) 377-8373</u>
CITY, STATE, ZIP <u>San Jose, CA 95124</u>	

CONSULTANT INFORMATION (IF APPLICABLE)

NAME <u>A. D. Selditch & Assoc.</u>	CONTACT <u>Alan Selditch</u>
ADDRESS <u>6267E Joaquin Murieta</u>	PHONE <u>(415) 490-1759</u>
CITY, STATE, ZIP <u>Newark CA 94560</u>	

FOR OFFICE USE ONLY

DATE RECEIVED _____	BY _____ (INIT.)
CC: INSPECTOR NO. _____	DATE _____ BY _____ (INIT.)
TELEPHONE UPDATE: CALLER _____	CHANGE MADE _____
BAAQMD N # _____	_____

Exhibit V
Health & Safety Plan

HEALTH AND SAFETY PLAN

Montgomery Ward
Dublin, CA

ADMINISTRATIVE INFORMATION

Project Number: 1188002-R
Task Number:
Project Manager: Charles West / *Alan Selditch*
Site Safety Office (SSO): Alan Selditch
Alternate: To be determined
Health and Safety Officer: Charles West
Author of Plan: Alan Selditch
Expiration Date: September 30, 1989

APPROVALS

Alan Selditch / *7/21/89*

Project Manager Date

INTRODUCTION

This Health and Safety Plan identifies the health and safety procedures for work described below (Work To Be Performed). It is the responsibility of the Project Manager to implement the requirements of this plan. The Site Safety Officer assists the Project Manager in carrying out this responsibility at the work site by means of authority to temporarily suspend work to protect health and safety and to suspend individuals from the site for failure to comply with the requirements of the health and safety plan. The Site Safety Officer or alternate designated in this plan shall be present on-site at all times that A. D. Selditch & Associates, Inc. or subcontractor personnel are working. The Corporate Health and Safety Officer may suspend or limit work, or direct changes in work practices, if the health and safety plans or the work practices being used, are inadequate to protect health and safety.

This plan may not be used for work other than that described in Work to be Performed section below. It may not be substantially modified or used beyond the expiration date of this plan, without the written approval of the Corporate Health and Safety Officer.

SITE LOCATION

Site is located on the northern side of Dublin Blvd. approximately 1/2 mile east of San Ramon Road. Site is currently in use as a Tire, Battery Accessory and Auto Maintenance Shop. Site currently houses, in addition to a retail tire and accessory shop, a mechanical auto maintenance facility. Until late November 1988 the site housed a gasoline dispensing operation consisting of three 10,000 gallon underground storage tanks. These tanks held unleaded premium unleaded and regular gasoline. In late November the 10,000 gallon unleaded gasoline tank was determined to be leaking. As a result management elected to close down the gasoline dispensing portion of this facility. Remedial activities are under way now.

WORK TO BE PERFORMED

Environmental Engineering Management, Liaison and Consulting

- ~ Necessary project management, agency liaison, permit preparation and acquisition from City of Dublin, Bay Area Air Quality Management District, San Francisco Bay Area Regional Water Quality Control Board, Alameda County Department of Health, Hazardous Materials Group, Alameda County Flood Control and Water Conservation District Zone 7, and other agencies as required.
- ~ Environmental engineering, sample gathering and analyses, including system design to commence and complete remedial activities. Remedial

Activities may include product recovery, vapor extraction, biodegradation, etc. as well as tank removal and destruction and backfill decontamination as required.

- Development of Health and Safety Plan
- Report preparation and distribution as required.

Tank Removal

- Tank removal cannot begin until assurance that volatile gasoline fumes are minimized and tanks rendered inert. Then the concrete slab can be size reduced and removed. After slab removal the rendered inert tanks can be removed and disposed as scrap.

Remedial Activities

- Remedial activities may evolve around vapor extraction, biodegradation, free product removal aeration and/or contaminated soil removal. Additional engineering and sampling will determine most practical remediation activity. Health and Safety plan will be modified as remedial activities are engineered.

CLASSES OF HAZARDOUS MATERIALS

Petroleum Hydrocarbons

Aside from the individual properties of the petroleum hydrocarbon expected to be encountered such as flammability, toxicity containment may be difficult. The gasoline must be kept from entering groundwater supplies and sewer systems. Common gasolines expected to be encountered are regular (leaded) gasoline, unleaded and premium unleaded gasolines.

The major problem associated with spills of gasoline are containment, vapor control and ultimate accumulation and disposal. Vapor control, in particular, is normally very difficult and in this incident because of the pea gravel backfill, can be very extensive and poses the greatest hazard. Vapors of some materials may be toxic or irritating while gasoline vapors are flammable as well. It is therefore clear that vapor reduction is the rule for this spill.

SPECIFIC HAZARDOUS MATERIALS WHICH MAY BE ENCOUNTERED

Gasoline

Toxic and Hazard Review - high to moderate via inhalation route. Repeated or prolonged dermal exposure causes dermatitis, can cause blistering of the skin. Entry via inhalation and/or oral routes can cause central nervous system depression. Pulmonary aspiration can cause severe pneumonitis. Even brief inhalation exposure to high concentration can cause pulmonary edema.

A very dangerous fire hazard from heat, flame and/or powerful oxidizers
Its vapors are heavier than air and can flash back to an ignition source.

Properties - clear, aromatic, volatile liquid, a mixture of aromatic and aliphatic hydrocarbons. Flash point - 50°F., density <1, vapor density 3-4, ULC 95-100, lel 1.3%, uel 60 c. after 50% distilled 110 c., after 90% distilled 170°C, final bp 204°C, insoluble in water, freely soluble in abs alcohol, ether, CH Clz, bz.

Lead:

(Metallic Lead) Only short-term exposure is anticipated, if any. However, prolonged absorption of lead or its inorganic compounds results in severe gastrointestinal disturbance and anemia. The upper limits of lead traditionally classified as normal are 40 µg/100 ml blood and 80 µg/l of urine; the lower limit of values classified as excessive are 80 µg/100 ml blood and 150 µg/liter of urine. At or above these levels action must be taken to reduce workers absorption of lead. There is evidence that prolonged exposure to lead during pregnancy has resulted in neurological disorders in infants. The TWA set by OSHA is 50 µg/m³ while the California Standards for Hazardous Waste for STLC and TTLC are 5 and 1000 mg/kg net weight, respectively.

FOR ALL TASKS

Prohibitions

Drinking and eating are prohibited on-site except in areas designated by the Site Safety Officer. Smoking and the use of any flame (except for a GC) is prohibited on-site.

Working alone outside of visual contact. It is sufficient to work in the presence of responsible client or site cleanup contractor personnel.

Heat Stress

Temperatures at the site may range between 70°F and 90°F. A source of potable water shall be immediately available and consumption encouraged.

Protective Clothing

Hearing protection shall be required within those areas where a normal conversation cannot be heard when standing 2 feet from the speaker.

A long sleeve work shirt and long pants shall be worn to minimize skin contact with potential contaminants and to reduce exposure to ultraviolet radiation. Safety boots with steel shanks shall be worn at all times on-site.

Latex gloves shall be worn during all sampling. After sampling is completed, gloves shall be placed in disposal bins.

Hard hats are required for all operations.

HEALTH AND SAFETY CLEARANCES

A. D. Selditch and Associates and subcontract personnel authorized to go on-site must meet the following requirements, (1) successfully complete a 40-hour safety training course and 8-hours of refresher training annually thereafter; (2) receive clearance from an approved physician to wear respiratory protective devices and to work with chemicals; and (3) pass a respirator fit test.

SAFETY MEETING PRIOR TO STARTING WORK

All members of the site team (including subcontractor employees) must attend a safety meeting before beginning any activity described. The meeting shall be conducted by the Project Manager or the Site Safety Officer. The meeting agenda shall include a review of the work plan and this health and safety plan, identification of the chain of command, location of telephones, restrooms, safety retreat area, and posted emergency telephone numbers and directions to the hospital and checking of respirators and medical and training clearances of subcontractor employees.

INCIDENT REPORTING

If an accident resulting in injury or illness occurs, the Project Manager must report the incident to the Business Unit Health and Safety Officer within 24 hours of occurrence using the accident/incident form.

SITE CONTROL/SECURITY MEASURES

Access to areas where tear down, demolition and steam cleaning is performed is limited to avoid injury and chemical exposure to site personnel, client, employees and other observers. To control access to such areas, a restricted area shall be established for the project. The boundaries of restricted areas must be at least 25 feet away from the nearest activity and clearly defined with barricades, chain link fencing, stakes, traffic cones, or some other suitable equipment connected with ribbon or safety tape. Entry to restricted areas shall be limited to individuals who must work in the area.

DECONTAMINATION

- a. Within the site boundary, wash hands with water before performing a different task. Leather boots are to be wiped down with a wet cloth.
- b. Remove gloves and clean and sanitize respirator if worn.
- c. Wash hands, face and neck with soap and water before eating and before leaving the site.

AUTHORIZED A. D. SELDITCH & ASSOCIATES PERSONNEL

The A. D. Selditch & Associates, Inc. and subcontract personnel listed below meet the requirements for medical clearance, training and respirator fit-testing as of the date of approval of this plan by the Safety Officer and are authorized to conduct the operations covered by this plan as long as they continue to meet those requirements:

Alan D. Selditch
Louise Hauke
Ike Hourval

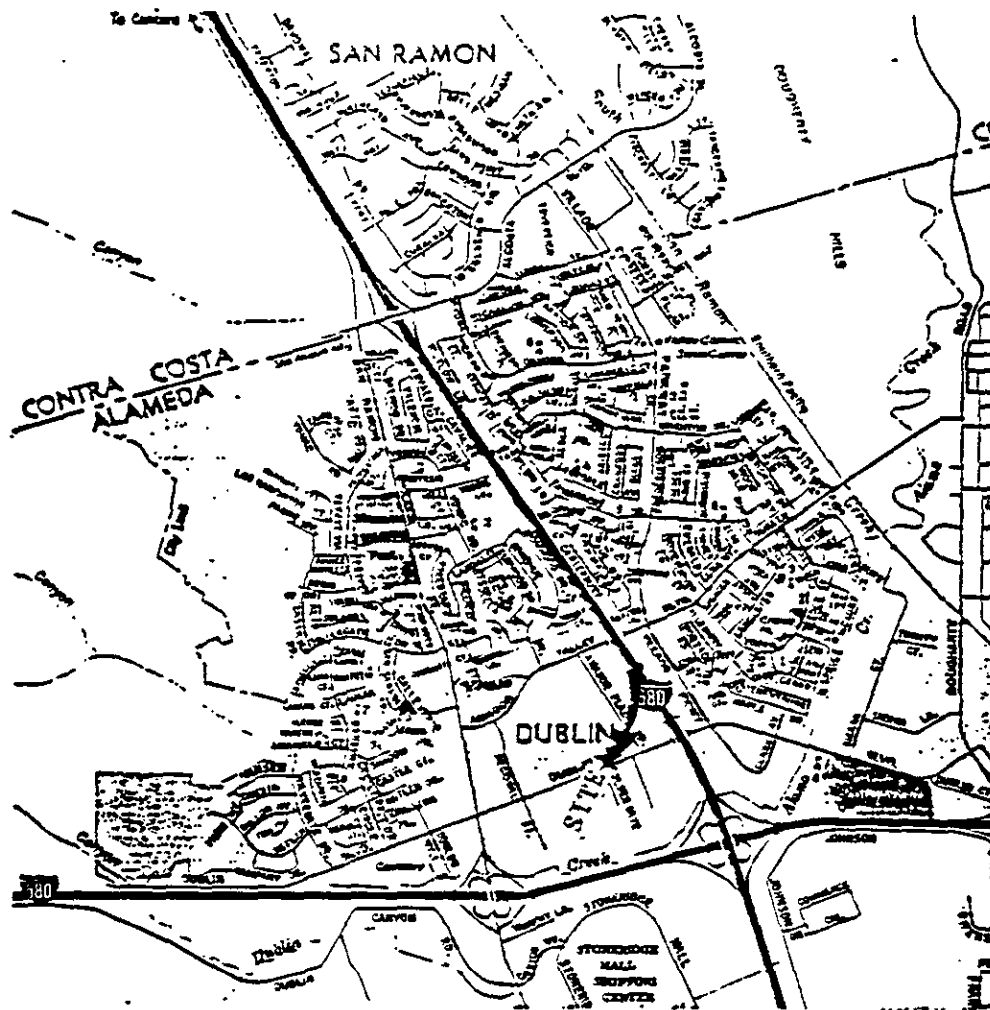
EMERGENCY RESPONSE PROCEDURES

In the event of a serious accident, illness or other emergency, telephone 911 for assistance. In the event of a minor medical emergency, the nearest medical facility is Valley Memorial Hospital, 1111 East Stanley Blvd., Livermore, (415)447-7000.

From the work place, drive west on Dublin Blvd. to San Ramon, turn South (left) on San Ramon to I-580. Drive easts on I580 to Portola Avenue. Drive South on Portola Avenue to Murrieta Blvd.. Continue South on Murrieta Blvd. to Stanley Blvd. Turn left on Stanley Blvd. and drive to Valley Memorial Hospital.

The Site Safety Officer must drive the route described above, prior to beginning work, to check the completeness of the information provided.

mw(dub).169/mc



A.D. Smith and Sons, Inc.
 625X - James Street, San Francisco, Cal. 94109
 415-390-1739
 415-390-1700
 Environmental Management and Engineering

DRAWN	DATE	MATERIAL
<i>RR</i>	1/14/90	
CHECKED	DATE	
<i>ADL</i>	1/14/90	
APPROVED	DATE	
<i>ADL</i>	1/14/90	

SCALE	OWNER NO.	ISSUE
	A	FIGURE ONE
TITLE AREA MAP—SITE LOCATION		
MONTGOMERY WARD		
DUBLIN CA		

HEALTH AND SAFETY COMPLIANCE AGREEMENT

I, the undersigned, have received a copy of the health and safety plan for the project identified below. I have read the plan, understand it, and agree to comply with all of the health and safety requirements therein. I understand that I may be prohibited from continuing work on the project for failing to comply.

I have have not (check one) been briefed by a project safety authority on the health and safety requirements of the project.

Project Number: 1188002-3

Project Title: Montgomery Ward - Dublin Remedial

Date of Plan: 1/24/89

CHARLIE R. WEST
Print Name

Charlie West
Signature

MONTGOMERY WARD
Firm

JANUARY 30, 1989
Date

Exhibit IV
Engineered Fill Specifications

CALIFORNIA ENVIRONMENTAL CONSULTANTS



June 28th, 1989

Dr. Alan D. Selditch
President
A.D. Selditch and Associates, Inc.
6267-E Joaquin Murieta Ave.
Newark, CA 94560

Re: Specs. for fill material, Montgomery Ward's facility, 6900 Amador Plaza Road and Dublin Boulevard, Dublin, California.

Dear Dr. Alan:

At your request, California Environmental Consultants (CEC) have prepared the following engineering specifications for filling of excavation at above referenced site.

1. Approximately 45' by 45' by 13' (depth) of excavated area is proposed to be back filled and regraded at this site.
2. Backfill material to be placed in the excavated trench area shall consist of gravel, crushed gravel, natural sands, manufactured sands, or combinations thereof. Backfill material shall be free of organic and other unsatisfactory material.
3. Backfill material shall conform to the following grading requirements:

Sieve Sizes	% Passing
3/4"	100
1/2 "	95 - 100
3/8"	80 - 95
No. 4	0 - 10

4. Backfill material shall be placed in uniform layers and shall be brought up uniformly throughout the trench area.
5. Maximum lift (thickness of layer) shall not exceed 12 inches before compaction.
6. Backfill material placed in the excavated trench shall be compacted to a relative compaction of not less than 90%



CALIFORNIA ENVIRONMENTAL CONSULTANTS

- compaction up to 6" below asphalt grade. The remaining 6 inches shall be compacted to 95% compaction, before asphalt/concrete placement.
7. Compaction shall be achieved by ponding and jetting methods supplemented by the use of vibratory or other compaction equipment.
 8. Ponding and jetting of the upper 4 feet of the backfill material (below finished grade) shall not be done.
 9. The top 6 inches of the trench area shall be either asphalt or cement concreted per Section 39 and 40 respectively of Standard Specifications of Caltrans.
 10. Type B asphalt concrete conforming to Section 39 of the State Specification over the compacted aggregate base shall be placed.
 11. Bituminous binder shall be included in the asphalt concrete mix and shall be steam refined asphalt having a penetration of 85-100. The penetration treatment (prime coat) shall be applied to all areas that are to be surfaced.
 12. Liquid asphalt used for penetration treatment shall be grade SC70.
 13. Penetration treatment shall be applied at the rate of 0.25 gallons per square yard and shall conform to the requirement of Section 36, 39 and 93 of State Specification.
 14. Penetration type asphaltic erosion shall conform to Section 94 of the State Specification.
 15. The top of the finished grade shall be flush with the existing surrounding pavement and shall have a cross slope (for storm water runoff) towards the nearest curb draining into the catch basin.
 16. Prior to start of the work, the Contractor shall furnish samples of all aggregates in the quantities requested by the Engineer.

The specs. for filling of the excavation detailed above, complete the scope of work per your June 21st, 1989 letter.



CALIFORNIA ENVIRONMENTAL CONSULTANTS

Should you need any additional information, please let us know.

Sincerely,

CALIFORNIA ENVIRONMENTAL CONSULTANTS

Munir Butts
Munir Butts
Sr. Hydrogeologist



Joe Standit
Registered Professional
Civil Engineer
(R.P.E. 19214)

Exhibit II

Application for Variance from Treator/Storer Status

A.D. Selditch and Assoc. Inc.
62678- Joaquin Murieta Ave., Newark, CA 94560

May 12, 1989

Permitting Unit
Department of Health Services
Toxic Substances Control Division
2151 Berkeley Way, Annex 7
Berkeley, CA 94704

Gentlemen:

The attached documents are submitted in response to our recent conversation and express our desire to be exempted from the storage and treatment site status requirements for the following reasons:

- ° The project discussed covers the closure of three underground fuel storage tanks and remediation of any uncovered contamination.
- ° The Alameda County Health Care Services Agency, Hazardous Materials Division, the Bay Area Air Quality Management Division, the City of Dublin, Fire Police and Public Works Department, have all approved the closure plan.
- ° The estimated span of time for remediation is less than ninety days and site will cease to be active as a fuel dispensing facility after closure is complete.

We appreciate your cooperation in this matter. If there are any questions, please call.

Cordially,

Dr. Alan D. Selditch, P.E., R.E.A.

mw(dublin).198/mc

Enclosure(s)

cc: Charles West
Montgomery Ward
39201 Fremont Blvd.
Fremont CA 94538

Mark Gilmartin
Straw & Gilmartin
100 Wilshire Blvd., Suite 1325
Santa Monica, CA 90401

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION
2151 BERKELEY WAY, ANNEX 7
BERKELEY, CA 94704



To: Operators of Hazardous Waste Facilities
From: Toxic Substances Control Division
Subject: Variances from Facility Permit Requirements

Section 25143, Health and Safety Code and Section 66310, Title 22, California Code of Regulations (CCR) authorizes the Department of Health Services to grant variances from the requirements of Hazardous Waste Control Law and Regulations. To grant a variance, the Department must find that such action will not result in a hazard to the environment or public health and safety.

In the interest of expediting consideration of variance requests, the Department requires the attached application to be completed and submitted to the appropriate regional office along with supporting documentation. The types of information which need to be submitted in support of a variance request are outlined in Attachments A and B to the variance application.

A complete variance application is typically reviewed and a decision is rendered within two months of receipt of the application.

Questions regarding variance applications should be directed to the regional office permit staff.

REQUEST FOR HAZARDOUS WASTE FACILITY PERMIT VARIANCE
California Department of Health Services
Toxic Substances Control Division

I would like to request a variance from the hazardous waste facility permit requirements of the California Department of Health Services. I am requesting a variance for the following type of facility: [THE FOLLOWING INFORMATION MUST BE TYPED]

- Container storage
- Tank storage
 - Located above ground
 - located below ground
- A totally enclosed treatment unit.
- An elementary neutralization unit.
 - Located above ground
 - located below ground
- A treatment system that discharges directly to a POTW.
 - Located above ground
 - located below ground
- Other (specify) Aeration of soil removed during closure of 3 underground fuel storage vessels

This facility is owned/operated by Montgomery Ward Co.

and is located at 6900 Amador Plaza Road, Dublin, CA 94568

I am basing my request for a variance on one of the following checked (X) sections of Title 22, CCR [either 66310(a)(1) or 66310(a)(2)]:

- 66310(a)(1) The hazardous waste at my facility is insignificant as a potential hazard to humans, domestic livestock or wildlife because of its:
 - small quantity
 - low concentration; and/or
 - physical or chemical characteristics.

(xx) 66310(a)(2)

The hazardous waste at my facility is handled processed or disposed of pursuant to regulations of another governmental agency. The agency is:

Alameda County Health Care Services Agency, Hazardous Materials Division,
80 Swan Way, Room 200, Oakland, CA 94621 (415)271-4320

{A copy of the applicable permit must be attached}

I am attaching information and drawings as outlined in Attachment A to support of this variance request. For any treatment, storage, or disposal units involving underground tanks, I have attached information on a proposed groundwater monitoring program as outlined in attachment B.

I understand that any variance from the Hazardous Waste Facility Permit requirements of the Department of Health Services, if granted, does not exempt the undersigned from any other applicable laws and regulations governing the management of hazardous wastes.

I certify that all information submitted with regards to this variance request is true, accurate and complete. [SIGNATURE OF OF CORPORATE OFFICER, PARTNER, OR OWNER REQUIRED]

Monrgomery Ward

Applicant

Charles West
Signature

39201 Fremont Blvd.
Mailing Address

Fremont, CA 94538

Title

415/794-2337
Telephone Number

5/8/89
Date

Interim Status Document No.
or Permit Document No.
(if applicable)

CAC 000 137685

EPA ID No.

A.D. Selditch and Assoc.
62675- Jouqua Mureta Ave., Newark, CA 94560

March 29, 1989

Ms. Vicki Dvorak
Enforcement Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco CA 94109

Dear Ms. Dvorak:

As I indicated to you on the telephone, I am acting as a consultant to the Montgomery Ward Co., Inc. Because of a tank leak at their Dublin, California, facility, they will need to do some soil aeration.

Pursuant to the administrative reporting requirements of Regulation 8, Sections 40-401 and 40-402, please find the following information:

401.1 Name of persons performing tank removal:

Erickson, Inc. 255 Parr Blvd., Richmond, CA 94801

401.2 Location of site at which tank removal will occur:

6900 Amador Plaza Road, Dublin, CA 94568

401.3 Scheduled starting date of tank removal:

April 30, 1989

401.4 Procedures to be employed to meet requirements of 8-40-310:

All piping will be drained or flushed into the tank.

All liquids and sludges will be removed to the extent possible.

A hand pump will be used to remove the bottom few inches, if necessary. The tanks will be purged with dry ice. When this is done, the tanks will contain no more than 0.001 gallons of organic liquid per gallon of tank capacity.

402.1 Names of persons performing excavation:

San Jose Crane & Rigging, 660 Giguere Court, San Jose, CA 95133
Erickson, Inc., 255 Parr Ave., Richmond, CA 94801

- 402.2 Location of site at which excavation will occur:
6900 Amador Plaza Road, Dublin, CA 94568
- 402.3 Scheduled starting date of excavation:
April 30, 1989
- 402.4 Procedures to be employed to meet the requirements of 8-40-301:
Aeration will not begin until laboratory analyses are completed as required by 8-40-601 and 602. After it is determined what amount of soil may be aerated per day, the limits of Section 8-40-301 will not be exceeded. A cover will be maintained over all materials not being aerated.
- 402.5 Name of government representative (closure plan submitted)
Alameda County Department of Health Services
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621
Attn: Tom Peacock

We are aware that we are required to notify the District, by telephone, no less than 24 hours prior to excavation and/or spreading of contaminated soil.

Please contact either Norman L. Grib (415/928-5384) or Alan D. Selditch (415/490-1759) if you require further information.

Cordially,



Dr. A. D. Selditch, P.E., R.E.A.

mw(dub).190/mc

Exhibit VI
Boring & Well Logs

WELL LOG

415-290-1759 Fax 415-770-9608		<i>A.D. Seibich and Assoc. Inc.</i> 6367 th - Joann Maria Ave... Newark, Ct. 94560		Project Name: MONTGOMERY WARD DUBLIN	
Boring/Well ID: 1188002R-5		Date Started: 1/11/89		Date Completed: 1/11/89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 4	
Size and Type of Casing: 2" PVC		Completion Depth: 22'		Water Level Depth: 12" ATD	
Drilling Method/Equip: DIEDRICH D-25		Perf: 0.02 Slotted		From: 7" To: 22"	
Drilling Agency: ENSCO		Pack: Sand		From: 5' To: 22"	
Driller: Cam		Drill Bits' Hollow Core		Seal 1: Bentonite From: 4' To: 5'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete From: Grade To: 4"	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC Black top	*	
			BC Gravel, medium brown, sandy, silty, slightly moist,	*	
			Clay, medium to dark brown, sandy, silty, moist, becoming more sandy	*	
5		15	Clay, light brown, stiff, moist, slightly silty,	*	Sample No. 5-1-2 No Odor
10		11	Clay, light gray, mottled brown. soft moist to wet.	*	Sample No. 5-2-2 Slight odor at tip ▽ ATD
15		5	Clay, light gray, mottled brown, sandy, wet soft	*	Sample No 5-3-2 No Odor
20		8	Clay, light brown mottled gray, soft moist.	*	Sample No. 5-4-2 No Odor.
			Bottom Of Boring		
25					
30					

5

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Figure
Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-190-1739 Fax 115-770-9608		A.D. Selditch and Assoc. Inc. 6267 ^{1/2} - Joaque Street - Newark, C.L. 94560		Project Name: Montgomery Ward Dublin	
Boring/Well ID: 1188002-R-6.		Date Started: 1-11-89		Date Completed: 1-20-89	
Project and Task Number: 1188002-R		Datum:		No. of Samples: None	
Size and Type of Casing: 4" PVC		Completion Depth: 12' 6"		Water Level Depth: 11' 6"	
Drilling Method/Equip: Mobil B-6ll		Perf: 0.020 Slots:		From: 2' To: 12' 6"	
Drilling Agency: ENSCO		Pack: Pea Gravel		From: 2' To: 12' 6"	
Driller: Scott Davison		Drill Bit: 10" Hollow Core		Seal 1: Bentonite: From: 1' To: 2'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete: From: 0" To: 1"	

Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC	*	
			BC Gravel, light brown sandy, silty, moist		
			Gravel, light to dark, gray, moist.		
			"Pea gravel"		
5					
10					
15			Bottom of Boring		∇ ATD Strong product odor on bottom auger. Permanent "Cap" on bottom of casing
20			Refusal--Concrete Pad, Suspected Tank Hold Down		
25					
30					

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Figure
Page 1 of 1

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

415-190-1739 Fax 415-770-9608		<i>A.D. Seidlich and Assoc. Inc.</i> 62673- Joaquin Herrera Ave., Newark, C.L. 94560		Project Name: <u>Montgomery Ward</u> <u>Dublin</u>	
Boring/Well ID: 1188002-R-7/		Date Started: 1/11/89/		Date Completed: 1/12/89/	
Project and Task Number: 1188002-R.		Datum:		No. of Samples:	
Size and Type of Casing: 4" PVC/		Completion Depth:		Water Level Depth:	
Drilling Method/Equip: Diederich D-25		Perf: <i>NA</i>		From: To:	
Drilling Agency: ENSCO/		Pack: <i>NA</i>		From: To:	
Driller: CAM/		Drill Bit: 6" cont. flight		Seal 1: From: To:	
Elev TOC: MSL		Elev WL: MSL		Seal 2: From: To:	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC/		
			BC gravel, light brown, sandy, silty, moist,		
			Clay, medium gray, silty, moist		
			Bottom of Boring		
5			BORING ABANDONED		Note: Hit white PVC irrigation line @ 1'± Damage repaired 1-12-89
10					
15					
20					
25					
30					

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Figure
Page 1 of 1/

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

415-490-1734 Fax 415-770-9608		A.D. Schleich and Assoc. Inc. 6267 th - Johnson Avenue - Newark, Ct. 94560		Project Name: MONTGOMERY WARD DUBLIN	
Boring/Well ID: 1188002R-3:		Date Started: 1/12/89		Date Completed: 1/12/89	
Project and Task Number: 1188002R:		Datum:		No. of Samples: NONE	
Size and Type of Casing: 4" pvc		Completion Depth: 12'6"		Water Level Depth: 11'6"	
Drilling Method/Equip: Diedrich D-25:		Perf: 0.02" Slotted.		; From: 2' ; To: 12'6"	
Drilling Agency: ENSCO		Pack: Pea Gravel		; From: 2' ; To: 12'6"	
Driller: JR:		Drill Bit 10' Hollow Core		Seal 1: Concrete ; From: Grade ; To: 2'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: ; From: ; To:	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC Black Top	/	Note: Friction Cap Installed Pending Installation of Vapor Recovery System
			BC Gravel, light Brown, sandy, silty, slighty moist to moist	/	
5			Gravel, light to dark gray, moist (Pea Gravel Backfill)		
10			Free Product on Augers, Strong Product Odor on Bottom Auger Refusal at 12'6" (Concrete slab 12')		▽ ATD
15			Bottom of Bore		
20					
25					
30					

8

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Figure
Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

118-190-1759 Fax 118-770-9608		<i>A.D. Selitch and Assoc. Inc.</i> 6267 th - Joaquin Marista Ave., Newark, C.T. 94560		Project Name:	
Boring/Well ID: 1188002-R-9'		Date Started: 1-12-89		Date Completed: 1-20-89	
Project and Task Number: 1188002-R'		Datum:		No. of Samples: None!	
Size and Type of Casing: 4" PVC:		Completion Depth: 12.5'		Water Level Depth: 11.5'	
Drilling Method/Equip: Mobil B-61!		Perf: 0.020 slots:		From: 2' To: 12.5'	
Drilling Agency: ENSCO		Pack: Pea Gravel:		From: 2' To: 12.5'	
Driller: Scott:		Drill Bit: 10" Hollow Stem Seal 1: Bentonite:		From: 1' To: 2'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete: From: 0' To: 1'	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC:	/	
			BC Gravel, light brown, sandy, silty, slightly moist.		(Gray PVC conduit for abandoned electrical at 14" -)
5			Gravel, light to dark gray, moist. "Pea Gravel"		
10			Refusal--Concrete Slab Believed to be Tank Holddown Slab		▽ ATD
			Bottom of Boring		Slight product odor
15					
20					
25					
30					

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Figure
Page 1 of 1

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-190-1759 Fax 115-770-9608		<i>A.D. Selditch and Assoc. Inc.</i> 62673- Joaquin Murres Ave... Newark, C.I. 94560		Project Name:	
Boring/Well ID: 1188002R-10		Date Started: 2/8/89		Date Completed: 2/8/89	
Project and Task Number: 1188002R:		Datum:		No. of Samples: 4	
Size and Type of Casing: 2" PVC:		Completion Depth: 22' 6"		Water Level Depth: 12' 6" ATD	
Drilling Method/Equip: Mobile Drill B-34		Perf: 0.020 Slots		From: 6' 6" To: 22"	
Drilling Agency: ENSCO		Pack: #3 Sand		From: 5' To: 22"	
Driller: Frank		Drill Bit: 8" Hollow Core		Seal 1: Bentonite From: 4' To: 5'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete From: 0' To: 4'	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			GC (Ground Cover)	/	
			Gravel, light to medium gray, clayey, sandy, silty, slightly moist, fine to coarse.	/	
			Clay (CL), medium to dark gray, trace gravel, sandy, silty, moist.	/	
5		40	Clay (CL), brown-gray, sandy, silty, slightly moist, stiff to very stiff.	/	5-1-2
10		21	Clay (CL), as above, less stiff	/	10-2-2 ▽ ATD
15		10	Clay (CL), light to medium brown, sandy, silty, moist, firm. Trace rootlets.	/	15-3-2
20		8	Clay (CL), light to medium brown, sandy, silty, moist, soft.	/	20-4-2
			Bottom of Boring	/	
25				/	
30				/	

10
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 Figure
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* INDICATE WELL COVER AND / OR LOCK

WELL LOG

415-490-1734 Fax 415-770-9608	A.D. Schlich and Assoc. Inc. 6267 th - Joann Maria Ave., Newark, Ct. 04560	Project Name: Montgomery Ward Dublin:
Boring/Well ID: 1188002R-11	Date Started: 12-1-88	Date Completed: 12-1-88
Project and Task Number: 1188002R	Datum:	No. of Samples: 2
Size and Type of Casing: 4" PVC	Completion Depth: 13'6"	Water Level Depth: NA
Drilling Method/Equip: Mobile B-611	Perf: 0.02"	From: 1'0" To: 13'6"
Drilling Agency: Enscol	Pack: Monterey Sand #2	From: 1'0" To: 13'6"
Driller: Scott Davison	Drill Bit: 8" Hollow Core	Seal 1: Bentonite
Elev TOC: MSL	Elev WL: MSL	Seal 2:
		From: To:

Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			6" Asphalt	*	
5	5i		Pea gravel		No odor Sample Lost
10					
15			100% Product Wet Pea Gravel		Strong gasoline odor
15			Refusal at 13'6" - 12" concrete slab		Disturbed pea gravel (Sample #11-0-1) Gasoline Sample #RW-1
20					
25					
30					

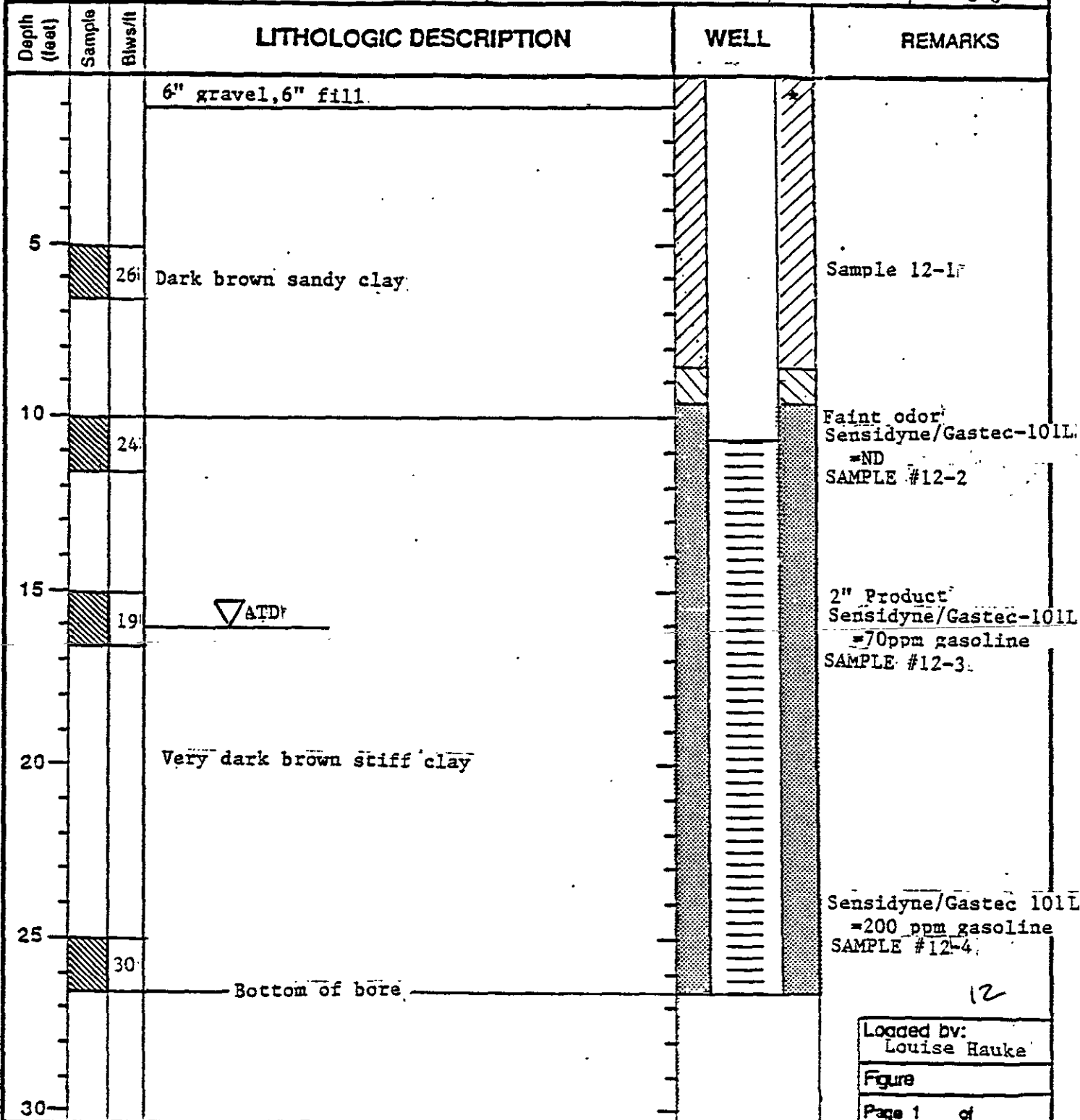
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Figure
Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-100-1734 Feb 115-771-2008		A.D. Seidlich and Assoc. Inc. 62671 - Truman Marine Inc. Newark, Ct. 94500		Project Name: Montgomery Ward, Dublini CA	
Boring/Well ID: 118800 2R-12		Date Started: 12-2-88		Date Completed: 12-2-88	
Project and Task Number: 1188002R		Datum:		No. of Samples: 4	
Size and Type of Casing: 4" PVC		Completion Depth: 26' 6"		Water Level Depth: 16' ATD	
Drilling Method/Equip: Mobile B-61		Perf: 0.02"		From: 10' 6" To: 26' 6"	
Drilling Agency: Ensco		Pack: Monterey Sand #2		From: 9' 6" To: 26' 6"	
Driller: Scott Davison		Drill Bit: 8" Hollow Core		Seal 1: Bentonite	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete	
				From: 8' 6" To: 9' 6"	
				From: 0 To: 8' 6"	



* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-100-1739 Fax 115-770-9008	A.D. Seibach and Assoc. Inc. 6267 th - Truman Manera Ave... Newark, Ct 04500	Project Name: Montgomery Ward Dublin:
Boring/Well ID: 1188002R-13	Date Started: 12-1-88	Date Completed: 12-1-88
Project and Task Number: 1188002R	Datum:	No. of Samples: 21
Size and Type of Casing: 4" PVC	Completion Depth: 13'6"	Water Level Depth: NA
Drilling Method/Equip: Mobile B-611	Perf: 0.02"	From: 1'0" To: 13'6"
Drilling Agency: Ensco	Pack: Monterey Sand #2	From: 1'0" To: 13'6"
Driller: Scott Davison	Drill Bit: 8" Hollow Core	Seal 1: Bentonite
Elev TOC: MSL	Elev WL: MSL	Seal 2:
		From: To:

Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			6" Asphalt		
5	51		Pea gravel		No odor Sample Lost
10					
15			100% Product Wet Pea Gravel Refusal at 13'6" - 12" concrete slab		Strong gasoline odor Disturbed pea gravel (Sample #11-0-1) Gasoline Sample #RW-1
20					
25					
30					

13
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 Figure
 Page 1 of

* INDICATE WELL COVER AND / OR LOCK

415-190-1739

A.D. Seidich and Assoc. Inc.

Fax 415-770-9608

62673- Soanum Street - Newark, C.I. 94560

Project Name:

Boring/Well ID:		Date Started:		Date Completed:	
Project and Task Number:		Datum:		No. of Samples:	
Size and Type of Casing:		Completion Depth:		Water Level Depth:	
Drilling Method/Equip:		Perf:	From:	To:	
Drilling Agency:		Pack:	From:	To:	
Driller:	Drill Bit:	Seal 1:	From:	To:	
Elev TOC:	MSL	Elev WL:	MSL	Seal 2:	From:
					To:

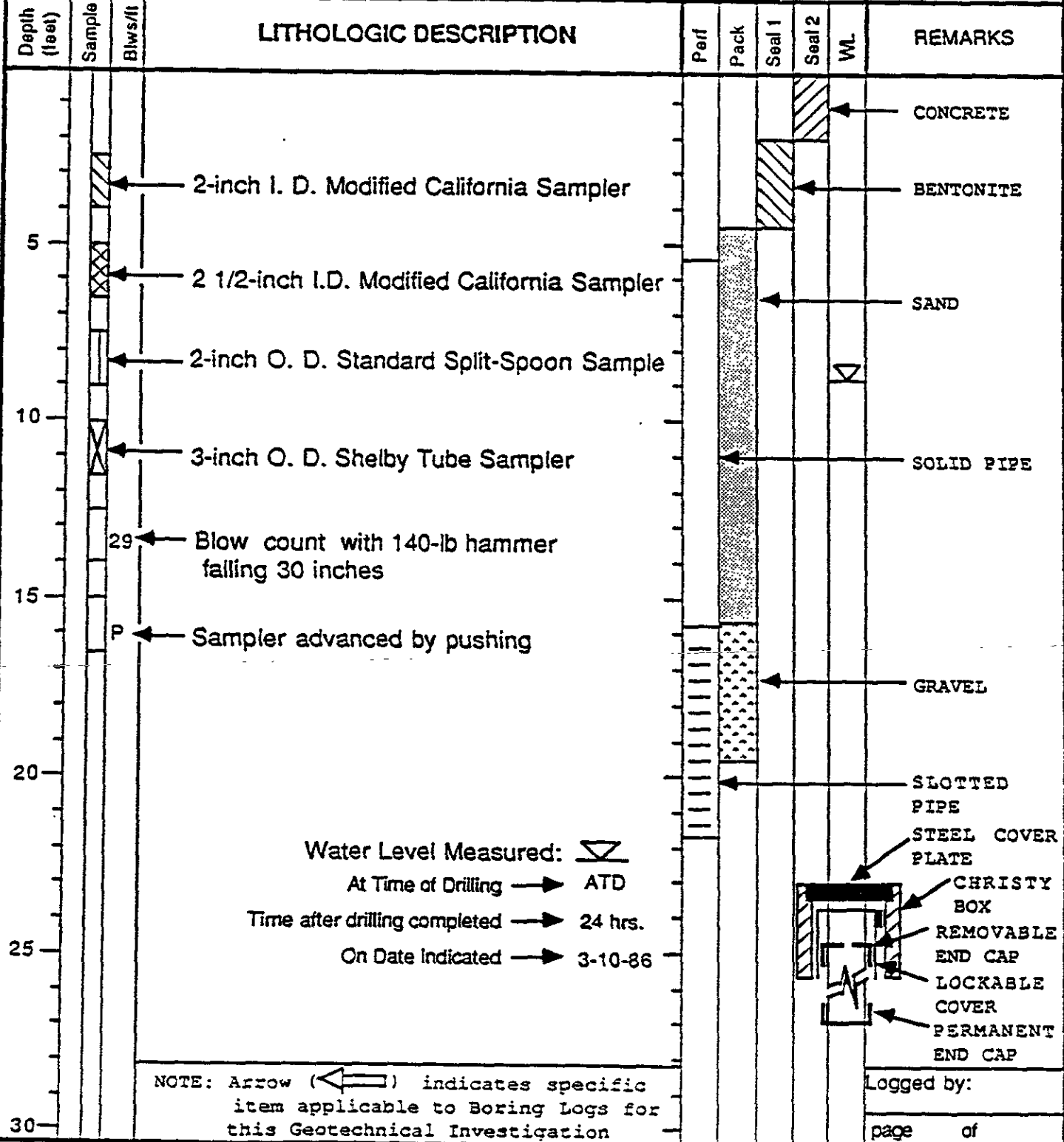


Exhibit VII
Analytical Results




**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 6-12-89
Lab. ID : W890347
Recv'd : 6-9-89
Col'd : 6-9-89
Analyzed : 6-9-89
Analyst : SF
Project # : 1188002R
Sample ID : 5 W
Matrix : Liquid
Rush

<u>Analysis</u>	<u>Results (mg/L)</u>	<u>EPA #</u>
Total Petroleum Hydrocarbons	52	8015
Benzene	6.5	8020
Toluene	7.5	8020
Ethyl Benzene	2.5	8020
Xylene	2.0	8020



Shui Fong
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released Date : 2-27-89
Lab. ID : W890059
Recv'd : 2-10-89
Col'd : 2-8-89
Analyzed : 2-20-89
Analyst : DH
Project # : 1188002R-10
Sample ID : 5-1-2
Matrix : Soil

Method: EPA 8015

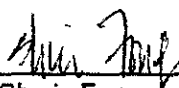
Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons

0.5

SF:dc



Shui Fong
Director, Water Laboratory

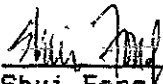


**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Released : 2-27-89
Lab. ID : W890060
Recv'd : 2-10-89
Col'd : 2-8-89
Analyzed : 2-20-89
Analyst : SF
Project # : 1188002R-10
Sample ID : 10-2-2
Matrix : Soil

<u>Analysis</u>	<u>Results (mg/kg)</u>	<u>EPA Method</u>
Total Petroleum Hydrocarbons	3.3	8015
Benzene	1.1	8020
Toluene	1.2	8020
Ethyl Benzene	< 0.1	8020
Xylene	0.5	8020



Shui Fong
Director, Water Laboratory

SF:dc

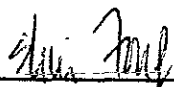


**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6257 Joaquin Murietta Suite E
Newark, Ca. 94560

Released : 2-27-89
Lab. ID : W890061
Recv'd : 2-10-89
Col'd : 2-8-89
Analyzed : 2-20-89
Analyst : SF
Project # : 1188002R-10
Sample ID : 15-3-2
Matrix : Soil

<u>Analysis</u>	<u>Results (mg/kg)</u>	<u>EPA Method</u>
Total Petroleum Hydrocarbons	8.0	8015
Benzene	0.9	8020
Toluene	0.8	8020
Ethyl Benzene	< 0.1	8020
Xylene	0.3	8020



Shui Fong
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released Date : 2-27-89
Lab. ID : W890062
Recv'd : 2-10-89
Col'd : 2-8-89
Analyzed : 2-20-89
Analyst : DH
Project # : 1188002R-10
Sample ID : 20-4-2
Matrix : Soil

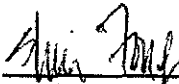
Method: EPA 8015

Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons

1.6



Shui Fong
Director, Water Laboratory

SF:dc



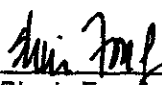
**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890316
Recv'd : 5-24-89
Col'd : 5-24-89
Analyzed : 5-30-89
Analyst : DH
Project #: 1188002R Dublin
Sample ID: STR W *well 10*
Matrix : Liquid

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	95
Benzene	14
Toluene	14
Ethyl Benzene	1.6
Xylene	2.4



Shui Fond
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 6-12-89
Lab. ID : W890345
Recv'd : 6-7-89
Col'd : 6-6-89
Analyzed : 6-9-89
Analyst : SF
Project # : 1188002R
Sample ID : 10 W
Matrix : Liquid
Rush

<u>Analysis</u>	<u>Results (mg/L)</u>	<u>EPA #</u>
Total Petroleum Hydrocarbons	105	8015
Benzene	20	8020
Toluene	16	8020
Ethyl Benzene	2.0	8020
Xylene	2.8	8020



Shui Fong
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, CA 94560

Released Date : 12-21-88
Lab. ID : WW880926
Rev'd : 12-5-88
Col'd : 12-2-88
Analyzed : 12-5-88
Analyst : DH
Project # : 1088002R
Sample ID : 12-1-2
Matrix : Soil

Method : EPA 8015

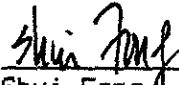
Analysis

Result (mg/kg)

Total Petroleum Hydrocarbons

0.7

SF:tt



Shui Fong
Director, Water Laboratory



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, CA 94560

Released Date : 12-21-88
Lab. ID : WW880928
Rev'd : 12-5-88
Col'd : 12-2-88
Analyzed : 12-5-88
Analyst : DH
Project # : 1088002R
Sample ID : 12-2-2
Matrix : Soil

Method : EPA 8015

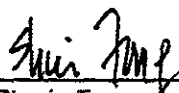
Analysis

Result (mg/kg)

Total Petroleum Hydrocarbons

87

SF:tt



Shui Fong
Director, Water Laboratory



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, CA 94560

Released Date : 12-21-88
Lab. ID : WW880929
Rev'd : 12-5-88
Col'd : 12-2-88
Analyzed : 12-5-88
Analyst : DH
Project # : 1088002R
Sample ID : 12-4-2
Matrix : Soil

Method : EPA 8015

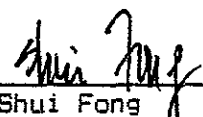
Analysis

Result (mg/kg)

Total Petroleum Hydrocarbons

4.5

SF:tt



Shui Fong
Director, Water Laboratory



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, CA 94560

Released Date : 12-21-88
Lab. ID : Ww880930
Rev'd : 12-5-88
Col'd : 12-2-88
Analyzed : 12-5-88
Analyst : DH
Project # : 1088002R
Sample ID : 12-5-0
Matrix : Soil

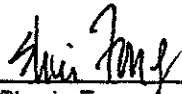
Method : EPA 602 and EPA 8015

Analysis

Results (mg/kg)

Benzene	< 0.1
Toluene	< 0.1
Xylene	< 0.1
Ethyl Benzene	< 0.1
Total Petroleum Hydrocarbons	< 0.5

SF:tt



Shui Fong
Director, Water Laboratory



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
San Jose Ca. 95113

Released Date : 12-28-88
Lab. ID : WW880950
RUSH
Recv'd : 12-6-88
Col'd : 12-5-88
Analyzed : 12-6-88
Analyst : SF
Project # : 1188002R
Sample ID : 12 W
Matrix : Liquid

Method: EPA 8015

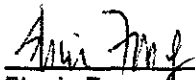
Analysis

Results (mg/L)

Total Petroleum Hydrocarbons

95%

Remark: Very high gasoline content



Shui Fong
Director, Water Laboratory

SF:dc



SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

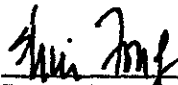
Released : 6-7-89
Lab. ID : W890306
Recv'd : 5-23-89
Col'd : ~~5-23-89~~ 5/18/89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: D O 1 W Well 12
Matrix : ~~Soil~~ water

Method: EPA 8015

Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons	478
Benzene	55
Toluene	103
Ethyl Benzene	23
Xylene	50



Shui Fong
Director, Water Laboratory

SF:dc




**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890324
Recv'd : 5-30-89
Col'd : 5-30-89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: N-1 *will 12*
Matrix : Liquid
Rush

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	313
Benzene	46
Toluene	58
Ethyl Benzene	19
Xylene	32



Shui Fong
Director, Water Laboratory

SF:dc



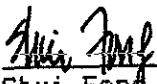
**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 6-12-89
Lab. ID : W890346
Recv'd : 6-7-89
Col'd : 6-6-89
Analyzed : 6-9-89
Analyst : SF
Project # : 1188002R
Sample ID : 12 W
Matrix : Liquid
Rush

<u>Analysis</u>	<u>Results (mg/L)</u>	<u>EPA #</u>
Total Petroleum Hydrocarbons	570	8015
Benzene	38	8020
Toluene	70	8020
Ethyl Benzene	27	8020
Xylene	17	8020



Shui Fong
Director, Water Laboratory

SF:dc



SCIENTIFIC ENVIRONMENTAL

LABORATORIES, INC.

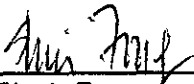
Dr. Alan Selditch
6267 Joaquin Murieta Suite E
San Jose, Ca. 95113

Attn: Dr. Alan Selditch

Released Date: 12-28-88
Lab. ID : WW880949 RUSH
Recv'd : 12-6-88
Col'd : 12-5-88
Analyzed : 12-13-88
Analyst : SF
Project # : 1188002-R
Sample ID : 13 W
Matrix : Liquid

Method: EPA 8015

<u>Analysis</u>	<u>Results</u> (mg/L)
Total Petroleum Hydrocarbon	118
Benzene	13.9
Toluene	18.3
Ethyl Benzene	2.8
Xylene	4.1



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SF:dc



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Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

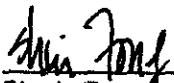
Released : 6-7-89
Lab. ID : W890307
Recv'd : 5-23-89
Col'd : ~~5-23-89~~ 5/18/89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: SE 2 *pit*
Matrix : Soil

Method: EPA 8015

Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons	18
Benzene	0.22
Toluene	1.2
Ethyl Benzene	0.92
Xylene	2.9



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Director, Water Laboratory

SF:dc



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LABORATORIES, INC.

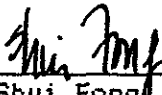
Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890308
Recv'd : 5-23-89
Col'd : ~~5-23-89~~ 5/18/89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: NW 3 PZ
Matrix : Liquid Soil

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	5.1
Benzene	< 0.05
Toluene	0.06
Ethyl Benzene	< 0.05
Xylene	0.06

SF:dc



Shui Fong
Director, Water Laboratory




**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890318
Recv'd : 5-24-89
Col'd : 5-24-89
Analyzed : 5-30-89
Analyst : DH
Project #: 1188002R Dublin
Sample ID: 20K Tank
Matrix : Liquid

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	48
Benzene	11
Toluene	12
Ethyl Benzene	0.22
Xylene	2.0



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Director, Water Laboratory

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LABORATORIES, INC.


Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : WB90305
Recv'd : 5-23-89
Col'd : ~~5-23-89~~ 5/18/89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: 6 K gal T
Matrix : *Soil Water*

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/kg)</u>
Total Petroleum Hydrocarbons	196
Benzene	20
Toluene	15
Ethyl Benzene	15
Xylene	13

SF:dc



Shui Fong
Director, Water Laboratory




**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 6-12-89
Lab. ID : W890348
Recv'd : 6-9-89
Col'd : 6-9-89
Analyzed : 6-9-89
Analyst : SF
Project # : 1188002R
Sample ID : Sump W
Matrix : Liquid
Rush

<u>Analysis</u>	<u>Results (mg/L)</u>	<u>EPA #</u>
Total Petroleum Hydrocarbons	120	8015
Benzene	16	8020
Toluene	7	8020
Ethyl Benzene	4	8020
Xylene	1.5	8020



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Director, Water Laboratory

SF:dc



SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.

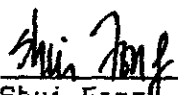
Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890325
Recv'd : 5-30-89
Col'd : 5-30-89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: S61-1 *Sump*
Matrix : Liquid
Rush

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	28
Benzene	11
Toluene	1.1
Ethyl Benzene	0.74
Xylene	1.2

SF:dc



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Director, Water Laboratory




**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Released : 6-7-89
Lab. ID : W890317
Recv'd : 5-24-89
Col'd : 5-24-89
Analyzed : 5-30-89
Analyst : DH
Project #: 1188002R Dublin
Sample ID: Sump
Matrix : Liquid

Method: EPA 8015

<u>Analysis</u>	<u>Results (mg/L)</u>
Total Petroleum Hydrocarbons	88
Benzene	14
Toluene	13
Ethyl Benzene	1.6
Xylene	2.3



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Director, Water Laboratory

SF:dc



SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560


Released : 6-7-89
Lab. ID : W890309
Recv'd : 5-23-89
Col'd : ~~5-23-89~~ 5/18/89
Analyzed : 6-3-89
Analyst : DH
Project #: 1188002R
Sample ID: SW 4 *Swamp*
Matrix : Liquid

Method: EPA 8015

Analysis

Results (mg/L)

Total Petroleum Hydrocarbons	22
Benzene	3.8
Toluene	5.8
Ethyl Benzene	1.9
Xylene	4.0



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Director, Water Laboratory

SF:dc



SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.

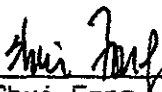
Dr. Alan Selditch
6267 Joaquin Murietta Suite E
Newark, CA 94560

Released Date : 12-21-88
Lab. ID : Ww880931
Rev'd : 12-5-88
Col'd : 12-2-88
Analyzed : 12-5-88
Analyst : DH
Project # : 1088002R
Sample ID : 13X
Matrix : Soil

Method : EPA 602 and EPA 8015

<u>Analysis</u>	<u>Results (mg/kg)</u>
Benzene	0.18
Toluene	0.30
Xylene	0.09
Ethyl Benzene	0.06
Total Petroleum Hydrocarbons	2180

SF:tt



Shui Fong
Director, Water Laboratory



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

Dr. Alan Selditch
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

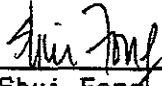
Released : 2-28-89
Lab. ID : WB90067
Recv'd : 2-13-89
Col'd : 2-13-89
Analyzed : 2-20-89
Analyst : SF
Project #: 1188002 R
Sample ID: 13W
Matrix : Liquid

Method: EPA 8015

Analysis

Results (mg/L)

Total Petroleum Hydrocarbons	376
Benzene	35
Toluene	48
Ethyl Benzene	10
Xylene	12
Lead	2.6



Shui Fong
Director, Water Laboratory

SF:dc

Exhibit VIII
Chain of Custody Records



SCIENTIFIC ENVIRONMENTAL LABORATORIES, INC.

PLEASE PRINT

CLIENT/COMPANY NAME : Alan S. Jettich
 ADDRESS : 6267 E - Jacques Memele
 CITY : Denver
 PHONE NUMBER : (303) 490-1759 EXTENSION : _____
 REPORT SEND TO ATTENTION : Alan Jettich
 SAMPLER : _____ DATE / TIME COLLECT _____
 PURCHASE ORDER # : _____ PROJECT ID : 1188002R

NUMBER OF SAMPLE	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED
1	1188002R-1	} Hold for instruction TTH-102X
2	1188002R-2	
3	" -3	
4	" -4	
5	" -5	
6	" -6	
7	" -7	
8	" -8	
9	" -9	

 Turn-Around Time : Comp. NORMAL OTHER TTH-102X

OTHER INSTRUCTIONS : Run Composite - Then call
Alan Jettich for instructions.

SAMPLE RELEASED BY : Alan Jettich DATE/TIME : 6/26/89 - 12:00
 SAMPLE RECEIVED BY : _____ DATE/TIME : _____

A.D. Selditch and Assoc. Inc.

62676 - Joaquin Murietta Ave., Newark, C.A. 94560

415-490-1759

Fax 415-770-9608

Chain of Custody Record

PROJECT NO.

1188002R

ANALYSES

SAMPLERS: (Signature)

a. Selditch

DATE

TIME

SAMPLE NUMBER

General Mineral

Priority Pollutant Metals

EPA Method 624

EPA Method 625

EPA Method 608

TPH

STEY

NUMBER OF CONTAINERS

REMARKS
(Sample preservation, handling procedures, etc.)

6/6

10³⁰A

1188002R-10 W

X

X

1

10⁵⁵A

1188002R-12 W

X

X

1

*Run TPH and call
a. Selditch (415)-490-1759
for instruction before
proceeding*

Push

TOTAL NUMBER OF CONTAINERS

2

RELINQUISHED BY:

(Signature)

a. Selditch

DATE/TIME

6/6 11P

RECEIVED BY:

(Signature)

Doris Cozart

RELINQUISHED BY:

(Signature)

DATE/TIME

RECEIVED BY:

(Signature)

METHOD OF SHIPMENT:

SHIPPED BY:

(Signature)

D

COURIER:

(Signature)

RECEIVED FOR LAB BY:

(Signature)

DATE/TIME

A.D. Selditch and Assoc. Inc.

6267^{1/2} - Joaquin Murietta Ave., Newark, CA 94560
415-490-1759 Fax 415-770-9608

Chain of Custody Record

PROJECT NO.			ANALYSES								NUMBER OF CONTAINERS	REMARKS (Sample preservation, handling procedures, etc.)	
1188002R DUBLIN			General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH as Specified	BTEX				
DATE	TIME	SAMPLE NUMBER											
5/24		1188002R SIX W										1	Then TPH and call a Selditch (415-490-1759) for instructions before proceeding. water
		1188002R W1										1	
		" SUMP W										1	
		" 20K TANK W										1	

TOTAL NUMBER OF CONTAINERS **B**

RELINQUISHED BY: (Signature) <i>Alan Selditch</i>	DATE/TIME <i>5/24</i>	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
---	--------------------------	-----------------------------	---------------------------------	-----------	-----------------------------

METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature) <i>Robert Escobar</i>	DATE/TIME <i>5/24 11:49</i>
---------------------	----------------------------	-------------------------	--	--------------------------------



SCIENTIFIC ENVIRONMENTAL LABORATORIES, INC.

PLEASE PRINT

CLIENT/COMPANY NAME : A.S.S. Environmental
 ADDRESS : 6267E - Joaquin Murietta
 CITY : Newark, Ca 94560
 PHONE NUMBER : (415) 490-1759 EXTENSION : _____
 REPORT SEND TO ATTENTION : Alan D. Selditch
 SAMPLER : A. D. Selditch DATE / TIME COLLECT 5/18/89
 PURCHASE ORDER # : _____ PROJECT ID : 11880002R

NUMBER OF SAMPLE	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED
1	1188002R 6 K gal T (W)	TPH as gas, BTEX % Soluble TPH
2	1188002R DOIW	"
3	1188002R SE 2	"
4	1188002R NW 3	"
5	1188002R SW-4	"

} Soil

TURN-AROUND TIME : NORMAL OTHER

OTHER INSTRUCTIONS : Run TPH as g and phone results to A. D. Selditch before running BTEX.

SAMPLE RELEASED BY : A. D. Selditch DATE/TIME : 5/23/89 - 4:00 p
 SAMPLe RECEIVED BY : hi Mj DATE/TIME : 5/23/89 4:00 p

A.D. Selditch and Assoc. Inc.

6267th - Joaquin - Murietta - Ave., Newark, Ct. 94560
415-290-1759 Fax 415-770-9608

Chain of Custody Record

PROJECT NO. *Montgomery Ward - Dublin*
1188002R

ANALYSES

SAMPLERS: (Signature)
A. D. Selditch

DATE TIME SAMPLE NUMBER

General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH-G	LEAD	BTEX	NUMBER OF CONTAINERS
					✓	✓	✓	

REMARKS
(Sample preservation, handling procedures, etc.)

7/13 10³⁰A 1188002R-13W

*Run TPH G and then
call Alan Selditch
before running Lead
and BTEX*

TOTAL NUMBER OF CONTAINERS

1

RELINQUISHED BY: (Signature)
Alan Selditch

DATE/TIME
7/13 12:44

RECEIVED BY: (Signature)
Alan Selditch

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

METHOD OF SHIPMENT:

SHIPPED BY: (Signature)

COURIER: (Signature)

RECEIVED FOR LAB BY: (Signature)

DATE/TIME

A.D. Selditch and Assoc. Inc.
 62675th - Joaquin Murietta Ave... Newark, CA 94560
 415-290-1759 Fax 415-770-9608

Chain of Custody Record

PROJECT NO.			ANALYSES						NUMBER OF CONTAINERS	REMARKS (Sample preservation, handling procedures, etc.)	
1188002R-			General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH			BTEX
DATE	TIME	SAMPLE NUMBER									
12/5	4:30	1188002R-13W						X	X	1	Run Overnight
12/5	3:30	1188002R-12W						X	X	1	

TOTAL NUMBER OF CONTAINERS *2*

RELINQUISHED BY: (Signature) <i>A.D. Selditch</i>	DATE/TIME <i>11/6 1:50</i>	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
METHOD OF SHIPMENT:		SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature) <i>D. C. ...</i>	DATE/TIME <i>12/6 3:53</i>

A.D. Selditch and Assoc. Inc.

62673- Joaquin Murietta Ave., Newark, CA 94560
415-490-1759 Fax 415-770-9608

Chain of Custody Record

PROJECT NO.			ANALYSES								REMARKS (Sample preservation, handling procedures, etc.)	
SAMPLERS: (Signature)			General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH-G	BTEX	NUMBER OF CONTAINERS		
DATE	TIME	SAMPLE NUMBER										
12/2	2 ²⁰	1188002R-12-1-2							✓		1	Held*
12/2	2 ⁴⁰	1188002R-12-2-2									1	
12/2	3 ¹⁵	1188002R-12-3-2							✓		1	
12/2	4 ⁰⁰	1188002R-12-4-2							✓		1	
12/2	4 ²⁰	1188002R-12-5-0							✓	✓	1	
12/2	5 ⁰⁰	1188002R-13X							✓	✓	2	
										TOTAL NUMBER OF CONTAINERS	7	
RELINQUISHED BY: (Signature)			DATE/TIME	RECEIVED BY: (Signature)			RELINQUISHED BY: (Signature)			DATE/TIME	RECEIVED BY: (Signature)	
METHOD OF SHIPMENT:			SHIPPED BY: (Signature)			COURIER: (Signature)			RECEIVED FOR LAB BY: (Signature)		DATE/TIME	

* Call A.D.S. for instructions after ~~TPH-G~~ completed

Exhibit IX

Preliminary Waste Water Discharge System Design

Job No. 1-2-2
 Client A.L.G.
 SELLITCH PE

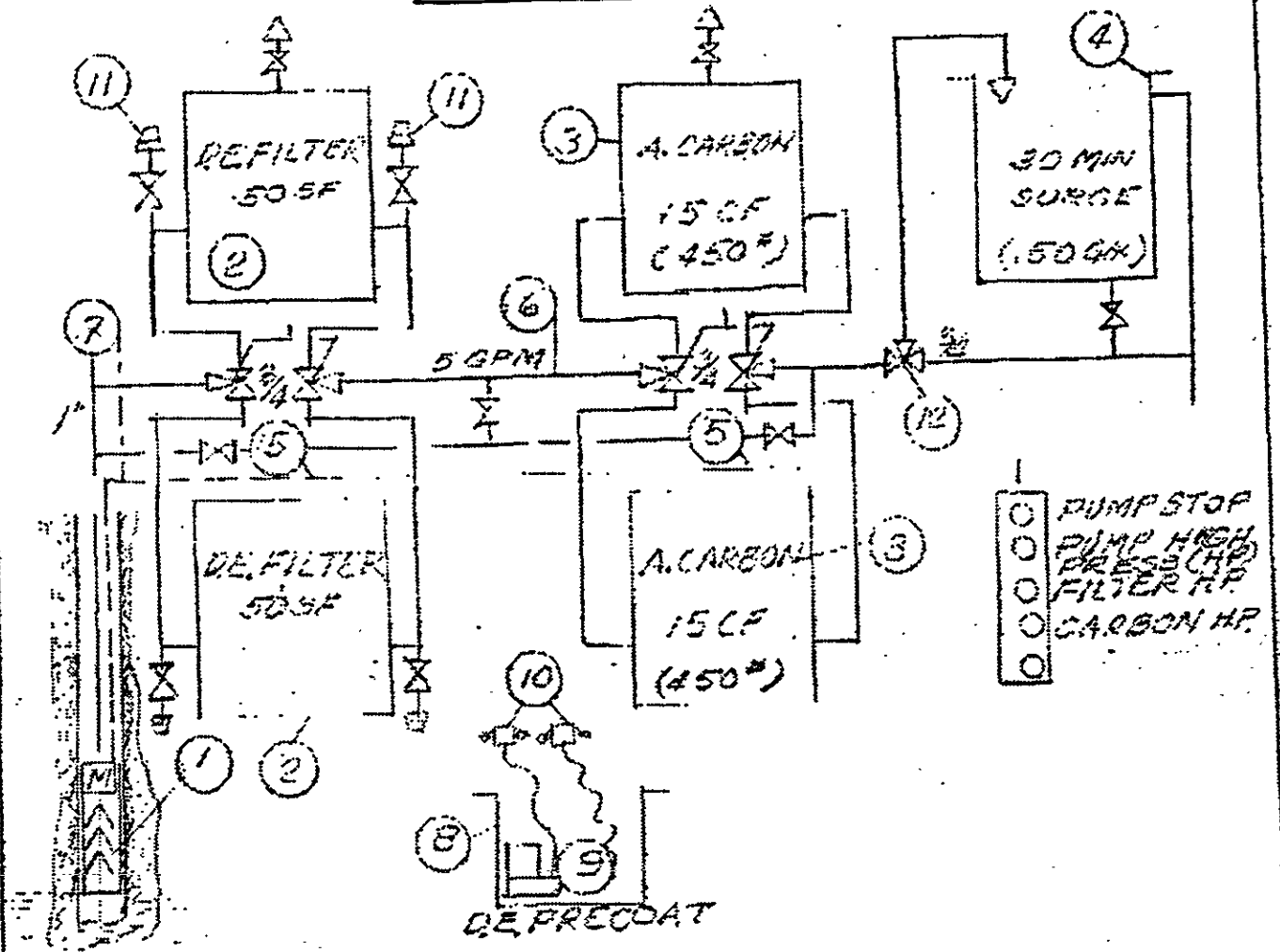
ECOPRO Consulting

Sheet ___ of ___
 Design EST
 Check _____
 Date _____

Project MONTGOMERY WARD - PLEASANTON
 Subject GASOLINE REMOVAL UNIT

Ref. _____

CALCULATIONS



EQUIPMENT LIST

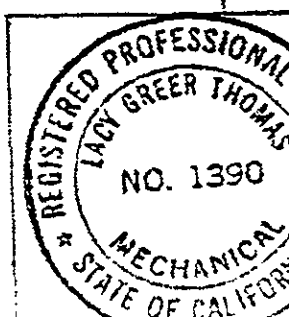
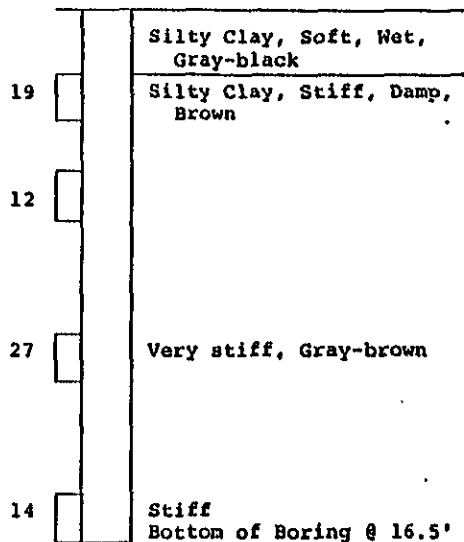


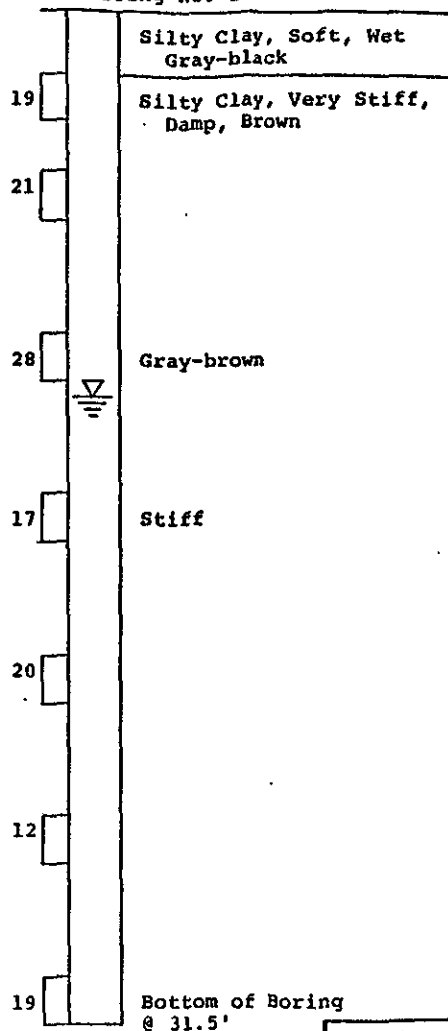
Exhibit X

J. H. Kleinfelder Boring Logs - 2/2/78

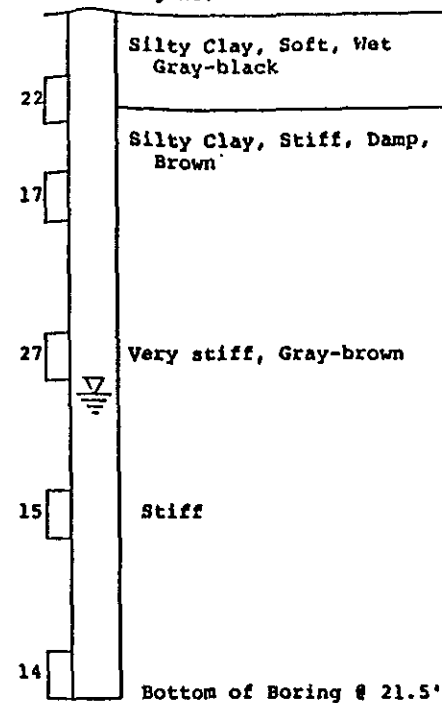
Boring No. 1



Boring No. 2



Boring No. 3



NOTES

1. Samples at the locations shown and the blow counts indicated were obtained with a Modified Porter Sampler (2 1/4" O.D., 2" I.D.).
2. Water levels shown are at the time of drilling.

Vertical Scale: 1" = 4'

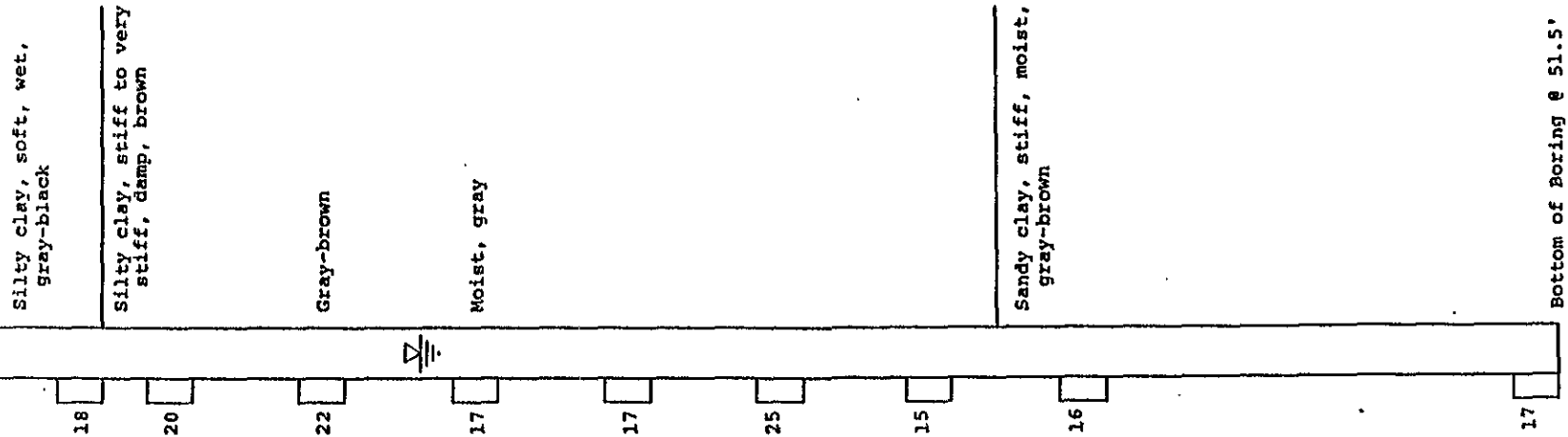
KH J. H. KLEINFELDER & ASSOCIATES
 GEOTECHNICAL CONSULTANTS - ENGINEERING LABORATORIES

PREPARED BY: DRC DATE 2/8/78
 CHECKED BY: CMM DATE 2/8/78

LOG OF BORINGS 1, 2 & 3

Dublin Shopping Center
 PROJECT NO B-1007-1 PLATE NO 1


Boring No. 4

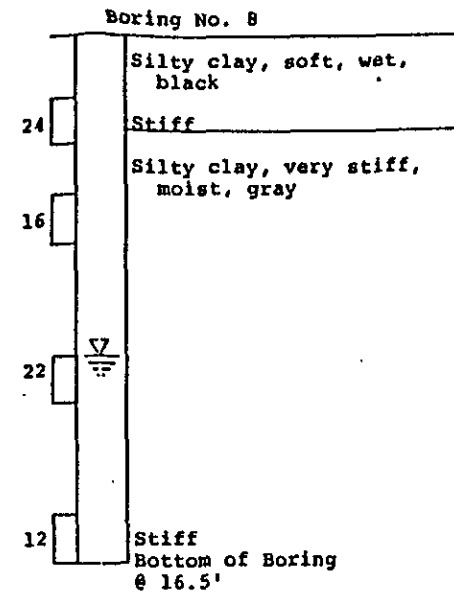
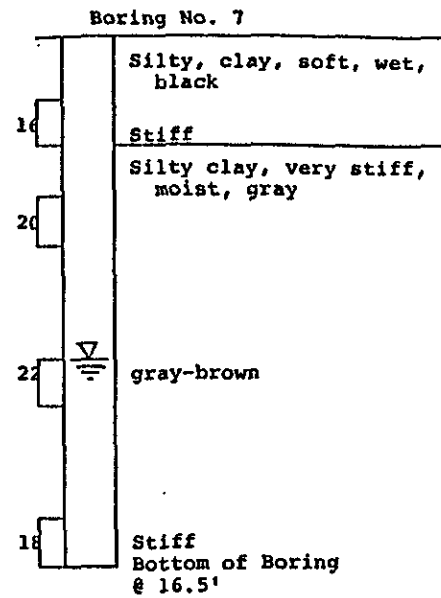
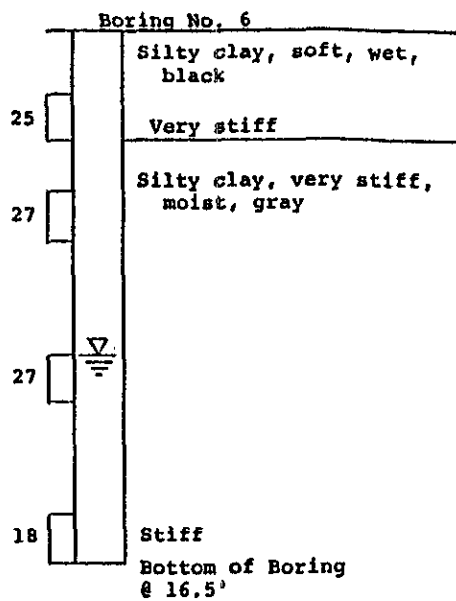
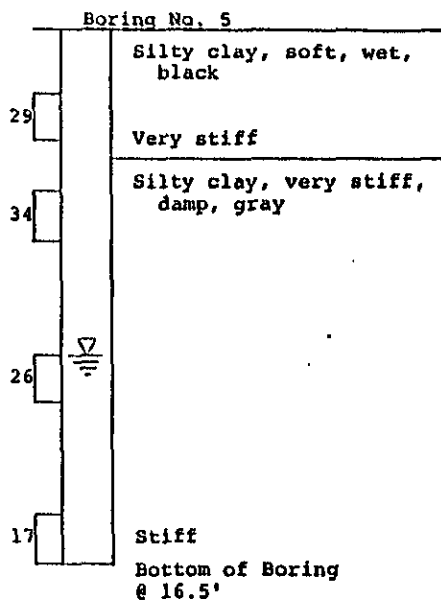


NOTES

1. Samples at the locations shown and the blow counts indicated were obtained with a Modified Porter Sampler (2½" O.D., 2" I.D.).
2. Water levels shown are at the time of drilling.

Vertical Scale: 1" = 4'


 J. H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS -- ENGINEERING LABORATORIES		LOG OF BORING 4	
PREPARED BY: DRC	DATE 2/8/78	Dublin Shopping Center	
CHECKED BY: CMM	DATE 2/8/78	PROJECT NO B-1007-1	PLATE NO 4

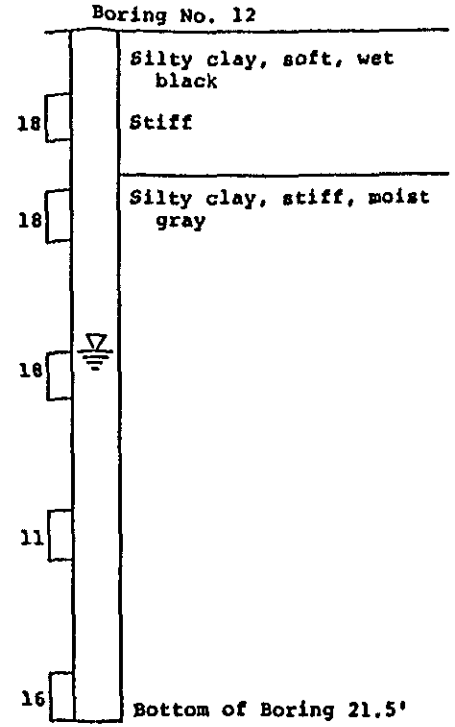
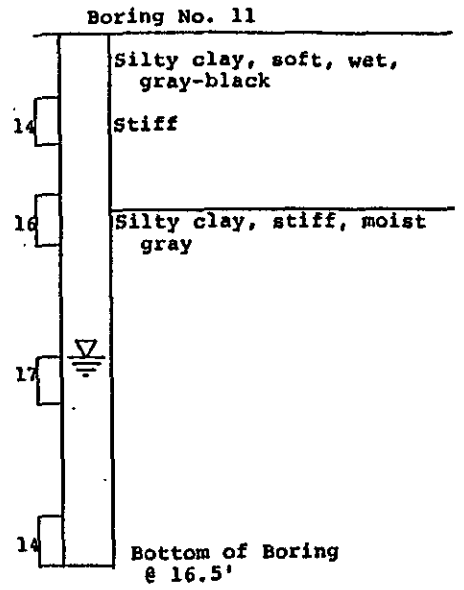
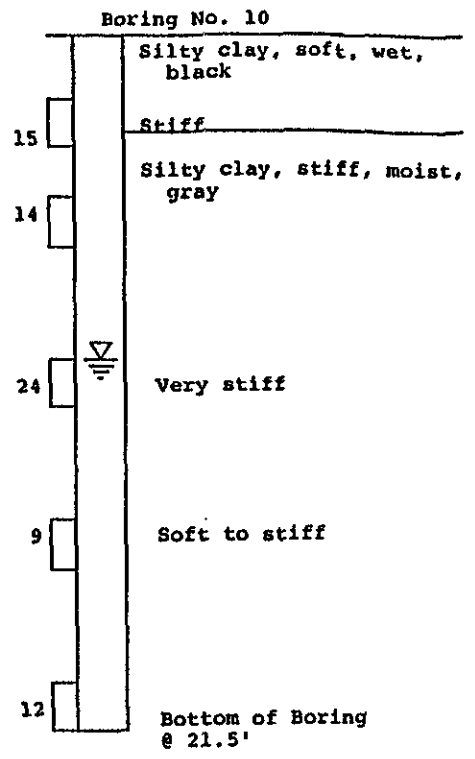
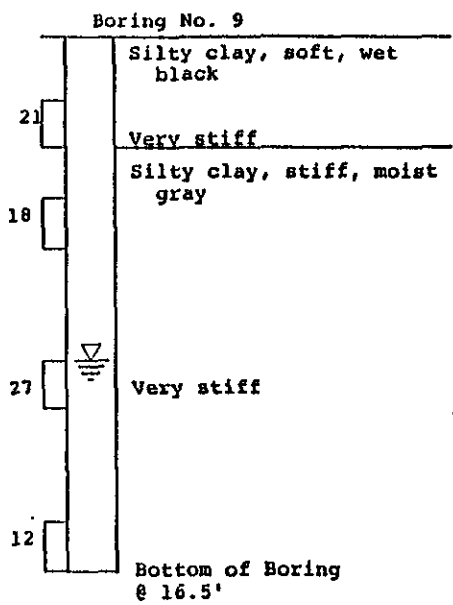


NOTES

1. Samples at the locations shown and the blow counts indicated were obtained with a Modified Porter Sampler (2½" O.D., 2" I.D.).
2. Water levels shown are at the time of drilling.

Vertical Scale: 1" = 4'


 J. H. KLEINFELDER & ASSOCIATES <small>GEOLOGICAL CONSULTANTS -- ENGINEERING LABORATORIES</small>		LOG OF BORINGS 5, 6, 7 and 8	
PREPARED BY: DRC	DATE: 2/8/78	Dublin Shopping Center	
CHECKED BY: CMM	DATE 2/8/78	PROJECT NO B-1007-1	PLATE NO 5

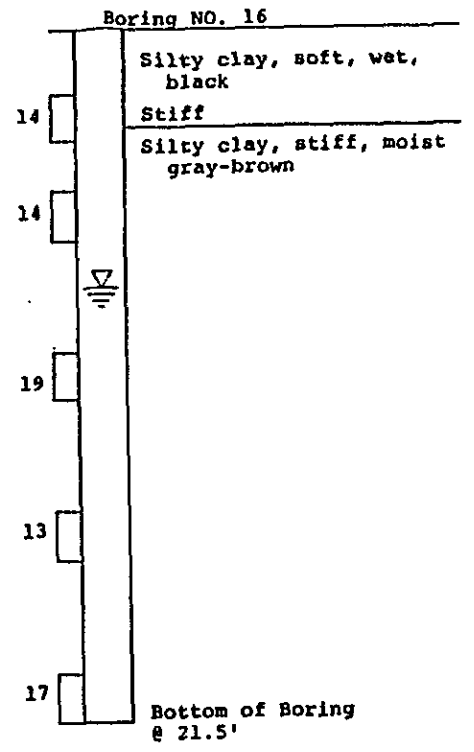
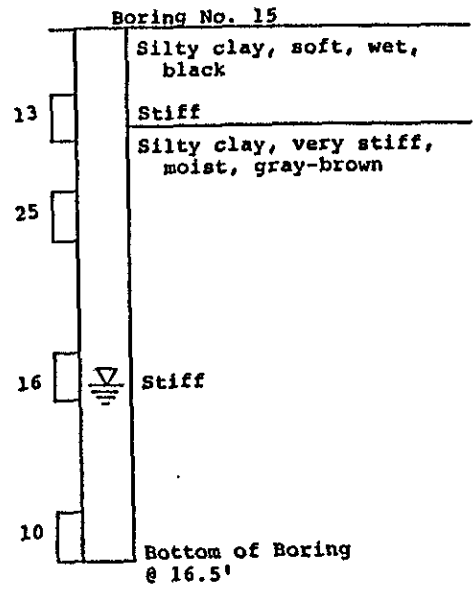
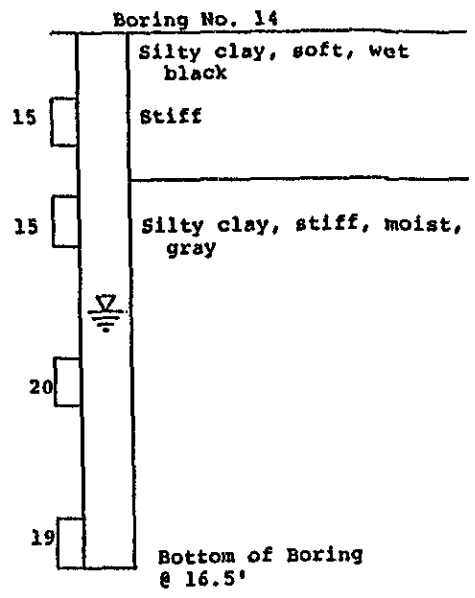
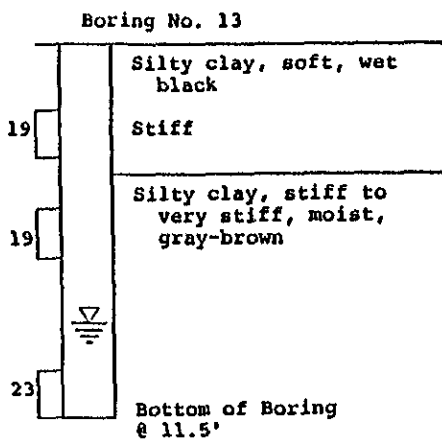


NOTES

1. Samples at the locations shown and the blow counts indicated were obtained with a Modified Porter Sampler (2 1/2" O.D., 2" I.D.).
2. Water levels shown are at the time of drilling.

Vertical Scale: 1" = 4'


 J. H. KLEINFELDER & ASSOCIATES <small>GEO TECHNICAL CONSULTANTS • ENGINEERING LABORATORIES</small>	LOG OF BORINGS 9, 10, 11 and 12	
	Dublin Shopping Center	
PREPARED BY: DRC	DATE: 2/8/78	PROJECT NOB-1007-1
CHECKED BY: CHM	DATE: 2/8/78	PLATE NO 6



NOTES

1. Samples at the locations shown and the blow counts indicated were obtained with a Modified Porter Sampler (2½" O.D., 2" I.D.).
2. Water levels shown are at the time of drilling.

Vertical Scale: 1" = 4'

 J. H. KLEINFELDER & ASSOCIATES GEO TECHNICAL CONSULTANTS - ENGINEERING LABORATORIES		Log of Borings 13, 14, 15 & 16	
PREPARED BY: DRC	DATE: 2/8/78	Dublin Shopping Center	
CHECKED BY: CMM	DATE: 2/8/78	PROJECT NO B-1007-1	PLATE NO 7

Figure

SUMMARY

Total site : 60,000 sq. ft. (1.37 ac)

Total Bldg. : 1,500,000 sq. ft.

Total Capex : \$150,000,000

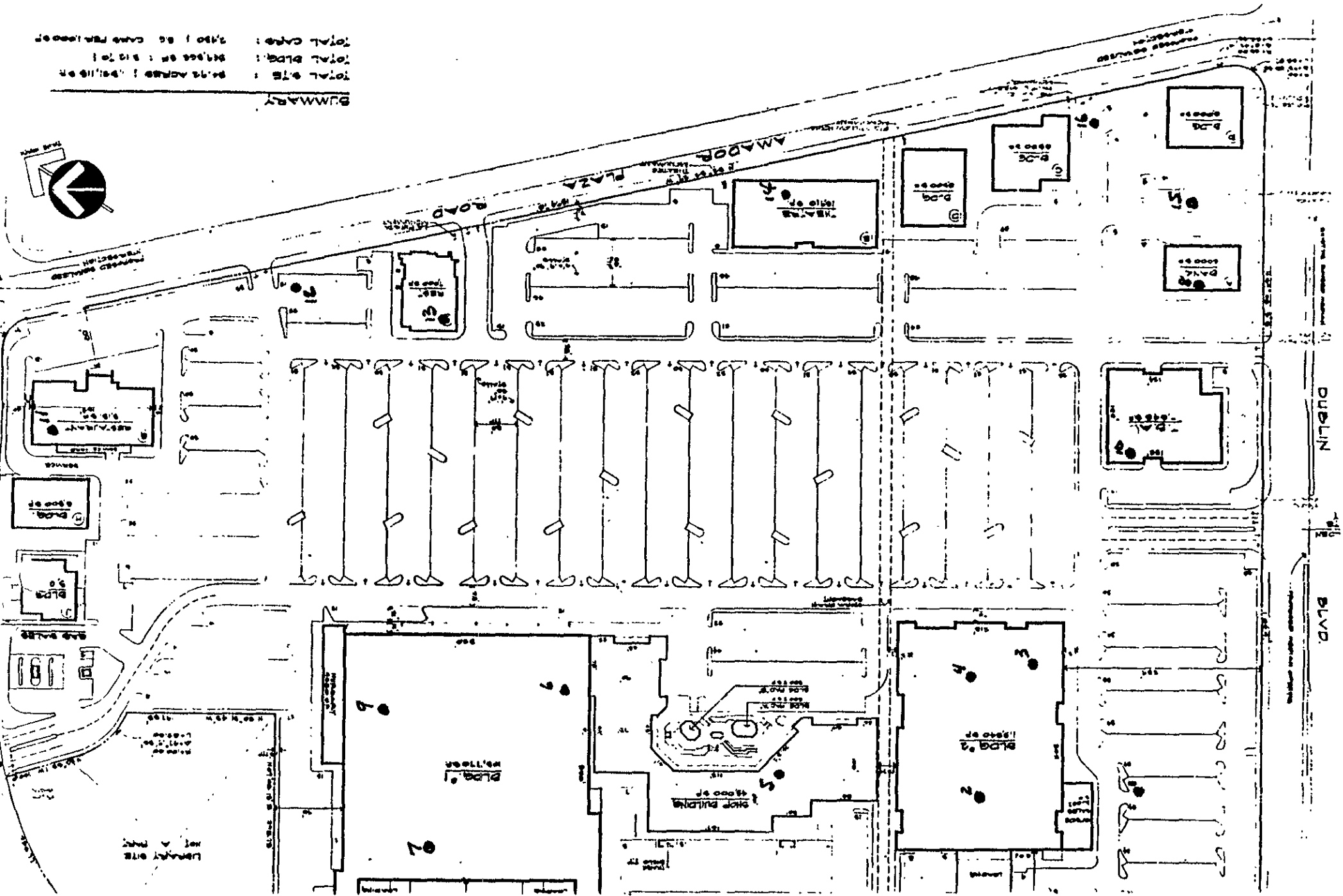
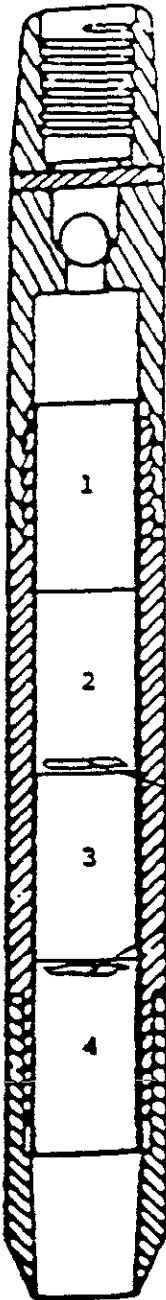


Exhibit XI
Samples Screening Method



TO BE USED FOR
SCREENING SAMPLES

<p><i>Alan D. Selditch P.E.</i> 6267-E Joaquina Murida Ave., Newark, CA 94560 415-490-7759</p>	DRAWN	DATE	SCALE	DWG. NO.	ISSUE
	CHECKED	DATE	SHT OF	A Exhibit XI	
	APPROVED	DATE	TITLE Soil Screening Protocol		

CITY OF DUBLIN
PUBLIC WORKS DEPARTMENT
6500 Dublin Boulevard Suite D
Dublin, CA 94568
(415) 829-4927

GRADING PERMIT
APPLICATION NO. 89-2

Permittee's Name Fowler Associates Date 5/12/89
Address 3190 S. Bascom Ave. #210 San Jose CA 95124 Phone 408/377-8373
Location of proposed work Montgomery Ward, 6900 Amador Plaza Road

Type of grading authorized:

Regular Engineered

Quantity 300 Cu. Yds.

The term of this permit shall not exceed

120 days from date of issuance.

Concurrent with Tract Contract.

Other _____

Fees:

Permit (29110002) \$ _____

Investigation &
Inspection (9600) \$ 400.00 dep.

Surety:

Cash (9580) \$ _____

Bond \$ N/A

Total \$ 400.00

Misc. Fees \$ _____

Record of payment:

\$ 400.00 Received 5/12/89

Receipt No. 3215D By JK

This permit is issued subject to the terms and conditions of City of Dublin Ordinance 56-87 (Grading Ordinance) and to the application and approved plans and specifications made a part hereof by reference. The Grading Ordinance and the approved plans and specifications are by this reference incorporated in this permit as if set forth at length. No change of any nature in the application, the plans and specifications, or in the work to be performed thereunder, shall be made unless such change shall have been first approved in writing by the Director of Public Works and an amendment to this permit executed. It is further provided that sufficient dust and noise control be employed at all times and that a soils engineer shall be on site (see Final Report Declaration attached). Additional conditions are as follows:

Full-time soils engineer requirement is waived; however, test reports are
required. (see Final Report Declaration). Comply with requirements of
Dougherty Regional Fire Authority and Alameda County Environmental Health

Final Geotechnical Report Required yes
Agreed and Accepted:

Tract or Parcel Map No. N/A
Approved for Issuance 5/12/89

Alfred N. Sedberry

Alfred N. Sedberry

FINAL GRADING REPORT DECLARATION

Section 22.13 of City of Dublin Ordinance 58-87 (Building Regulations) and Sections 34 and 40 of City of Dublin Ordinance 56-87 (Grading Ordinance) require the following in a final grading report:

- 1) An as-built grading plan prepared by a registered civil engineer, including original ground surface elevations, as-graded ground surface elevations, lot drainage, and location of all surface and subsurface drainage facilities.
- 2) A complete record of all field and laboratory tests, including location and elevation of all field tests.
- 3) A professional opinion as to the safety of the site from the hazards of land slippage, erosion, settlement, or seismic activity.
- 4) A declaration by the Geotechnical Engineer or Engineering Geologist in the format required by the City Engineer that all work was done in substantial compliance with the recommendations contained in the soil or geologic investigation reports as approved and in accordance with the approved plans and specifications.

The declarations shall be as follows:

1) Special Inspector's Report:

"I declare that based upon personal knowledge (personal continuing observation of construction work in all stages of progress), work performed and materials used during the grading operations described in this report are in accordance with the plans and specifications for this project as approved by the City of Dublin City Engineer."

2) Declaration by Civil Engineer and/or Engineering Geologist:

"I declare that all work for which I have professional responsibility, performed during the grading operations described in this report, was done in accordance with the recommendations contained the the soil and geologic investigation as approved by the City of Dublin City Engineer and the approved plans and specifications.

"I further declare that the special inspector(s) whose report(s) appear(s) in this document were under my professional supervision, and that I have reviewed his (their) report(s) and find it (them) to be correct to the best of my knowledge and belief.

These declarations shall be personally signed by the responsible civil engineer and/or engineering geologist. The signatories shall include their California registration numbers.

CITY OF DUBLIN
APPLICATION FOR GRADING PERMIT NO. _____

Pursuant to City of Dublin Ordinance No. 56-87:

Name of Applicant: Fowler Associates
Address: 3140 S. Bascom Ave # 210 San Jose Ca 95124
Telephone: 408-377-8373
Representing: Montgomery Ward
Name of agency, company, etc.

Location of Site to Be Graded: 6900 Arnadow Plaza Road
Dublin Ca

Assessor Parcel No. _____
The owner of the property is Montgomery Ward
whose address is 39201 Fremont Blvd Fremont Ca 94538

Name of person responsible for operations at the above site: Alan D. Hittich
Mailing address of responsible person 6267E - Jaquez Merced Newark Ca
Telephone number 415-490-1759

INFORMATION FOR GRADING PERMIT APPLICATION

Purpose of proposed grading operation: Remediation of gasoline spill

Maximum vertical depth (measured from existing ground surface) of the proposed cuts or fills that will occur on site:

Cut depth 15 feet
Fill depth 13 feet

Quantity of grading to be done: Cut _____ CY Fill 300 CY
(Provide rough calculations)

Amount of material to be exported from site 175 CY

Location of borrow site: to be determined

Amount of material to be imported to site 125-130 CY

Location of borrow site to be determined

Describe equipment to be employed in excavating, processing, and in transporting finished material from the site. List quantity of each.

Dozer _____ Front End Loader 1 Scraper _____
Grader 1 Dump Truck 1 Tractor/Trailer 76-20
Other (Identify) _____

Number of offsite truck trips per day per type: 7-10/day
Number of days to be hauling off-site: 2-3 days

PLEASE NOTE THAT ALL EQUIPMENT OVER LEGAL SIZE AND/OR WEIGHT REQUIRES A CITY OF DUBLIN TRANSPORTATION PERMIT IN ORDER TO MOVE ON CITY STREETS

Describe dust control measures _____

Describe noise control measures _____

Describe points of access to public roads to be used in transporting graded materials and connection routes to freeways to be followed. Attach map if necessary.

Dublin Blvd to San Ramon Road to I 680

During what days of the week and hours of the day are grading operations to be conducted?

5 days/wk - M-F - 8⁰⁰ A - 4³⁰ P

Grading is proposed to begin on 5/16-17/59 and be completed by 8/15/59

Operations will be: Continuous _____ Intermittent Seasonal _____ Other _____

(Explain) Errows & Dumped Trucks - 3-4 days as appropriate
Operation daily - 30-60amp

Describe measures proposed to protect the graded site from overflow of adjacent streams (if applicable):

N/A

Is there reason to believe the excavation will extend near or into a usable water-bearing stratum?

To Be Determined

If so, describe, by attaching a detailed description of the measures proposed to protect the quality of water and to maintain the transmissivity or area through which water may flow.

To Be Determined

Describe other activities and land uses that will occur on the site, whether or not associated with the grading activity:

TIRE, BATTERY & AUTO ACCESSORIES RETAIL OPERATIONS

It is understood that any permit issued pursuant to this application will not grant any right or privilege to use any building or land contrary to the provisions of law and of any ordinance of the City of Dublin. All provisions of law and of ordinance governing the use of the aforesaid building or land will be complied with whether specified herein or not.

In consideration of granting of a permit pursuant to this application and other good and valuable consideration therefore, the undersigned agrees to indemnify and hold harmless the City of Dublin, the members of the City Council thereof, and their officers, employees, agents, and servants and each of them, from and against liability for injury to or death of persons, and/or liability for damage to property arising from and all work therein permitted or incidental thereto or which may arise from failure of permittee to perform the obligations of the permittee under said permit with respect to maintenance thereof.

I attest under penalty of perjury to the truth and correctness of all the facts, exhibits, maps, and attachments presented with and made a part of this application.

Signed: _____

Date: _____

Name: _____

Phone: _____

Address: _____

Please submit two (2) copies of preliminary grading plans that are in conformance with the City of Dublin Grading Ordinance, No. 56-87.

CITY OF DUBLIN

GRADING PERMIT APPLICATION

Instructions to Applicant

A. Filing

1. Fill in all blanks on the application. If a particular item does not apply to your project please indicate by filling the blank with an "N/A".
2. If it will be necessary to import or export material to or from this site, items No. 4, 5, and 9, will have to be completed. If these items are not known at the time the application is filled in, it may be submitted without them; however, a permit cannot be issued until these questions are satisfactorily answered. If the borrow site or the disposal site is located outside the corporate limits of the City, a separate grading permit may also be required for that site from the local agency.
3. The application must be signed by the same person who will sign the Grading Permit for this project.
4. Return one completed copy of the attached application along with 2 sets of Preliminary Grading Plans prepared in conformance with City of Dublin Ordinance 56-87.

B. Action: Processing of an application will normally proceed as follows:

1. An Initial Study will be made to determine if an Environmental Impact Report is required. If a report is necessary, the applicant may be required to submit additional material and will be required to pay costs for preparation of the Environmental Impact Report and any other necessary environmental documents. (Refer to Alameda County Guidelines for Implementation of the California Environmental Quality Act.)
2. After the Initial Study, the Plan Check Fee Deposit amount and the Inspection Fee Deposit amount along with any Improvement Security amount will be established. The Plan Check Fee Deposit will be required prior to any further processing of the application. The Inspection Fee Deposit and any Improvement Security amount will be required prior to issuance of the permit.
3. Referral: Copies of the application will be referred to other governmental jurisdictions that have responsibilities associated with the proposal. The application may also be referred to interested non-governmental agencies.
4. Notice may be given to adjacent property owners.
5. Preliminary Meeting: After the Initial Study and Prior to Final review of the application, a meeting with the applicant and referral agencies may be conducted by the City Staff for the purposes of clarifying all aspects of the proposal, determining any additional information that may be required, and discussion of issues.

8. Contact Person f Investigation

Name Charles West Title Field Engineering Manager
A. D. Selditch Consultant
415/794-2337
Phone 415/490-1759

9. Total No. of Tanks at facility 3

10. Have permit applications for all tanks been submitted to this office? Yes [x] No []

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

b) Rinsate Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

c) Tank Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

d) Contaminated Soil Transporter

Name Erickson, Inc. EPA I.D. No. CAD 009 466 392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

12. Sample Collector

Name A. D. Selditch
Company A. D. Selditch & Associates, Inc.
Address 6267E Joaquin Murieta
City Newark State CA Zip 94560 Phone 415/490-1759

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
SW corner of Site			
Capacity	Historic Contents (past 5 years)		
10,000 gal	Regular Gasoline	Gasoline	11'6" from slab to tank bottom
10,000 gal	Unleaded Gasoline	Gasoline	11'6" from slab to tank bottom
10,000 gal	Premium Unleaded Gasoline	Gasoline	11'6" from slab to tank bottom
			All tanks located under 20' x 20' x 9" reinforced concrete slab in SW corner of lot

14. Have tanks or pipes leaked in the past? Yes [] No [x] Remove

If yes, describe. The only known incident occurred in late November 1988 -

15. NFPA methods used for rendering tank inert? Yes [x] No []

If yes, describe. To be done upon removal - insert dry ice 24 hours prior to tank/slab removal

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name Scientific Environmental Lab

Address 924 Industrial Ave.

City Palo Alto State CA Zip 94303

State Certification No. 241

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
Total Petroleum Hydrocarbons as Gasoline	EPA-8013	EPA-8015
Benzene	EPA-8020	EPA-8020
Toluene	EPA-8020	EPA-8020
Ethyl Benzene	EPA-8020	EPA-8020
Xylene	EPA-8020	EPA-8020
Lead (Total)	EPA-7420	EPA-7420

18. Submit Site Safety Plan

19. Workman's Compensation: Yes No

Copy of Certificate enclosed? Yes No

Name of Insurer Provided by outside contractor

20. Plot Plan submitted? Yes No

21. Deposit enclosed? Yes No

22. Please forward to this office the following information within 60 days after receipt of sample results.

- a) Chain of Custody Sheets
- b) Original Signed Laboratory Reports
- c) TSD to Generator copies of wastes shipped and received
- d) Attachment A summarizing laboratory results

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

ATTACHMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units) all units mg/kg (ppm)
Well #12 Soil	TPH (g)	5 ft.	.7
	TPH (g)	10 ft.	87.
	TPH (g)	20 ft.	4.5
	TPH (g)	25 ft.	0.5
	Benzene	25 ft.	<0.1
	Toluene	25 ft.	<0.1
	Xylene	25 ft.	<0.1
	Ethyl Benzene	25 ft.	<0.1
Well #12 Water	TPH (g)	12-13 ft.	95%
Well #13 Soil	TPH (g)	13 ft.	2180
	Benzene	13 ft.	0.18
	Toluene	13 ft.	0.30
	Xylene	13 ft.	0.09
	Ethyl Benzene	13 ft.	0.06
Well #13 Water	TPH (g)	13 ft.	118
	Benzene	13 ft.	13.9
	Toluene	13 ft.	18.3
	Ethyl Benzene	13 ft.	2.8
	Xylene	13 ft.	4.1

Exhibit II

Well Logs

WELL LOG

415-490-1759 Fax 415-770-9608		<i>A.D. Selbach and Assoc. Inc.</i> 62675- Jorajuni - Mureta Ave., Newark, Ct. 04560		Project Name: <u>Montgomery Ward</u> <u>Dublin</u>	
Boring/Well ID: 1188002R-15		Date Started: 8-15-89		Date Completed: 8-15-89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 5	
Size and Type of Casing: 4" PVC		Completion Depth: 23'		Water Level Depth: 17.5' *1	
Drilling Method/Equip: Mobil Drill		Perf: .02		From: 8' To: 23'	
Drilling Agency: Ensco		Pack: #2 Sand		From: 6' To: 23'	
Driller: Scott		Drill Bit:		Seal 1: Bentonite From: 5' To: 6'	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete From: 0' To: 5'	

Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC & BC		
			Clay, dark gray, moist, gravelly, sandy, silty		
5	8	8	Clay, as above, decrease in gravel.		15-2-1 Gas Tech 0 no odor.
			Clay, dark gray, moist, silty, firm,		
10	3	4	Clay, medium to light brown, slightly moist, sandy, silty, rootlets, soft to firm. Becoming medium to dark brown.		15-2-2 Gas Tech 0 No odor.
15	7	12	Becoming very stiff. Free water in "root canals".		15-2-3 Gas Tech 0 No odor.
20	5	6	Clay, medium brown, moist, becoming more soft and mottled light gray Decrease in "rootlets".	▽ ATD	15-2-4 Gas Tech 0 No odor.
25	8	9	Clay, as above, soft to firm.		15-2-5 Gas Tech 0 No odor.
			Bottom of Boring		
30					

*1-Water at time of drilling, 17.5' up to 13' within 5 minutes

15
Logged by: IMH

Figure

Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

415-490-1759 Fax 415-770-9608		<i>A.D. Seidich and Assoc. Inc.</i> 6267 th - Joaquin, Marista Ave., Newark, Ct. 94560		Project Name: Montgomery Ward. Dublin	
Boring/Well ID: 1188002R-16		Date Started: 8-15-89		Date Completed: 8-15-89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 5	
Size and Type of Casing: 4" PVC		Completion Depth: 26.5		Water Level Depth: 14	
Drilling Method/Equip: Mobil Drill		Perf: .02		From: 10	To: 25
Drilling Agency: Ensco		Pack: #2 Sand		From: 8	To: 25
Driller: Scott	Drill Bit: 10" Hollow	Seal 1: Bentonite	From: 7	To: 8	
Elev TOC: MSL	Elev WL: MSL	Seal 2: Concrete	From: 0	To: 7	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			Concrete and Gravel		
			Gravel, gray, 3/4" ±, clean drain rock.		Abandoned power service
5		6 6 7	Clay, light to medium brown, slightly sandy, slightly moist, firm.		16-2-1 Gas Tech 0 No odor.
10		3 4 7	Clay as above, mottled light gray,		16-2-2 Gas Tech 0 No odor.
15		3 4 6	Clay, light to medium brown, mottled green-gray. Free moisture in "root canals".		16-2-3 Gas Tech 0 No odor.
20		6 8 9	Clay, as above, becoming mottled light gray.		16-2-4 Gas Tech 0 No odor.
25		6 8 10	Clay, as above, becoming more firm.		16-2-5 Gas Tech 0 No odor.
			Bottom of Boring.		
			NOTE: Strong product odor on top of water at completion.		
30					

▽
ATD

16

Logged by: IMH	
Figure	
Page 1	of

* INDICATE WELL COVER AND / OR LOCK

Exhibit III
Analytical Results
&
Chain of Custody Records



SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch


Released : 8-25-89
Lab. ID : WB90541-544
Recv'd : 8-18-89
@ 1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: Composite
15-2-1 to 15-2-4
Matrix : Soil

Method: EPA 8020, 5053

Analysis

Results (mg/kg)

Benzene	0.34
Toluene	0.84
Xylene	6.5
Ethyl Benzene	0.60



Shui Fong
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 8-25-89
Lab. ID : W890541-544
Recv'd : 8-18-89 @1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: Composite 15-2-1 to
15-2-4
Matrix : Soil

Method: EPA 8015, 5030

Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons

10.2

Shui Fong
Director, Water Laboratory

SF:dc



**SCIENTIFIC ENVIRONMENTAL
LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

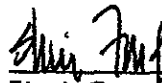
Released : 8-25-89
Lab. ID : W890545
Recv'd : 8-18-89
@ 1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: 15-2-5
Matrix : Soil

Method: EPA 8020, 5053

Analysis

Results (mg/kg)

Benzene	< 0.01
Toluene	< 0.01
Xylene	< 0.01
Ethyl Benzene	< 0.01



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Director, Water Laboratory

SF:dc



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6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 8-25-89
Lab. ID : W890546-549
Recv'd : 8-18-89
@ 1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: Composite
16-2-1 to 16-2-4
Matrix : Soil


Method: EPA 8020, 5053

Analysis

Results (mg/kg)

Benzene	0.57
Toluene	1.0
Xylene	0.42
Ethyl Benzene	0.26

SF:dc



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Director, Water Laboratory



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LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murieta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 8-25-89
Lab. ID : W890546-549
Recv'd : 8-18-89 @1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: Composite 16-2-1 to
16-2-4
Matrix : Soil

Method: EPA 8015, 5030

Analysis

Results (mg/kg)

Total Petroleum Hydrocarbons

6.3

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Director, Water Laboratory

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LABORATORIES, INC.**

ADS Environmental
6267 Joaquin Murietta Suite E
Newark, Ca. 94560

Attn: Dr. Alan Selditch

Released : 8-25-89
Lab. ID : W890550
Recv'd : 8-18-89
@ 1330
Col'd : 8-17-89
Analyzed : 8-23-89
Analyst : DH
Project #: 1188002R
Sample ID: 16-2-5
Matrix : Soil


Method: EPA 8020, 5053

Analysis

Results (mg/kg)

Benzene	< 0.01
Toluene	< 0.01
Xylene	< 0.01
Ethyl Benzene	< 0.01

SF:dc



Shui Fong
Director, Water Laboratory

A.D. Selditch and Assoc. Inc.

6267^{1/2} - Joaquin Murietta Ave., Newark, CA 94560
 415-490-1759 Fax 415-770-9608

Chain of Custody Record

PROJECT NO. 1188002R			ANALYSES								NUMBER OF CONTAINERS	REMARKS (Sample preservation, handling procedures, etc.)
SAMPLERS: (Signature) <i>Mike Howard</i>			General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH	BTEX			
DATE	TIME	SAMPLE NUMBER										
8/17		1188002R-15-2-1						•			1	Composite samples 15-2-1, 2-2, 2-3 and 2-4 run TPH on composite
		15-2-2						•			1	
		15-2-3						•			1	
		15-2-4						•			1	
		15-2-5						✓	✓		1	
		16-2-1						•			1	Composite samples 16-2-1, 16-2-2, 16-2-3 & 16-2-4 and run TPH on composite
		16-2-2						•			1	
		16-2-3						•			1	
		16-2-4						•			1	
		16-2-5						✓	✓		1	
										TOTAL NUMBER OF CONTAINERS	10	
RELINQUISHED BY: (Signature) <i>Mike Howard</i>		DATE/TIME 8/17 4:30	RECEIVED BY: (Signature) <i>Adelstein</i>		RELINQUISHED BY: (Signature) <i>Adelstein</i>		DATE/TIME		RECEIVED BY: (Signature)			
METHOD OF SHIPMENT:			SHIPPED BY: (Signature)		COURIER: (Signature)		RECEIVED FOR LAB BY: (Signature) <i>Colin Cunningham</i>		DATE/TIME 8/18 1:30			

Note - moderate to strong odor at 16-2-5 during recharge - slight odor HTD as H₂O and on auger.

Exhibit IV
Release Rate Calculations

Montgomery Ward
Dublin, CA
Release Rate Determination
for
New Well

Available Data

MW-12

Water Level at time of Drill - 11.5'
Water Level at Time of Test - 17'7"
Depth of Well - 26.5'
Well = 4" casing 8" bore
Well recharge - 26.5" to 17'7" = 500 seconds = 8.3 minutes

Surface Area of Water Exposure Calculation

Surface Area = Exposed Bore Surface x Circumference of Bore
Exposed Bore Surface = distance from Bottom of Borehole
to water level

$$\text{Therefore: Surface Area} = (26.5' - 11.5') \times \frac{3.1416 \times 8''}{12 \text{ in/ft}^2} = 31.4 \text{ ft}^2$$

Volume of Area = Base Area x Height

$$\begin{aligned} \pi r^2 \times h & \quad r = 4'' = 0.33 \text{ ft.} \\ (3.1416 \times 0.33 \text{ ft}^2) \times 15 \text{ ft.} & = 5.13 \text{ ft}^3 \\ 5.13 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 & = 38.37 \text{ gal.} \end{aligned}$$

$$\text{Release Rate} = \frac{38.37 \text{ gal}}{8.3 \text{ min}} = 4.62 \text{ gal/min}$$

Surface Area Required @ 10 gal/min well capacity = x

$$\frac{\text{Surface Area of Test Well}}{\text{Release Rate of Test Well}} = \frac{x}{4.62 \text{ gal/min}}$$

$$\frac{31.4 \text{ ft}^2}{4.62 \text{ gal/min}} = \frac{x}{10 \text{ gal/min}} = \frac{31.4 \text{ ft}^2 \times 10 \text{ gal/min}}{4.62 \text{ gal/min}} = 67.97 \text{ ft}^2$$

Ratio

$$\frac{\text{Surface Area at 10 gpm}}{\text{Surface Area of existing}} = \frac{67.97 \text{ ft}^2}{31.4 \text{ ft}^2} = 2.16$$

Existing diameter x ratio = diameter at 10 gallons per minute

$$8'' \times 2.16 = 17.3'' \text{ diameter}$$