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REPORT  
SOIL SAMPLING/TESTING AND  
PRELIMINARY SITE ASSESSMENT  
FIRE STATION No. 1 RELOCATION SITE  
SOUTH LOT ADJOINING  
7494 DONOHUE DRIVE  
DUBLIN, CALIFORNIA

June 1991

# BSK & Associates, Geotechnical Consultants, Inc.

Geotechnical Engineering • Engineering Geology • Environmental Engineering • Engineering Laboratories • Chemical Laboratories

June 28, 1991

BSK JOB No. P91082

City of Dublin  
100 Civic Plaza  
Dublin, CA 94568

Attention: Mr. Lee Thompson,  
Public Works Director

SUBJECT: Report  
Soil Sampling/Testing and  
Preliminary Site Assessment  
Fire Station No. 1 Relocation Site  
South Lot Adjoining 7494 Donohue Drive  
Dublin, California  
for Dougherty Regional Fire Authority

Gentlemen:

BSK & Associates (BSK) is pleased to submit five copies of our report of Soil Sampling/Testing and Preliminary Site Assessment (PSA) for the subject property referenced above. This investigation was authorized by the Dougherty Regional Fire Authority, and administered by the City of Dublin under "Standard Consulting Engineering Services Agreement" dated May 23, 1991. The site location with respect to surrounding geography is shown on Figure 1, Site Location Map.

The soil sampling and analytical testing were performed to assess the lateral extent of petroleum hydrocarbon contamination migration in soil from the fuel release area at the existing Fire Station to the north.

The PSA was performed to address the current status of the subject property with regard to possible soil and groundwater contamination resulting from previous and current site usage, and/or activities on surrounding properties to a distance of one-half mile. The property is presently being considered for development for expansion of the Dougherty Regional Fire Station No. 1 adjoining the site to the north.

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Preliminary Site Assessment  
Fire Station No. 1 Relocation Site  
South Lot Adjoining 7494 Donohue Drive  
Dublin, California

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June 28, 1991  
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BSK & Associates is pleased to have had this opportunity to be of service to you. If there are questions concerning the contents of this report, please do not hesitate to contact us. If we can continue to be of service to you in ensuing portions of site remediation and development, we would appreciate the opportunity.

Respectfully submitted,

BSK & Associates

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Distribution: City of Dublin (5 copies)

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SOIL SAMPLING TESTING AND  
PRELIMINARY SITE ASSESSMENT  
FIRE STATION RELOCATION SITE  
SOUTH LOT ADJOINING 7494 DONOHUE DRIVE  
DUBLIN, CALIFORNIA

INTRODUCTION

This report presents the results of our soil sampling/testing activities and a Preliminary Site Assessment (PSA) of property in Dublin, California adjoining the southern property boundary of the Dougherty Regional Fire Station No. 1 at 7494 Donohue Drive. These services were performed for the Dougherty Regional Fire Authority (DRFA), and administered by the City of Dublin Public Works Department. The subject property owner is Rainbow Investment, a.k.a. Whitney Investment Company of San Carlos, California.

The findings presented herein result from an investigation of available current regulatory and other published data, site observations, and limited soil sampling and analytical testing, as described in our Proposal PR91087 of April 29, 1991.

A separate report (BSK Job No. P910983), containing the results of our geotechnical and geologic/seismic hazards investigation for the subject project is concurrently being submitted to the City of Dublin.

Project Background

We understand that the DRFA is in the process of purchasing a 13,600 square foot lot south of the existing Fire Station No. 1 at 7494 Donohue Drive in Dublin, California. The Authority plans to demolish the existing Fire Station and replace it with a parking lot, and to construct a new Fire Station on the adjacent vacant lot (see Figure 2, Site Plan).

According to DRFA, three Underground Storage Tanks (USTs) containing gasoline and diesel were in use at the project site (existing Fire Station No. 1) in the 1960's. In 1965 or 1966, one of the gasoline tanks was observed to not maintain fuel levels and was subsequently abandoned by grouting in place. The two remaining tanks were in use until 1989, when they were removed in November of that year.

During removal, soils in the close vicinity of the abandoned gasoline tanks were observed to be contaminated by petroleum product. Contaminated soil was removed from the tank excavation and aerated on-site under a permit from the Bay Area Air Quality Management District (BAAQMD) and with the approval of the Alameda County Environmental Health Department (ACEH).

In the Spring of 1990, three (3) Groundwater Monitoring Wells were installed by BSK & Associates at the fire station site. Soil and groundwater samples were then obtained and chemical analyses performed. Groundwater flow direction was also recorded. BSK continues to monitor the wells on a quarterly basis. Fuel contamination of soil was found by BSK above the water table at the well locations. No groundwater contamination from the fuel release was found during the well installations or during the quarterly monitoring, thus far.

Because the Authority is planning to build a new fire station on the adjacent vacant lot (the subject property), the DRFA is concerned that soil on this lot has been contaminated. In addition, the DRFA is concerned that degradation of the subject property may have occurred due to previous site use or development, and/or from activities occurring in the vicinity of the property in addition to that attributed to the existing Fire Station.

#### PURPOSE AND SCOPE

This preliminary investigation was performed to assess the potential existence and extent of environmental liability, within the subject property, resulting from off-site sources within one-half mile of the site.

The following tasks were performed:

1. Review of Past and Present Usage of the Site and Vicinity
  - a) Time-study of aerial photographs;
  - b) Review of regulatory records;
  - c) Review of previous investigations performed at the adjacent existing Fire Station at 7494 Donohue Drive;

d) Visual reconnaissance of the site and surrounding area to a distance of one-half mile; and

e) Shallow soil boring and sampling to test for the existence and lateral extent of soil contamination resulting from a release at the adjoining Fire Station.

2. Assessment of Site Environmental Liabilities

3. Services Excluded from Workslope - Services performed by BSK & Associates did not include radon gas or asbestos hazard assessments.

SITE DESCRIPTION

The subject property comprises approximately 13,700 square feet and is situated on Donohue Drive, adjacent to the south property line of DRFA Fire Station No. 1 at 7494 Donohue Drive, Dublin California. The property is shown as Assessor's Parcel No. 941173 1-6. No lot number has been assigned, since the property will be a subdivision of a larger lot occupying the northwest corner of the intersection of Amador Valley Boulevard and Donohue Drive.

The property is trapazoidal in shape, elongated in the east-west direction. The eastern one-half of the property has been developed as an asphalt paved parking area, with storm drain, plantings and light fixtures. The western half is undeveloped, and comprises bare earth and gravel with weeds, grasses and encroaching landscape around the perimeter. The site is essentially level, with drainage as provided by grading and a storm drain in the eastern half. A 10-foot wide public utility easement crosses the width of the property near the western property boundary. The site is fenced along the north boundary by chain link fencing and a low brick wall. The site lay-out and pertinent features are illustrated on Figure 2, Site Plan.

The subject property is currently vacant, except for parking in the eastern half as described. Limited inquiry regarding past usage revealed no prior commercial development. The site was farmed until the 1960s, and has been essentially vacant to the present. The parking lot was constructed in 1972 and 1979. We understand that the site is intended for the expansion of the adjoining fire station to the north.



## PHYSICAL ENVIRONMENT

### Geologic Setting

The project area is located within the San Ramon Valley, a north-south trending depression extending north from the western terminus of the Amador Valley structural basin, which nearly bisects the Diablo Range of the Coastal Ranges geomorphic province. Topography in the site area is considered to be primarily governed by the north-northwest trending Calaveras Fault, which lies at the western edge of the San Ramon and Amador Valleys, and is approximately 1300 feet west of the site. The site area is essentially flat lying, with a slight slope to the east-southeast at a gradient of approximately one percent. The site does not lie within a seismic hazards Special Studies Zone.

Subsurface conditions were explored by BSK in conjunction with this assessment and contemporaneously during the geotechnical investigation (BSK Job P91083) of the building site. The results of our exploratory borings indicate that the upper 29 feet consist of stiff clay with varying percentages of silt and sand. The clay is underlain at a depth of 36 feet by thinly interbedded layers of sand, silty sand, and clayey sand. The interbedded layers are underlain at a depth of 30 feet by a layer of silty sand approximately 7 feet thick, and by sandy clay and sandy silt at depths greater than 43 feet. Groundwater was initially encountered at depths of 14 to 15 feet in the borings during drilling. Groundwater rose to 8 and 12 feet at the completion of drilling (June 4, 1991).

Shallow sediments in the site area are identified by a 1966 USDA Soil Survey as Quaternary Alluvium, composed of Sunnyvale and Danville Clay Loam soils. These soils are poor to well-drained, and are slowly permeable (0.1 to 1 foot/day). Underlying these shallow sediments are Valley Fill materials of approximately 300 to 500 feet in thickness, comprised of unconsolidated alluvium. Underlying the Valley Fill sediments is the moderately consolidated Pliocene Tassajara Formation, consisting of tuffaceous shale and sandstone deposits (1974 DWR Groundwater Resource Study).

### Hydrogeologic Setting

According to DWR Bulletin No. 118-2, "Evaluation of Groundwater Resources: Livermore and Sunol Valleys," the project site is

located within the Dublin sub-basin of the Livermore Valley Groundwater basin. There are two primary aquifers within the basin: the uppermost aquifer is semi-to-unconfined and occurs at a depth of 12 to 15 feet; the lower aquifer is confined, and is encountered at depths greater than 50 to 80 feet. Groundwater flow in the upper aquifer is southeast at the adjacent Fire Station, and the gradient is 0.7 percent (as determined in May 1990). The lower aquifer flow direction is reported to be similar to that of the upper aquifer. Mean annual precipitation in the site vicinity, as measured from 1888 to 1977, was approximately 24-inches.

Groundwater at the site was encountered in several borings during this and the geotechnical investigation. Groundwater was first encountered between 14 and 15 feet in depth. Groundwater rose 8 to 12 feet in depth, indicating semi-confined to confined conditions. flow direction and gradient were not determined.

#### SITE HISTORY

A preliminary characterization of site history was derived from an aerial photo time-study. Aerial-photo stereo-pairs, soil-classification, and traffic-index photographs from 1950 to 1989 were observed. Time laps between photographs were as much as 10 years (1979 to 1989); however, site development was such that the time intervals between photographs were not detrimental to the characterization of site usage.

The first observed record of the site was a 1950 aerial photograph stereo-pair. The subject property was at the time a portion of an agricultural field, apparently utilized for dry-land farming. A drainage channel for Martin Canyon Creek is the only feature in the photo that still exists. No development other than farming is apparent.

The site and vicinity was observed to be essentially unchanged in a 1958 stereo-pair. In 1966, an aerial photograph reveals a constructed and operating Fire Station as it presently exists adjacent to the site. Some residential development exists to the north, and a shopping center at Amador Valley Boulevard and Starward Drive has been constructed. The subject property is vacant.

An aerial stereo-pair dated April 1972 indicates that the property is vacant. A dirt path crosses the lot from northeast to southwest. A vehicle (pick-up truck) is observed in the southeast corner of the lot. The site vicinity comprises residential development, with Regional and Amador Plaza Roads newly constructed, but only Mervyn's, Payless, and Albertson's retail stores existing. A portion of the 1972 photograph is presented in the Photo Summary section of this report.

By 1979, aerial-photos show the site and vicinity to be similar to the present time. The parking area has been constructed in the east half of the site, and is in use.

In 1989, an aerial-stereo pair depict the site and vicinity to be essentially unchanged. A gasoline service-station is located at the Amador Valley Boulevard entrance to the Gemco shopping center.

#### CURRENT SITE CONDITIONS

Surface and subsurface conditions at the subject property were observed and explored during the period of May 10 and 24, 1991. Visual observation of the land surface was made on May 10, 1991, and consisted of a self-guided walk-through of the property. The north, east and west site boundaries were assumed to be those marked by fence lines and Donohue Drive. The south boundary was marked by BSK personnel, at 80 feet south of the north property line, as depicted on a Map provided by the client to BSK.

The site walk-through revealed no indication of significant degradation. The parking area contained minor oil-staining from motor vehicles. No staining or evidence of dumping was observed at the storm drain inlets. The unpaved west lot area contained minor quantities of trash and broken glass. Several mounds of gravel were observed in the western one-fourth of the property. A number of cement, grout and concrete "clean-out" piles were also observed, where concrete mixers had cleaned-out their chutes following delivery, or excess product had been dumped. There are no current occupants at the site, nor evidence of site usage by transients. No transformers were observed. Elevated power lines do not cross the site. No evidence of underground tanks was observed.

## Soil Sampling

Subsurface conditions were explored May 24, 1991 utilizing a Mobile B-53 truck-mounted drill rig, equipped with an 8-inch flight-auger.

Five exploratory soil borings were advanced to depths of 13.5 to 14 feet. Boring locations are shown as EB-1 through EB-5 on Figure 3. The borings were generally drilled to first encountered groundwater, or just above.

Two-inch I.D. split-spoon samplers housing three 2 x 6-inch stainless steel sampling tubes were used to sample soil for chemical analysis. A 1.4-inch I.D. Standard Penetration Split-spoon (SPT) sampler was used for field soil classification and Photo Ionization Detector (PID) screening. Soils were classified in the field by a geologist using the Unified Soil Classification System for guideline (ASTM D-2487), as shown on the Legend for Test Hole Logs, Figure 4. The Logs of Borings are presented on Figures 5 through 9.

Soil samples were obtained from each boring at approximately five foot intervals, at the soil/groundwater interface and other pertinent horizons. The samples were utilized for the determination of soil classification and condition. Soil samples obtained from the soil/groundwater interface from each exploratory boring were retained for possible chemical analysis for contaminants. Selected soil samples obtained above groundwater in the soil borings were also retained for chemical analysis based on PID response. Following boring and sampling completion, each boring was backfilled to the ground surface with an 11-sack cement and sand slurry.

Retained samples were sealed within the aforementioned stainless steel tubes with teflon sheeting and pressure-fitted plastic caps, labeled, and refrigerated for delivery to our State-certified analytical laboratory.

A Photo Ionization Detector (PID), using a 10 ev lamp and calibrated to a 100 ppm isobutylene standard, was used to screen soils exhumed from each of the borings while drilling. PID values were recorded on the boring logs at the depth from which the screened sample was obtained.

Drilling and sampling equipment used during drilling were cleaned by high-pressure, high-temperature wash and/or non-phosphate detergent wash, and rinsed prior to usage at the site, and between borings.

Groundwater was not sampled or observed for hydrocarbon contaminants, nor was assessment made of asbestos or radon gas hazards at the site as these services are not considered to be within the scope of this investigation.

### Subsurface Conditions

As determined from five borings drilled to a maximum depth of 14-feet, subsurface conditions in the northern half of the site consist primarily of dark olive and red-gray clayey silt and silty clay. In Boring EB-2, a one-foot light brown silt lens was encountered. Groundwater was encountered at 13.5 feet below grade in Borings EB-1 and EB-2.

### Field Indications of Contamination

Indications of motor fuel and contamination were encountered in Borings EB-1 and EB-2, between 5 and 12 feet. The greatest observed concentration occurred between 8 and 11 feet.

} ?

### Chemical Analyses

The ten (10) soil samples retained for chemical analysis were analyzed for the gasoline and diesel contamination indicators - Benzene, Toluene, Xylene and Ethylbenzene (BTXE), as well as Total Petroleum Hydrocarbons as gasoline (TVH) and diesel (TPH) and lead.

The analyses performed are those specified by the Tri-Regional Water Quality Control Board Recommendations of July 6, 1990. The analyses results are presented in the following tables. The Chemical Test Data Sheets are presented in Appendix "A," Figures A-1 through A-6. Project Chain-of-Custody records are shown as Figures A-7 through A-8.

**TABLE I**  
**SUMMARY OF CHEMICAL TEST RESULTS: SOIL SAMPLES**  
 All units in mg/kg (ppm) unless otherwise indicated.

**TVH, TPH and LEAD**

<u>Sample Designation</u> (Action Level)*	C O N S T I T U E N T S		
	<u>TVH</u> (10)	<u>TPH</u> (100)	<u>LEAD</u> (13)
EB-1 at 11.5'	33	12	ND
EB-1 at 13'	ND	ND	--
EB-2 at 8.5'	ND	ND	--
EB-2 at 12.5'	ND	--	--
EB-3 at 10.5'	--	ND	--
EB-3 at 13'	ND	--	--
EB-4 at 10.5'	ND	ND	--
EB-4 at 12.5'	ND	--	--
EB-5 at 9.5'	ND	ND	--
EB-5 at 13'	ND	--	--

ND - None Detected  
 -- - Not Tested for this Parameter

\*TVH/TPH Action Levels: Derived from Table 2-1, Leaching Potential Analysis, RWQCB LUFT Manual, October 18, 1989.

**BTXE**

<u>Sample Designation</u> (Action Level)*	C O N S T I T U E N T S			
	<u>Benzene</u> (NA)	<u>Toluene</u> (NA)	<u>Ethylbenzene</u> (NA)	<u>Xylene</u> (NA)
EB-1 at 13.0'	ND	0.05	0.07	0.14
EB-1 at 11.5'	ND	0.03	ND	ND
EB-2 at 8.5'	ND	ND	ND	ND
EB-2 at 12.5'	ND	ND	ND	ND
EB-3 at 10.5'	ND	ND	ND	ND
EB-3 at 13'	ND	ND	ND	ND
EB-4 at 10.5'	ND	ND	ND	ND
EB-4 at 12.5'	ND	ND	ND	ND
EB-5 at 9.5'	ND	ND	ND	ND
EB-5 at 13'	ND	ND	ND	ND

ND - None Detected  
 NA - Not Applicable\*\*

\*Action Levels are California Department of Health Services Drinking Water Standards, March 1989.

\*\*NA indicates that Action Levels are not applicable for BTEX in soils at this site, as characterized by Table 2-1 LUFT Guidelines.

## REGULATORY RECORD REVIEW

Public and private records of toxic substance control, release or related topics were reviewed for this investigation within 1/2-mile of the property. Documents were reviewed from the following agencies:

U.S. Environmental Protection Agency;  
California Department of Health Services;  
Regional Water Quality Control Board;  
State of California Office of Planning and Research;  
California Waste Management Board;  
Air Resources Board, Office of Environmental Protection;  
Bay Area Air Quality Management District;  
Alameda County Environmental Health Department.

A total of 38 business names were found on the lists reviewed. Some businesses are listed for operating permits issued for toxic substances generation and/or storage; others are listed for toxic releases. The facilities are arranged below in alphabetical order by street name.

NOTE: The following abbreviations are utilized in the regulatory summaries:

ACEH	- Alameda County Environmental Health Department
AGT	- Above-Ground Tank
ASPIS	- Abandoned Sites Program Information System
ASPNF	- Abandoned Site Program - No Further Action (DHS)
BAAQMD	- Bay Area Air Quality Management District
CaEAA	- California Environmental Affairs Agency
Cortese	- Hazardous Waste and Substance Sites List (State)
DHS	- Department of Health Services (State)
EPA	- Environmental Protection Agency (Federal)
FINDS	- Facility Index System (EPA)
HMMP	- Hazardous Materials Management Plan
HSSCI	- Hazardous Substance Storage Container Information
HWIS	- Hazardous Waste Information System (DHS)
LUST	- Leaking Underground Storage Tank List (RWQCB)
NFA	- No Further Action
NFI	- No Further Information
RCRA	- Resource Conservation and Recovery Act (Federal)
RWQCB	- Regional Water Quality Control Board
SWRCB	- State Water Resources Control Board
WRCB	- Water Resource Control Board (State)
UST	- Underground Storage Tank

The locations of the following properties are shown on Figure 10, Site Vicinity Map.

1. Montgomery Wards Auto Service Center

6900 Amador Plaza Road

ACEH - UST punctured in 1988, 3,000 to 20,000 gallons released.

All tanks removed in 1989 - Monitoring wells installed, groundwater plume has extended off-site. Groundwater remediation in progress.

CaEAA - LUST

Cortese - Tank Leak

HSSCI - Four USTs Listed

RWQCB Fuel Leaks List - FNA

2. One Hour Martinizing

6956 Amador Plaza Road

ACEH - Listed as The Cleaning Place, 04/04/88 - "no problems"

BAAQMD - Listed as The Cleaning Place, inspected May 25, 1991

Emits 9.62 lbs/day organics, no violations

RCRA - Generates more than 100 kg., but less than 1,000 kg. per month non-acutely hazardous waste (11/25/86)

3. Dublin Honda

7099 Amador Plaza Road

ACEH - Inspected 03/87 - "no problems"

Two USTs - One 3,300 gallons gasoline, one 550 gallon waste oil, tested tight in 1988 and 1989, tank removal planned for 1991.

Dublin Fire responded to hydrocarbon release to adjoining creek, likely from car wash area drain (12/19/85).

CaEAA - HWIS CAD981658990

BAAQMD - Inspected 05/25/91, emits 1.57 lbs/day organics (solvent)

Violations - 06/20/88, broken dust cover

HSSCI - Two USTs listed

RCRA - Generate at least 1000 kg/month non-acutely hazardous waste (11/10/86)



4. Amador Union 76  
7375 Amador Valley Boulevard

ACEH - Four USTs listed, two gas, one diesel, and one waste oil. Inspected 03/91 - "no problems".

Soil and groundwater contamination present, most soil removed, four monitoring wells installed, plume has likely migrated off-site to east.

CaEAA - LUST

BAAQMD - Listed as Unocal #5366, two 12,000 gallon USTs

Violations - 01/24/89, no information signs

HSSCI - Four USTs listed

Cortese - WRCB Tank Leak

RWQCB - Fuel Leak List

5. Dutch Pride Drive-In Dairy  
7400 Amador Valley Boulevard

CaEAA - LUST

RWQCB - Fuel Leaks List - Listed as "Dodge"

RWQCB File Review - Two 10,000 gallon USTs removed 01/90, unauthorized release Filed 02/90, gasoline contaminated soil and groundwater. Groundwater plume has likely migrated off-site to east.

6. Di Gas  
7600 Amador Valley Boulevard

HSSCI - Lists 37 containers (no evidence for this observed in aerial photos, list likely refers to total number of tanks parent company operates).

RCRA - Listed as Tesoro Gasoline (08/18/80)

7. Target  
7200 Amador Valley Boulevard

ACEH - Groundwater and soil impacted by former gas station, groundwater plume within site, travelling southeast.

Formerly known as Express Gas, Gemco Gas and Target Gas.

8. Circuit City  
7450 Amador Valley Boulevard

CaEAA - HWIS CAC000025247

9. Simon Mui Unocal  
7850 Amador Valley Boulevard

ACEH - Listed as "Unocal Service Station No. 7176," three 10,000 gallon gas and one 10,000 gallon diesel tank, one 550 gallon waste oil tank removed in 1988. Tanks precision tested tight in 1988.

CaEAA - HWIS CAD982058810

BAAQMD - Three 10,000 gallon USTs listed. Violation: 10/16/90, torn hose on two pumps, short fill-pipes.

HSSCI - Listed as "Fill'Em Fast 166-04," four UST

RCRA - Generate less than 100 kg/month non-acute hazardous waste (9/21/87)

10. Glory's Cleaners  
7988 Amador Valley Boulevard

ACEH - Inspected 05/90 - "no problems"

Generate 20 gallons of sludge waste and 55 gallons of filter waste. Store 80 gallons perchloroethylene on-site.

BAAQMD - Inspected 5/25/91

Emit 3.07 lbs/day organics (solvent)

No violations

RCRA - CAD981581234, generate between 100 and 1,000 kg/month non-acutely hazardous waste (11/25/86)

11. Exxon Service Station  
7840 Amador Valley Boulevard

ACEH - Listed as "Texaco No. 7-0210," three 8,000 gallon USTs tested tight 9/90, 7/89. Failed leak test 6/88, NFI

Became Exxon in late 1988. Inspected 3/90 - "no problems"

HSSCCI - Listed as "Texaco," four USTs

12. Dougherty Fire Station No. 1  
7494 Donohue Drive

ACEH - UST installed 1978, Unauthorized Release Filed 07/86,  
UST removed 10/89

CaEAA - LUST

HSSCI - Two tanks

Cortese - WRCB, Tank Leak

RWQCB - Fuel Leaks List

BSK - Studies performed by BSK & Associates indicate shallow  
soil contamination extending off-site to the south. Ground-  
water contamination has not been detected.

13. Shamrock Ford  
7499 Dublin Boulevard

ACEH - Inspected 3/87 - "no problems," 2,000-gallon gas UST,  
one 500 gallon waste oil UST.

Notes indicate waste oil tank leak in 1987. Groundwater  
monitoring well installed in 1986. Waste oil tank removed  
NFI.

BAAQMD - Inspected 5/25/91, Emit 9.85 lbs/day organics  
(solvent). Violation - 3/15/91, solvent saturated rags  
left unattended.

CaEAA - HWIS CAX000069039

HWIS CAD981171192

HSSCI - Two USTs listed

RCRA - Generate less than 100 kg/month non-acutely  
hazardous waste (1/21/86)

14. Crown Chevrolet Buick  
7544 Dublin Boulevard

ACEH - Two 1,000 gallon USTs installed in 1968, replaced with  
fiberglass tanks in 1986. Zone 7 Water District letter to  
ACEH indicates 7/86 tank leak. NFA, NFI

BAAQMD - Listed as "Crown Chevrolet Body Shop," inspected  
5/25/91, Emits 4.63 lbs/day organics (solvents and surface  
coaters)

CaEAA - HWIS CAD981638968

HWIS CAD045290335

LUST

Crown Chevrolet Buick (Continued)

HSSCI - Two USTs listed  
Cortese - WRCB Tank Leak  
RWQCB - Fuel Leaks List  
RCRA - Generate between 100 and 1,000 kg/day non-acutely  
Hazardous waste

15. Standard Materials, Inc.  
11815 Dublin Boulevard

ASPIS - NFA

16. Gary's Auto Electric and Union 76  
11976 Dublin Boulevard

ACEH - Listed as "Unocal #5901"  
Inspected 3/88 - no significant problems

Three UST removed in 6/90, holes observed in all tanks,  
contaminated soil at waste oil tank, contaminated  
groundwater. Four groundwater monitoring wells installed.  
Groundwater flow is north-northeast. Regional flow is  
southeast. Wells indicate no detectable contaminants.  
UST precision tested tight in 7/90, 5/90, 4/90  
BAAQMD - Two 12,000 gallon USTs  
CaEAA - HWIS CAD982057192  
RCRA - Generates less than 100 kg/month non-acutely  
hazardous waste (9/21/87)

17. Dublin Shell  
11989 Dublin Boulevard

ACEH - Four USTs; three 10,000 gallon gasoline, one 10,000  
gallon diesel  
Precision tested 5/90 - pass  
HSSCI - Listed as "Namio Maghsoudi" - Four UST

18. Orchard Supply Hardware  
7884 Dublin Boulevard

RCRA - Generates less than 100 kg/month non-acutely hazardous waste

19. One Hour Dry Clean  
7257 Regional

ACEH - Inspected 5/89, "no problems." Store 30 gallons perchloroethylene

20. Grand Auto  
7100 Regional

ACEH - Three 10,000 gallon USTs removed 11/86 - "no problems"  
Generate approximately 1,500 gallons/year waste oil  
RCRA - Generate less than 100 kg/month non-acutely hazardous waste (4/25/86)

21. Transamerica Title Company  
6850 Regional Street

CaEAA - LUST  
Cortese - WRCB Tank Leak  
RWQCB - Fuel Leaks List

22. Crow Canyon Cleaners  
7272 San Ramon Valley Road

ACEH - Inspected 6/89. Store 55 to 140 gallons perchloroethylene  
BAAQMD - Inspected 5/25/91. Emit 8.9 lbs/day organics (solvent)

23. Chevron Service Station  
7007 San Ramon Valley Road

ACEH - Listed as "Chevron 95542." Four USTs removed 2/90, replaced with three 12,000-gallon USTs, soil and groundwater contamination discovered, monitoring wells installed, off-site wells to be installed. Plume has exited site to east.  
BAAQMD - Tank volume; three 12,000 gallon USTs

24. Dublin Auto Body and Diagnostics  
6920 Village Parkway

ACEH - Inspected 12/17/90 - Noted routine floor wash drains to ground in rear of shop

25. Corwood Car Wash  
6973 Village Parkway

ACEH - Two gasoline USTs, tank leak verbally reported (Mr. Ravi Arulanantham)  
BAAQMD - Two 10,000 gallon USTs. Violation - 4/27/89, unregistered gas nozzles  
HSSCI - Two UST listed

26. Rich Water, Inc.  
7000 Village Parkway

ASPIS - NFA

27. John & Bills Transmission Service  
7016 Village Parkway

ACEH - Inspected 6/14/89, observed disposal of solvent to floor drain, poor housekeeping  
Violation notice issued 6/89, problem rectified 6/89

28. Quick Way Cleaner  
7061 Village Parkway

BAAQMD - Inspected 5/25/91. Emits 5.5 lbs/day organics  
(solvent)

CaEAA - HWIS CAD981976533

RCRA - Generates over 1,000 kg/month non-acutely hazardous  
waste (4/27/87)

29. Valley Auto Clinic  
7102 Village Parkway

ACEH - Closed due to fire, no previous violations noted

30. Dublin Tire Service  
7104 Village Parkway

ACEH - Inspected 1/91, revealed steam-cleaning discharge  
to storm drain and no oil/water separator. Inspected 5/91,  
found problem corrected

31. Dold's Workshop  
7106 Village Parkway

CaEAA - HWIS CAD076562248

RCRA - Generates between 100 and 1,000 kg/month  
non-acutely hazardous waste (5/16/86)

32. Parkway Body Shop  
7130 Village Parkway

ACEH - Inspected 10/26/86, satisfactory

BAAQMD - Inspected 5/25/91. Emit 9.45 lbs/day organics  
(solvent and surface coaters)

CaEAA - HWIS CAD981689425

RCRA - Generate more than 1,000 kg/month non-acutely  
hazardous waste

33. AC Automotive Consultants  
7136 Village Parkway

ACEH - Inspected 6/14/89, required better house and record keeping

34. Broadway Mufflers  
7140 Village Parkway

ACEH - Inspected 1/09/90. Violation issued 6/89, noted sludge and oil-stained soil around drain culvert, additional violations issued 11/89, 9/89, 6/89 regarding house and recordkeeping

35. Oil Changers  
7194 Village Parkway

ACEH - Former Shell Oil service station. Four USTs removed 8/87, discovered soil and groundwater contamination. Plume has likely travelled off-site to the southeast

BAAQMD - Listed as "Shell Oil Company," product listed as "treated groundwater"

CaEAA - LUST

HSSCI - Listed as "George Grey," four USTs

RWQCB - Fuel Leaks List

RCRA - Listed as Shell Station #20, generates greater than 1,000 kg/month non-acutely hazardous waste (4/25/86)

36. Amador BP Car Care  
7197 Village Parkway

ACEH - Former Mobil service station, 280 gallon waste oil tank removed 12/88, revealed soil and groundwater contamination. Water flow is northwesterly. Gas spilled during piping upgrade, 5/90. Contaminated soil was removed. Inspected 2/90, 6/90 and 10/90 - "no problems"

CaEAA - LUST

HSSCI - Four USTs listed

RWQCB - Fuel Leaks List



37. AM/PM Mini Mart  
7249 Village Parkway

ACEH - One 550 gallon waste oil tank removed 6/90. Five gallons gasoline spilled 9/90. NFI. Also listed as "Teutsch Enterprises, Inc."  
HSSCI - Listed as "Ron E. Teutsch" - five USTs

Designer Collective, Inc.  
7249 Village Parkway

CaEAA - HWIS CAC000195258

38. Village Cleaners  
7301 Village Parkway

ACEH - Inspected 5/86, Perchloroethylene used  
BAAQMD - Inspected 5/25/91. Emits 2.96 lbs/day organics (solvent)  
ASPIS - Listed as "Estler's of Dublin," NFA  
CaEAA - HWIS CAX000145813

## AGRICULTURAL USAGE

As indicated by aerial photograph time-study, the site was used for agriculture from pre-1950 to the early or mid-1960s. Row and grain crops were likely raised. Agriculture was likely practiced here by single families or small collectives, rather than by commercial interests. The Agricultural Commission does not have record of farming practices during the period of agricultural use at the site. No agriculture is practiced at the site or within the site vicinity at this time.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

These conclusions are based on the site reconnaissance and the document review procedures described in the report.

The study site is partially developed with an area of less than one-third acre. The site is proposed for the expansion of the adjoining Dougherty Regional Fire Station. No. 1, to the north.

Examination of the property surface by walking the site revealed no evidence of significant environmental degradation. Review of historical photographs provided no indications of past development or other impact on the property by an on-site source. Review of regulatory agency environmental documents did not reveal past or present deleterious site usage or degradation.

Investigation of the site subsurface revealed motor fuel soil contamination, originating from Fire Station No. 1, in excess of recommended allowable limits along approximately 90 feet of the north property line, and extending approximately 30 feet into the property. Field indications of soil contamination were encountered at depths of 5 to 12 feet, with the greatest concentration observed between 8 and 11 feet. Groundwater was not investigated within the site. Groundwater monitoring of the adjacent motor fuel release area by BSK, for the past year, has revealed no detectable quantities of hydrocarbon constituents. The subject property is down-gradient and cross-gradient from the release area at the existing Fire Station.

Investigation of the project site vicinity, which is defined by a 1/2-mile radius, has revealed several sources of subsurface soil and groundwater contamination. Based on the distance to the source locations from the site, and prevailing groundwater flow directions, the site does not appear to be at a high risk of groundwater contamination.

#### Recommendations

With respect to this investigation, and the conclusions presented herein, BSK recommends that the contaminated site soils be remediated. Remedial effort would likely include excavation and treatment of contaminated soil either on- or off-site. A Remedial Action Plan (RAP) addressing site soil contamination would have to be prepared for regulatory agency review and approval. RAP preparation is beyond the scope of our investigation.

Drummed soil, originating from the site soil borings, should be properly disposed of, based on the nature of the cuttings as defined by the soil chemical analysis results.

PHOTO SUMMARY

Surface Photographs - Photographs one through four were taken of the subject site on May 24 and June 4, 1991.

Aerial Photo - The aerial photograph shows the subject property and vicinity/study-area, as well as pertinent geographical features.



1. Photograph shows most of site, looking northwest, note storm drain to left, light vehicle oil-staining. Shows drilling of 50' deep geotechnical boring.



2. Looking west across Donohue Drive, showing north property line separating site and Fire Station No. 1.



3. Looking east down north property line. Shows EB-2 (foreground) and EB-3 (near drums) locations. Drums contain boring spoils. Shows typical surface condition in west lot half.



4. Shows east lot parking area. Barricades mark approximate south lot boundary. Storm drain inlets shown in foreground and to the right of drill rig. Fire Station No. 1 in background. Undeveloped west lot shown at left center.



1972 Aerial Photograph (AC 8-15-46) showing vacant site, adjoining Fire Station No. 1, principal streets and highways, and site vicinity covered by investigation.

### LIMITATIONS

*This (preliminary) assessment report has been prepared for the exclusive use of the Dougherty Regional Fire Authority. Unauthorized use of or reliance on the information contained in this report, unless given express written consent by BSK & Associates, is strictly prohibited.*

The findings and conclusions presented in this report are based on a preliminary field reconnaissance, data obtained from the literature research, and limited subsurface physical and chemical investigation.

This report has been prepared in accordance with generally accepted methodologies and standards of practice of the area. No warranty, express or implied, is made as to the findings, conclusions and recommendations included in the report.

The findings of this report apply to present site conditions existing at the time of our study and those reasonably identifiable. Site conditions may change with the passage of time, natural processes or human intervention which can invalidate the findings and conclusions presented in this report.

Respectfully submitted,

**BSK & Associates**



## REFERENCES

### Aerial Photographs

1950	03/12/50	BUT4G	138 & 139	1:20,000
1958	08/13/58	BUT5V	122 & 121	1:20,000
1966	05/16/66	BUT4GG	33	1:7,920
1972	04/19/72	AC 8	15 - 45 & 46	1:12,000
1979	08/16/79	40 USDA 06001	145 & 146	1:20,000
1989	04/07/89	WAC-88 CA	38 - 104 & 105	1:20,000

Source: California Soil Conservation District Field Office -  
Livermore, California

### Regulatory Records

Abandoned Sites Program Information System - 2/04/91  
ACEH File Review - 5/21/91  
BAAQMD Record Search - 5/29/91  
Comprehensive Environmental Response, Compensation and  
Liability Information System (CERCLIS)  
Expenditure Plan for the Hazardous Substance Clean-up Bond Act  
of 1984 (Revised 1989)  
Facility Inventory Database, California Environmental Affairs  
Agency - 6/04/91  
Office of Planning & Research Hazardous Waste and Substances  
List (Cortese) - 3/90  
RWQCB File Review-5/30/91  
RWQCB Fuel Leaks List - 3/01/91  
RWQCB North Bay Counties - Properties Reported Having Evidence  
of Chemical Release - 5/06/91  
SWRCB - Hazardous Waste Substance Storage Container  
Information for Alameda County - 3/06/86  
U.S. EPA RCRA Database - 6/05/91

Private Documents

BSK & Associates (BSK) Report P90103, 9/27/90, Monitoring Facility Installation, Soil and Groundwater Chemical Testing, Fire Station No. 1, 7494 Donohue Drive, Dublin, California.

BSK & Associates (BSK) Report P90103, 9/27/90, 12/90/91, Quarterly Groundwater Sampling Period Nos. 1,2 and 3, Fire Station No. 1, 7494 Donohue Drive, Dublin, California

Publications

DWR, June 1974, Bulletin No. 118-2, Evaluation of Groundwater Resources: Livermore and Sunol Valleys.

USDA, March 1966, Soil Survey - Alameda Area, California, California Agricultural Experiment Station, Series 1961, No. 41.

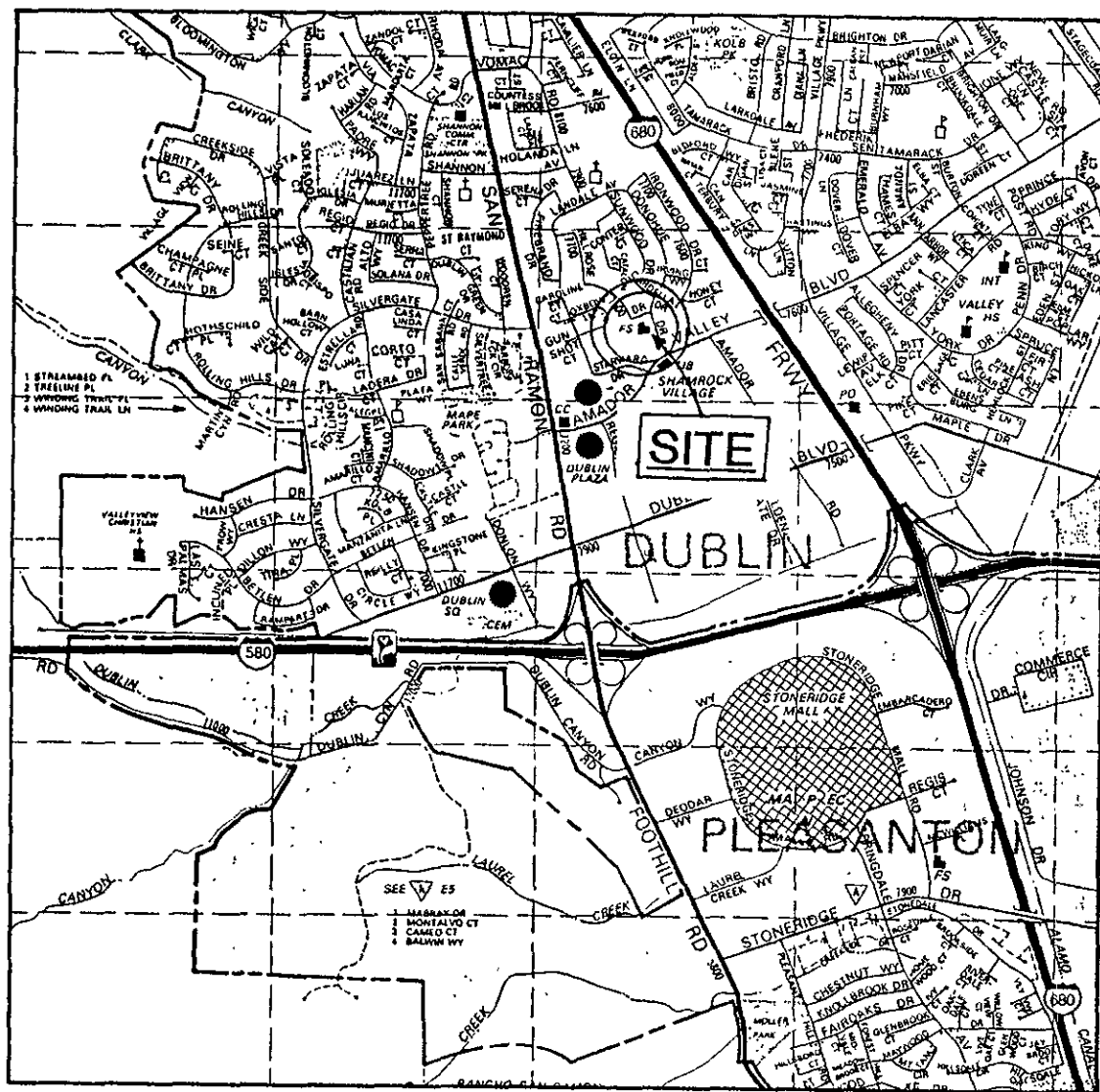
A.C.F.C. Zone 7, Memorandum, Spring 1990 Groundwater Level Report, June 27, 1990.

A.C.F.C. Zone 7, Memorandum, Fall 1990 Groundwater Level Report, January 16, 1991.

CHECKED BY AYE

DATE 4/26/91

BY TWS



SCALE: 1" = 2200'

# SITE LOCATION MAP

SOIL SAMPLING/TESTING AND  
 PRELIMINARY SITE ASSESSMENT  
 FIRE STATION NO. 1 RELOCATION SITE  
 SOUTH LOT ADJOINING 7494 DONOHUE DRIVE  
 DUBLIN, CALIFORNIA

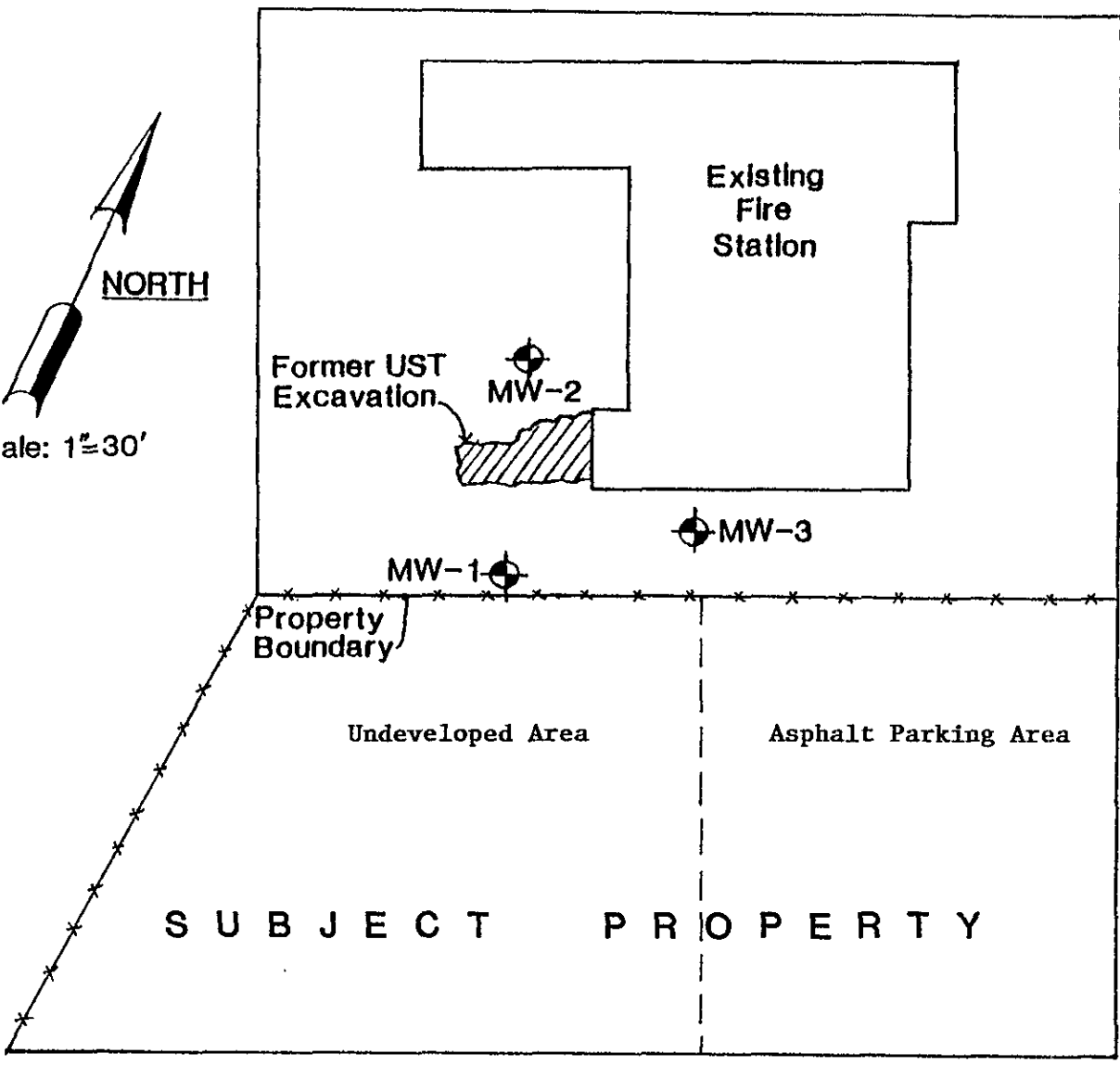
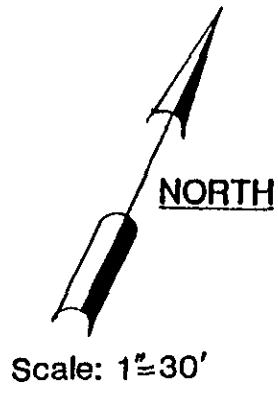
BSK Job No. P91082  
 June 1991  
 FIGURE: 1



CHECKED BY BYE

DATE 5-26-91

BY TWB



DONOHUE DRIVE

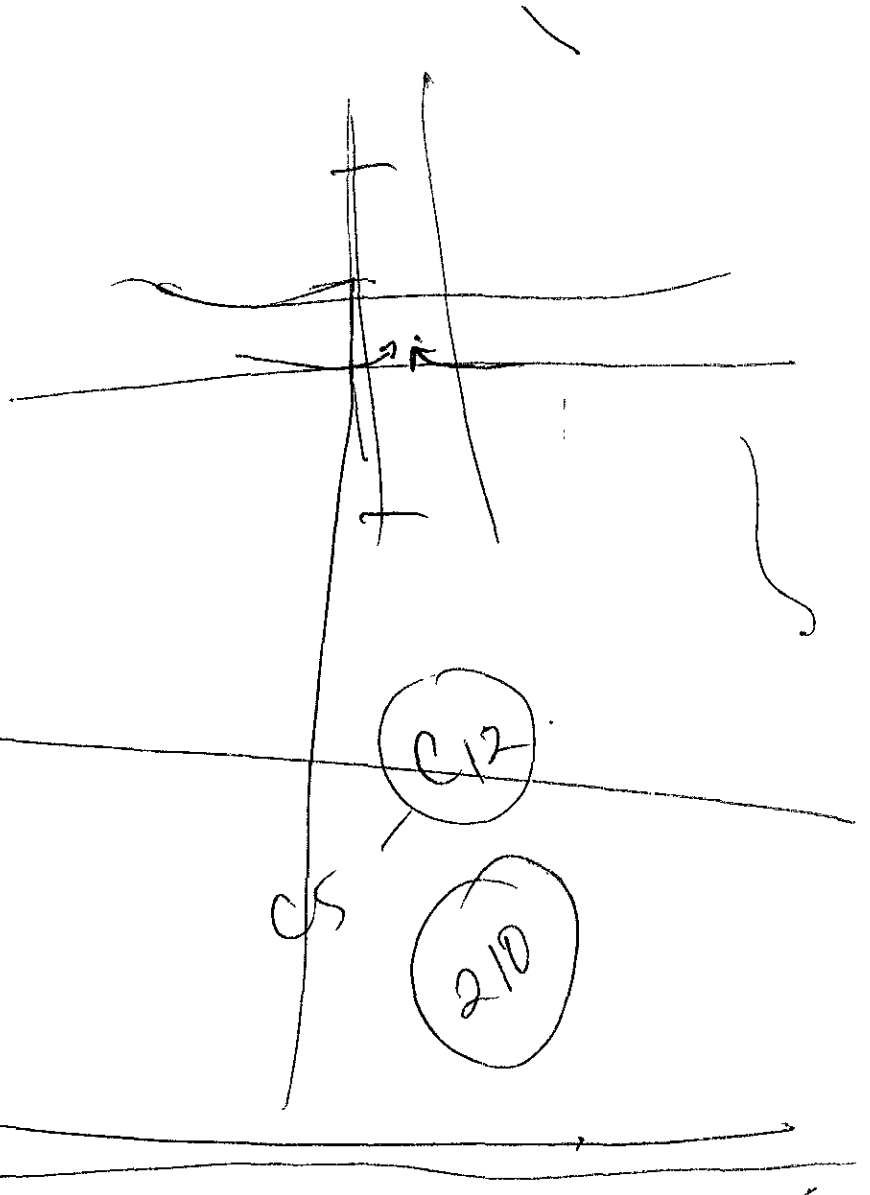
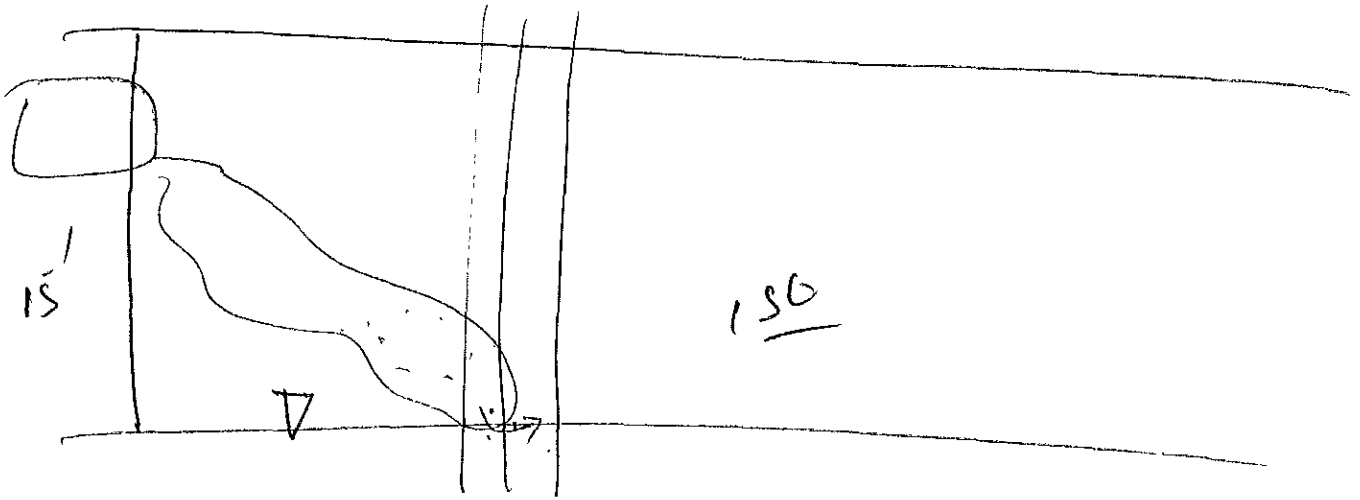
**LEGEND:**

- Previously Installed Groundwater Monitoring Well

**SITE PLAN**

BSK Job No. P91082  
June 1991  
FIGURE: 2





CHECKED BY *RYE*

DATE 6-10-91

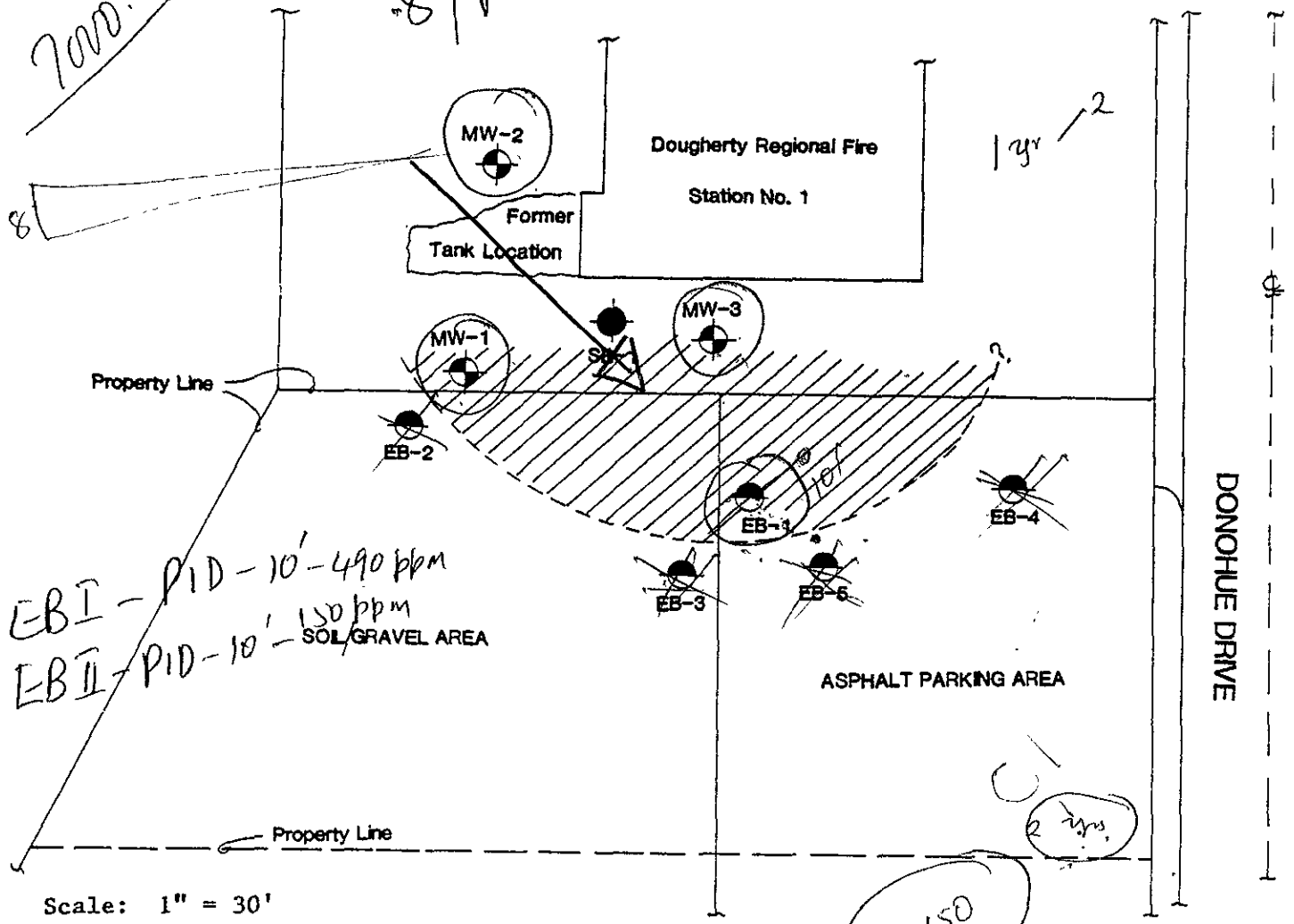
BY *TWB*

$16 = 4 \times 4 \text{ yrs.}$

*7000.00*

*8' / 8'*

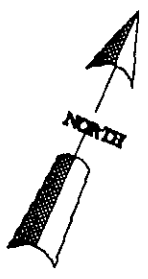
*1 yr* <sup>2</sup>



EB I - PID - 10' - 490 ppm  
 EB II - PID - 10' - 150 ppm  
 SOL/GRAVEL AREA

ASPHALT PARKING AREA

Scale: 1" = 30'



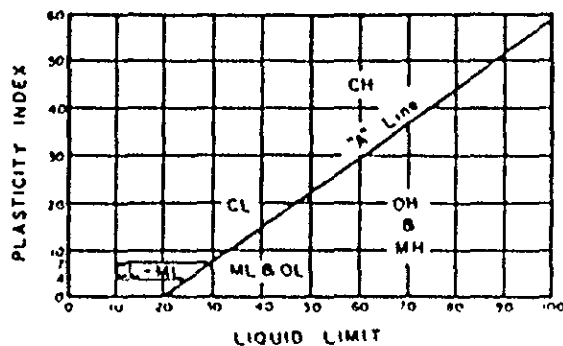
**LEGEND:**

- Exploratory Boring Performed for the Current Investigation
- Existing Groundwater Monitoring Well
- Soil Boring Performed During Previous Investigation at Fire Station No. 1 - BSK Job #P90103
- Approximate Area of Motor Fuel Contaminated Soil

**APPROXIMATE LATERAL SOIL CONTAMINANT LIMITS**

# LEGEND FOR TEST HOLE LOGS

METHOD OF SOIL CLASSIFICATION (Unified Soil Classification System)			
MAJOR DIVISIONS	SYMBOLS	TYPICAL NAMES	
<b>COARSE GRAINED SOILS</b> (More than 1/2 of soil > no. 200 sieve size)	<b>GRAVELS</b> (More than 1/2 of coarse fraction < no. 4 sieve size)	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	<b>SANDS</b> (More than 1/2 of coarse fraction < no. 4 sieve size)	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
<b>FINE GRAINED SOILS</b> (More than 1/2 of soil < no. 200 sieve size)	<b>SILTS &amp; CLAYS</b> <u>LL &lt; 50</u>	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	<b>SILTS &amp; CLAYS</b> <u>LL &gt; 50</u>	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts



PLASTICITY CHART

Key to Samples

- Indicates depth of undisturbed sample
- ☒ Indicates depth of disturbed sample
- ▣ Indicates depth of Standard Penetration Split Spoon Sample
- Sample not recovered

DATE: 5/24/91  
 LOGGED BY: TWB  
 ELEVATION: Approx. +350' MSL  
 WATER LEVEL: First Encounter - 14 feet  
 EQUIPMENT: B-53 Mobile Drill with 8" Hollow Stem Auger

# LOG DESIGNATION EB-1

JOB: P91082  
 FIGURE: 5

DEPTH, FEET	NOMINAL (1) DIAMETER, IN.	BLOWS / FOOT (2)	MOISTURE %	DRY DENSITY, PCF	SAMPLES	U.S.C.S.	SOIL OR ROCK DESCRIPTION	NOTES
						PMT	3" Asphalt & Aggregate Baserock	
						ML	CLAYEY SILT: Dark gray, damp, dense, sandy	
5	1.4	25	-	-		CL	SILTY CLAY: Dark olive-gray, damp, very stiff, granular texture, many small to very small (<1 mm) pores, Stage 1 carbonates	PID to 0
							Grades red-gray	
10	1.4	14	-	-			Grades olive-gray	PID to 490
					1		Stage 2 carbonates, red-gray	PID to 36
	2.0	--	-	-				
	2.0	--	-	-	2	CL ML	SILTY CLAY/CLAYEY SILT: Red-gray, damp to moist, very stiff to hard, trace small pebbles, Stage 3-4 carbonates	First Encounter PID = 2
15								Boring terminated at 14 feet
20								
25							NOTE: Boring backfilled to surface with 11-sack cement/sand slurry	

THE LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

- (1) SAMPLER INSIDE DIAM.
- (2) 140lb HAMMER - 30 INCH DROP.
- (P) HYDRAULICALLY PUSHED

**BSK**  
 & Associates



DATE: 5/24/91  
 LOGGED BY: TWB  
 ELEVATION: Approx. +350' MSL  
 WATER LEVEL: First Encounter - 13.5'  
 EQUIPMENT: B-53 Mobile Drill with 8" Hollow Stem Auger

# LOG DESIGNATION EB-2

JOB: P91082  
 FIGURE: 6

DEPTH, FEET	NOMINAL (1) DIAMETER, IN.	BLOWS / FOOT (2)	MOISTURE %	DRY DENSITY, PCF	SAMPLES	U.S.C.S.	SOIL OR ROCK DESCRIPTION	NOTES
							Soil and Gravel Surface	
5	1.4	37	-	-		CL	SILTY CLAY: Dark olive-gray, damp, very stiff to hard, granular texture, some very small (< 1 mm) pores, Stage 3 carbonates	PID to 0
						ML	SILT: Light brown, damp, trace clay	PID to 25
10	2.0	20	-	-	1	CL	SILTY CLAY: Dark olive-gray, damp to moist, very stiff, trace coarse sand, granular texture, Stage 2 carbonates	PID to 150 PID to 2
15	2.0	22	-	-	2		Grades dark gray to black, Stage 2-3 carbonates, moist to wet blebs	First Encounter PID to 0 ▼
20								Boring terminated at 13.5'
25							NOTE: Boring backfilled to surface with 11-sack cement/sand slurry	

THE LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

- (1) SAMPLER INSIDE DIAM.
- (2) 140lb HAMMER - 30 INCH DROP.
- (P) HYDRAULICALLY PUSHED

DATE: 5/24/91  
 LOGGED BY: TWB  
 ELEVATION: Approx. +350' MSL  
 WATER LEVEL: Not Encountered  
 EQUIPMENT: B-53 Mobile Drill with 8" Hollow Stem Auger

# LOG DESIGNATION EB-3

JOB: P91082  
 FIGURE: 7

DEPTH, FEET	NOMINAL (1) DIAMETER, IN.	BLOWS / FOOT (2)	MOISTURE %	DRY DENSITY, PCF	SAMPLES	U.S.C.S.	SOIL OR ROCK DESCRIPTION	NOTES
							Gravel and soil surface	
5	1.4	12	-	-		CL	SILTY CLAY: Dark gray, damp, stiff to very stiff, trace rootlets, trace very small pores, Stage 2 carbonates	PID to 0
							Grades moister, brown streaks	PID to 4
10	2.0	15	-	-	1		Grades olive-gray, some small pores, carbonate fill in larger pores	PID to 0
							Grades to Stage 4 carbonates, wet in horizontal soil partings	PID to 0
15	2.0	20	-	-	2			Boring terminated at 13.5'
20								
25								
							NOTE: Boring backfilled to surface with 11-sack cement/sand slurry	

THE LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

- (1) SAMPLER INSIDE DIAM.
- (2) 140lb HAMMER - 30 INCH DROP.
- (P) HYDRAULICALLY PUSHED

DATE: 5/24/91  
 LOGGED BY: TWB  
 ELEVATION: Approx. +350' MSL  
 WATER LEVEL: Not Encountered  
 EQUIPMENT: B-53 Mobile Drill with 8" Hollow Stem Auger

# LOG DESIGNATION EB-4

JOB: P91082  
 FIGURE: 8

DEPTH, FEET	NOMINAL (1) DIAMETER, IN.	BLOWS / FOOT (2)	MOISTURE %	DRY DENSITY, PCF	SAMPLES	U.S.C.S.	SOIL OR ROCK DESCRIPTION	NOTES
						PMT	3" Asphalt plus Aggregate Base	
						CL	SILTY CLAY: Dark olive-brown, damp, very stiff, trace coarse sand, some Stage 2 carbonates	
5	1.4	24	-	-			Grades moister	PID to 0
10	2.0	19	-	-	1		Grades darker, Stage 3 carbonates, some very small pores, carbonate pore filling	PID to 0
	2.0	18	-	-	2		Grades more porous, moister, trace rootlets	PID to 0
15								Boring terminated at 13.5'
20							NOTE: Boring backfilled to surface with 11-sack cement/sand slurry	
25								

THE LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

- (1) SAMPLER INSIDE DIAM.
- (2) 140lb HAMMER - 30 INCH DROP.
- (P) HYDRAULICALLY PUSHED

DATE: 5/24/91  
 LOGGED BY: TWB  
 ELEVATION: Approx. +350' MSL  
 WATER LEVEL: Not Encountered  
 EQUIPMENT: B-53 Mobile Drill with 8" Hollow Stem Auger

LOG DESIGNATION EB-5

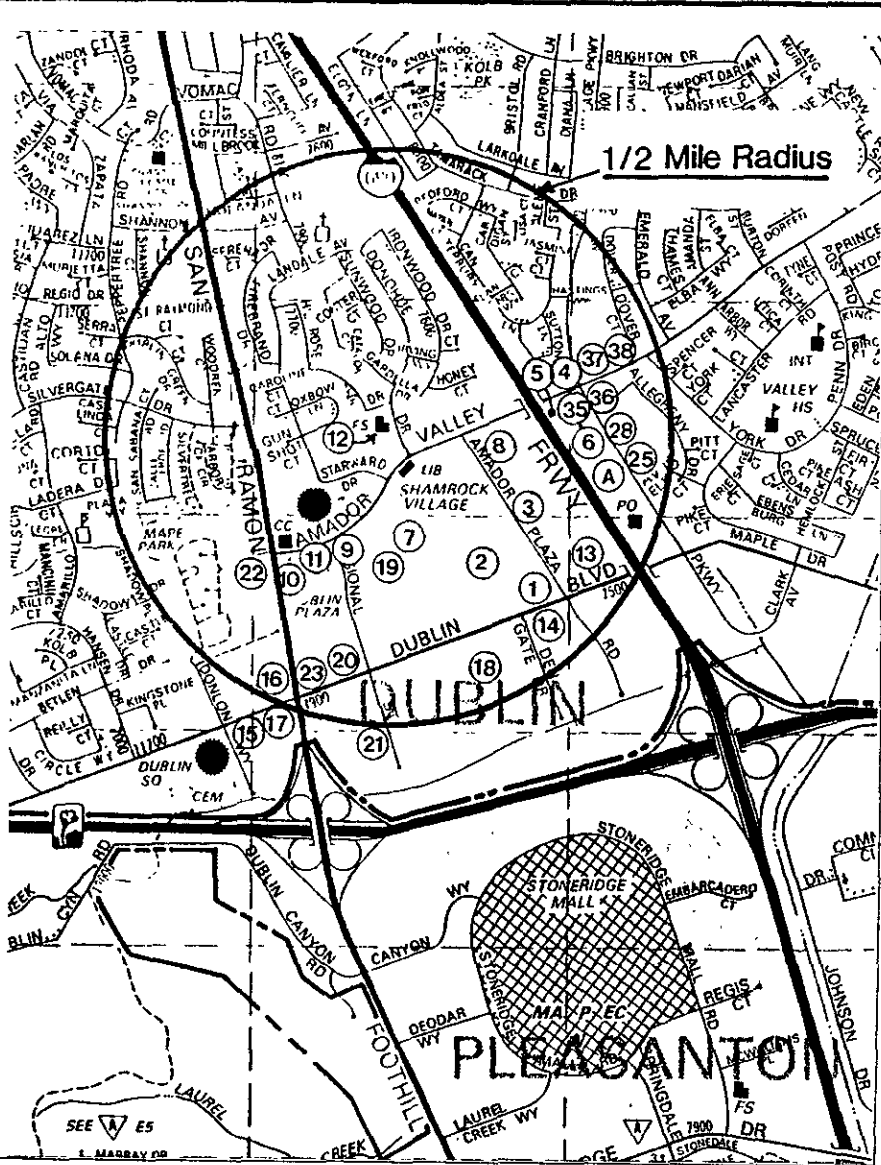
JOB: P91082  
 FIGURE: 9

DEPTH, FEET	NOMINAL (1) DIAMETER, IN.	BLOWS / FOOT (2)	MOISTURE %	DRY DENSITY, PCF	SAMPLES	U.S.C.S.	SOIL OR ROCK DESCRIPTION	NOTES
						PMT	3" Asphalt plus Aggregate Base	
						CL	SILTY CLAY: Dark olive-gray, damp to moist, stiff to very stiff, abundant Stage 2 carbonates, granular texture	
5	1.4	15	-	-				PID to 0
10	2.0	16	-	-	1		Grades very dark gray to black, moist, Stage 3-4 carbonates	PID to 0
15	2.0	17	-	-	2		Grades to Stage 5 carbonates, trace small gravel, granular texture	PID to 0
20								Boring terminated at 13.5'
25							NOTE: Boring backfilled to surface with 11-sack cement/sand slurry	

THE LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

- (1) SAMPLER INSIDE DIAM.
- (2) 140lb HAMMER - 30 INCH DROP.
- (P) HYDRAULICALLY PUSHED





1. Montgomery Wards Auto Service Center - 6900 Amador Plaza Road
2. One-Hour Martinizing - 6956 Amador Plaza Road
3. Dublin Honda - 7099 Amador Plaza Road
4. Amador Union 76 - 7375 Amador Valley Boulevard
5. Dutch Pride Drive-in Dairy - 7400 Amador Valley Boulevard
6. Di-Gas - 7600 Amador Valley Boulevard
7. Target - 7200 Amador Valley Boulevard
8. Circuit City - 7450 Amador Valley Boulevard
9. Simon Mui Unocal - 7850 Amador Valley Boulevard
10. Glory's Cleaners - 7988 Amador Valley Boulevard
11. Exxon Service Station - 7840 Amador Valley Boulevard
12. Dougherty Fire Station No. 1 - 7494 Donohue Drive
13. Shamrock Ford - 7499 Dublin Boulevard
14. Crown Chevrolet-Buick - 7544 Dublin Boulevard
15. Standard Meter Labs, Inc. - 11815 Dublin Boulevard
16. Gary's Auto Electric and Union 76 - 11976 Dublin Boulevard
17. Dublin Shell - 11989 Dublin Boulevard
18. Orchard Supply Hardware - 7884 Dublin Boulevard
19. One Hour Dry Clean - 7257 Regional Street
20. Grand Auto - 7100 Regional Street
21. Transamerica Title Company - 6850 Regional Street
22. Crow Canyon Cleaners - 7272 San Ramon Road
23. Chevron Service Station - 7007 San Ramon Road
24. Dublin Auto Body and Diagnostics - 6920 Village Parkway
25. Corwood Carwash - 6973 Village Parkway
26. Rich Water, Inc. - 7000 Village Parkway
27. John and Bill's Transmission Service - 7016 Village Parkway
28. Quickway Cleaners - 7061 Village Parkway
- A-29. Valley Auto Clinic - 7102 Village Parkway
- A-30. Dublin Tire Service - 7104 Village Parkway
- A-31. Dold's Workshop - 7106 Village Parkway
- A-32. Parkway Body Shop - 7130 Village Parkway
- A-33. AC Automotive Consultants - 7136 Village Parkway
- A-34. Broadway Mufflers - 7140 Village Parkway
35. Oil Changers - 7194 Village Parkway
36. Amador BP Car Care - 7197 Village Parkway
37. AM/PM Mini-Mart - 7249 Village Parkway
38. Village Cleaners - 7301 Village Parkway

## SITE VICINITY MAP

BSK Job No. P91082

June 1991

FIGURE: 10

**BSK**  
& Associates

APPENDIX "A"

BSK & ASSOCIATES' LABORATORY CHEMICAL TEST DATA

# BSK Analytical Laboratories

1414 Stanislaus Street \* Fresno, California 93706 \* Telephone (209) 485-8310 \* Fax (209) 485-6935

BSK-Pleasanton  
 City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
 Date Received: 05/28/91  
 Project Number: P91082


Lab Number	Date Sampled	Client's Sample Description		Date Analyzed
Ch912570-1	05/24/91	0914 hrs.	EB-1 #1 at 11.5'	06/06/91
Ch912570-2	05/24/91	0920 hrs.	EB-1 #2 at 13'	06/06/91


Soil Analyses for BTXE, TPH, and TVH

Results Reported in Milligram per Kilogram (mg/kg)

Compound	Lab.No. 2570-1	Lab.No. 2570-2	Detection Limit (DLR)
Benzene .....	ND	ND	0.02
Toluene .....	0.05	0.03	0.02
Ethylbenzene .....	0.07	ND	0.02
Total Xylene Isomers .....	0.14	ND	0.02
Total Petroleum Hydrocarbons	12	ND	10.00
Total Volatile Hydrocarbons	33	ND	10.00

Method: BTXE and TVH -EPA 8020 TPH-DHS GC/FID  
 ND: None Detected  
 DLR: Detection Limit For the Purposes of Reporting

  
 Cynthia Pigman,  
 QA/QC Supervisor

  
 Michael Brechmann,  
 Organics Supervisor

# BSK Analytical Laboratories

1414 Stanislaus Street \* Fresno, California 93706 \* Telephone (209) 485-8310 \* Fax (209) 485-6935

BSK-Pleasanton  
 City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
 Date Received: 05/28/91  
 Project Number: P91082

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch912570-1	05/24/91	0914 hrs. EB-1 #1 at 11.5'	06/06/91

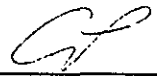
California Assessment Manual  
 Analyses for Soluble Metals (WET)

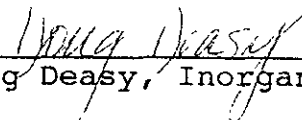
Results Reported in Milligrams per Liter (mg/L)

Constituent	Results	DLR
Lead (Pb).....	ND	1.0

ND: None Detected

DLR: Detection Limit for the Purposes of Reporting

  
 Cynthia Pigman, QA/QC Supervisor

  
 Doug Deasy, Inorganics Supervisor



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BSK-Pleasanton  
 City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
 Date Received: 05/28/91  
 Project Number: P91082

Lab Number	Date Sampled	Client's Sample Description		Date Analyzed
Ch912570-3	05/24/91	1030 hrs.	EB-2 #1 at 8.5'	06/06/91
Ch912570-4	05/24/91	1050 hrs.	EB-2 #2 at 12.5'	05/30/91

Soil Analyses for BTXE, TPH, and TVH


Results Reported in Milligram per Kilogram (mg/kg)


Compound	Lab.No. 2570-3	Lab.No. 2570-4	Detection Limit (DLR)
Benzene .....	ND	ND	0.02
Toluene .....	ND	ND	0.02
Ethylbenzene .....	ND	ND	0.02
Total Xylene Isomers .....	ND	ND	0.02
Total Petroleum Hydrocarbons	ND	--	10.00
Total Volatile Hydrocarbons	ND	ND	10.00

Method: BTXE and TVH -EPA 8020 TPH-DHS GC/FID

ND: None Detected

DLR: Detection Limit For the Purposes of Reporting

  
 Cynthia Pigman,  
 QA/QC Supervisor

  
 Michael Brechmann,  
 Organics Supervisor

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BSK-Pleasanton  
City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
Date Received: 05/28/91  
Project Number: P91082

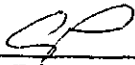
Lab Number	Date Sampled	Client's Sample Description		Date Analyzed
Ch912570-5	05/24/91	1210 hrs.	EB-3 #1 at 10.5'	06/06/91
Ch912570-6	05/24/91	1220 hrs.	EB-3 #2 at 13'	05/30/91


Soil Analyses for BTXE, TPH, and TVH

Results Reported in Milligram per Kilogram (mg/kg)

Compound	Lab.No. 2570-5	Lab.No. 2570-6	Detection Limit (DLR)
Benzene .....	ND	ND	0.02
Toluene .....	ND	ND	0.02
Ethylbenzene .....	ND	ND	0.02
Total Xylene Isomers .....	ND	ND	0.02
Total Petroleum Hydrocarbons	ND	--	10.00
Total Volatile Hydrocarbons	ND	ND	10.00

Method: BTXE and TVH -EPA 8020 TPH-DHS GC/FID  
ND: None Detected  
DLR: Detection Limit For the Purposes of Reporting

  
\_\_\_\_\_  
Cynthia Pigman,  
QA/QC Supervisor

  
\_\_\_\_\_  
Michael Brechmann,  
Organics Supervisor

# BSK Analytical Laboratories

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BSK-Pleasanton  
 City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
 Date Received: 05/28/91  
 Project Number: P91082


Lab Number	Date Sampled	Client's Sample Description		Date Analyzed
Ch912570-7	05/24/91	1315 hrs.	EB-4 #1 at 10.5'	06/06/91
Ch912570-8	05/24/91	1330 hrs.	EB-4 #2 at 12.5'	05/31/91


Soil Analyses for BTXE, TPH, and TVH

Results Reported in Milligram per Kilogram (mg/kg)

Compound	Lab.No. 2570-7	Lab.No. 2570-8	Detection Limit (DLR)
Benzene .....	ND	ND	0.02
Toluene .....	ND	ND	0.02
Ethylbenzene .....	ND	ND	0.02
Total Xylene Isomers .....	ND	ND	0.02
Total Petroleum Hydrocarbons	ND	--	10.00
Total Volatile Hydrocarbons	ND	ND	10.00

Method: BTXE and TVH -EPA 8020 TPH-DHS GC/FID  
 ND: None Detected  
 DLR: Detection Limit For the Purposes of Reporting

  
 \_\_\_\_\_  
 Cynthia Pigman,  
 QA/QC Supervisor

  
 \_\_\_\_\_  
 Michael Brechmann,  
 Organics Supervisor

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BSK-Pleasanton  
City of Dublin (Dougherty Fire Auth.)

Report Issue Date: 06/12/91  
Date Received: 05/28/91  
Project Number: P91082

Lab Number	Date Sampled	Client's Sample Description		Date Analyzed
Ch912570-9	05/24/91	1400 hrs.	EB-5 #1 at 9.5'	06/06/91
Ch912570-10	05/24/91	1413 hrs.	EB-5 #2 at 13'	05/31/91

Soil Analyses for BTXE, TPH, and TVH

Results Reported in Milligram per Kilogram (mg/kg)


Compound	Lab.No. 2570-9	Lab.No. 2570-10	Detection Limit (DLR)
Benzene .....	ND	ND	0.02
Toluene .....	ND	ND	0.02
Ethylbenzene .....	ND	ND	0.02
Total Xylene Isomers .....	ND	ND	0.02
Total Petroleum Hydrocarbons	ND	--	10.00
Total Volatile Hydrocarbons	ND	ND	10.00

Method: BTXE and TVH -EPA 8020 TPH-DHS GC/FID

ND: None Detected

DLR: Detection Limit For the Purposes of Reporting

  
Cynthia Pigman,  
QA/QC Supervisor

  
Michael Brechmann,  
Organics Supervisor

Client Name <i>City of Dublin (Daugherty Fire Auth.)</i>			Project or PO # <i>191082</i>			Lab Use Only in this section Analysis required BTEX FTVH TPH Lead-Stc Hazardous sample Special handling required 6-7-91						
Address <i>1181 Quercy Lane, Bldg. 300</i>			Phone # <i>415 462 4000</i>									
City, State, Zip <i>Pleasanton, CA 94566</i>			Report, attention <i>Tim Berger</i>									
Date sampled	Time sampled	Type (See key below)	Sampled by	Number of containers	Lab Sample number	Sample Seals (See key below)					Remarks	
<i>5/24/91</i>	<i>09:14</i>	<i>SO</i>	<i>Tim Berger</i>	<i>1</i>	<i>-1</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>Insert tube PID to 36</i>
	<i>09:20</i>			<i>1</i>	<i>-2</i>		<i>X</i>	<i>X</i>				
	<i>10:30</i>			<i>1</i>	<i>-3</i>		<i>X</i>	<i>X</i>				
	<i>10:50</i>			<i>1</i>	<i>-4</i>		<i>X</i>					
	<i>12:10</i>			<i>1</i>	<i>-5</i>		<i>X</i>	<i>X</i>				
	<i>12:20</i>			<i>1</i>	<i>-6</i>		<i>X</i>					
	<i>13:15</i>			<i>1</i>	<i>-7</i>		<i>X</i>	<i>X</i>				
	<i>13:30</i>			<i>1</i>	<i>-8</i>		<i>X</i>					
	<i>14:00</i>			<i>1</i>	<i>-9</i>		<i>X</i>	<i>X</i>				

IMPORTANT NOTICE: No samples will be analyzed without an authorized signature in this section.

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. E.P.A. SW 846 and that there is no extra charge for this service.

By: *Tim Berger*  
Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of \$50.00 per work order or \$5.00 a bottle, whichever is greater.

By: \_\_\_\_\_ Authorized Signature

Signature	Print Name	Company	Date	Time
<i>Tim Berger</i>	<i>Tim Berger</i>	<i>BSK &amp; Assoc.</i>		
<i>Cecil Harris</i>	<i>C. Harris</i>	<i>BSK Lab</i>	<i>5-22-91</i>	<i>1605</i>
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by				

**BSK** & Associates Chemical Laboratories

KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other  
 Seals: P-Present A-Absent B-Broken  
 DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR  
 Note:  
 Samples are discarded 14 days after results are reported unless other arrangements are made.  
 Hazardous samples will be returned to client or disposed of at client expense.

1414 Stanislaus Street Fresno, California 93706  
 Telephone (209) 485-8310 • Fax (209) 485-7427

FIGURE: A-7

2 of 2

1000-7730

BSK Log Number 2570

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

Client Name <u>City of Dublin (Dougherty Fire Authr.)</u>			Project or PO# <u>P91082</u>			Lab Use Only in this section	Analysis required									
Address <u>1181 Quarry Lane, Bldg. 300</u>			Phone # <u>415 462 4000</u>				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TVH + BTXE</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Hazardous sample Special handling required</div> <div style="font-size: 2em;">6-7-91</div> </div>									
City, State, Zip <u>Pleasanton, CA 94566</u>		Report, attention <u>Tim Berger</u>														
Date sampled	Time sampled	Type (See key below)	Sampled by	Number of containers	Lab Sample number	Sample Seals (See key below)	Remarks									
<u>5/24/91</u>	<u>14:13</u>	<u>SO</u>	<u>Tim Berger</u>	<u>1</u>	<u>-10</u>	<u>P</u>	<u>x soil tube</u>									

IMPORTANT NOTICE: No samples will be analyzed without an authorized signature in this section.

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. EPA. SW 846 and that there is no extra charge for this service.

By: Tim Berger  
Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of \$50.00 per work order or \$5.00 a bottle, whichever is greater.

By: \_\_\_\_\_  
Authorized Signature

Signature	Print Name	Company	Date	Time
<u>Tim Berger</u>	<u>Tim Berger</u>	<u>BSK - P</u>		
<u>Cecil Harris</u>	<u>C. Harris</u>	<u>BSK Lab</u>	<u>5-28-91</u>	<u>1605</u>
Relinquished by				
Received by				
Relinquished by				
Received by				

**BSK** & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706  
Telephone (209) 485-8310 • Fax (209) 485-7427

**KEY:** Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other  
Seals: P-Present A-Absent B-Broken  
DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR  
Note:  
Samples are discarded 14 days after results are reported unless other arrangements are made.  
Hazardous samples will be returned to client or disposed of at client expense.

FIGURE: A-8