

HK2, Inc./SEMCO

70 CHEMICAL WAY • REDWOOD CITY, CALIFORNIA 94063 • (650) 261-1968 • (650) 261-0735 FAX
GENERAL ENGINEERING & ENVIRONMENTAL CONTRACTORS • LICENSE NO. 719103 (A, B, C57, C61/D40, HAZ, ASB)

February 3, 1998

Ms. Pamela Evans
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: Site Characterization Activities at 510 Lincoln Avenue in Alameda, California (HK2 Project 97-0153)

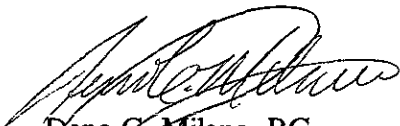
Dear Ms. Evans:

Enclosed is our report summarizing the site characterization activities performed at 510 Lincoln Avenue in Alameda, California. The work was performed in May 1997 and the report was submitted to Mr. Seto on August 7, 1997.

Please call if you have any questions.

Sincerely,

HK2, Inc./SEMCO



Deno G. Milano, RG
Senior Geologist

ENVIRONMENTAL
PROTECTION
97 AUG -8 PM 3:03

SITE CHARACTERIZATION REPORT

Apartment Complex
510 Lincoln Avenue
Alameda, California

#5844
PE

PREPARED BY:

HK2, Inc./SEMCO
1751 Leslie Street
San Mateo, California 94402
(415) 572-8033 phone
(415) 572-9734 fax

PROJECT 97-0153

August 1997

SITE CHARACTERIZATION REPORT

Apartment Complex
510 Lincoln Avenue
Alameda, California

PREPARED BY:

HK2, Inc./SEMCO
1751 Leslie Street
San Mateo, California 94402
(415) 572-8033 phone
(415) 572-9734 fax

PROJECT 97-0153

August 1997

INTRODUCTION

This report presents the results of site characterization activities performed in May 1997 at the apartment complex at 510 Lincoln Avenue in Alameda, California. The site location is shown in Figure 1. Figure 2 is a site plan. The investigation was requested by Ms. Juliet Shin of the Alameda County Health Care Services Agency (ACHCSA) in her letter dated October 1, 1996. The work plan for these activities was prepared by HK2 on March 20, 1997 and approved by Ms. Shin on March 27, 1997. Appendix A contains a copy of Ms. Shin's letters.

SITE DESCRIPTION

The site is owned by Mr. William Sheehan. It is an apartment complex located approximately 150 feet east of 5th Street and 0.25 mile north of San Francisco Bay (see Figure 1). It is in the west-central portion of the East Bay Plain Groundwater Basin (California Regional Water Quality Control Board, 1995), approximately 15 feet above mean sea level (National Geodetic Vertical Datum, 1929), and underlain by imported fill soils and Quaternary saline marsh deposits (predominantly mud) deposited on the Jurassic Cretaceous rocks of the Franciscan Complex (California Department of Conservation, 1990, United States Geological Survey, 1993).

BACKGROUND

On September 20, 1996, HK2 removed one 1,500-gallon underground heating oil storage tank (UST) from the site. No holes were observed in the tank and the concentration of total petroleum hydrocarbons as diesel (TPH-D) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) in soil samples collected from excavated soil and the tank cavity sidewalls were below the laboratory reporting limit (1 mg/kg for TPH-D and 0.005 to 0.010 mg/kg for BTEX). However, 27,000 ug/l of TPH-D was measured in a water sample collected from the tank cavity. Details are in the Tank Removal Report prepared by HK2.

Based on the concentration of TPH-D measured in the water sample, the ACHCSA requested further assessment. Mr. Sheehan contracted HK2 to perform the assessment. HK2's investigation is summarized below.

CURRENT INVESTIGATION

On May 16, 1997, HK2 drilled one 6-inch-diameter hollow-stem auger boring (MW-1; Figure 2) through the former tank cavity to approximately 15 feet below grade (fbg) to evaluate the diesel hydrocarbons encountered in September 1996. The boring was drilled in accordance with the ACHCSA approved work plan dated March 20, 1997. Our general field procedures are in Appendix A. A copy of the Zone 7 Water Agency drilling permit, City of Alameda Excavation Permit, and our boring log is also in Appendix A.

Soil samples were not collected from the boring because groundwater was encountered at approximately 4 fbg and the soil used to backfill the former tank cavity extended to approximately 8 fbg. However, three samples were collected from the soil cuttings for disposal profiling and submitted to North State Environmental (a California certified laboratory) for analysis of TPH-D (Modified EPA Method 8015), BTEX (EPA Method 8020), and cadmium, chromium, lead, nickel, and zinc (EPA 7000 series). A copy of the laboratory report and chain of custody record is in Appendix B.

After completion of the soil boring, HK2 converted the boring into a 0.75-inch-diameter PVC groundwater monitoring well screened from approximately 3.5 to 13.5 fbg. The monitoring well construction detail is depicted on the boring log in Appendix A.

On June 5, 1997, HK2 measured the depth to groundwater in MW-1 and developed the well by purging approximately 12 gallons of water (approximately 53 well casing volumes) with a diaphragm pump. The pH, conductivity and temperature of the water was recorded during well development and are detailed on the well purging log in Appendix B. After developing the well, a groundwater sample was collected and submitted to Global Environmental Laboratory (a California certified laboratory) for analyses of TPH-D (EPA Modified Method 8015) and poly-cyclic aromatic hydrocarbons (PAHs; EPA Method 8100). A copy of the laboratory report and chain of custody record is in Appendix B.

WASTE MANAGEMENT

The soil cuttings and well purge and equipment rinse water was temporarily stored onsite in a 55-gallon drums. On June 5, 1997, HK2 removed the soil from the drum (approximately 0.1 cubic yard) and worked it into an undeveloped onsite planter, as approved by Ms. Juliet Shin of the ACHCSA. On July 10, 1997, HK2 poured the drummed water into the undeveloped planter as approved by Mr. Rico Duazo of the San Francisco Bay Region of the California Regional Water Quality Control Board.

FINDINGS

- Fine to medium grained sand and sand with 5 to 12% silt was observed from grade to approximately 15 fbg (the maximum depth of drilling).
- Depth to groundwater was approximately 4.4 fbg. No free product was observed in the well.
- The TPH-D and BTEX concentration in samples collected from soil cuttings were below the laboratory reporting limit (1 mg/kg for TPH-D and <0.010 mg/kg for BTEX)
- The TPH-D and PAH concentration in groundwater in MW-1 was below the laboratory reporting limit (50 ug/l for TPH-D and 1 ug/l for PAHs)

CONCLUSION

- It does not appear the TPH-D affected groundwater encountered in the tank cavity during tank removal activities was extensive or has adversely impacted the surrounding groundwater based on the analytical results of soil samples collected during tank removal and groundwater samples collected from MW-1.

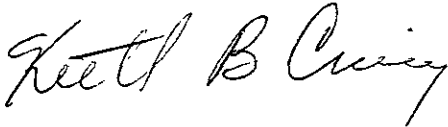
RECOMMENDATION

- HK2 recommends MW-1 be destroyed in accordance with Zone 7 Water Agency requirements and the ACHCSA close this Local Oversight Program (LOP) case based on the findings and conclusions of this report.


LIMATATIONS AND CERTIFICATION

The activities summarized in this report have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an interpretation of the observed conditions. If actual conditions differ from those described in this report, our office should be notified and additional recommendations, if necessary, will be provided.

HK2, Inc./SEMCO



Keith B. Craig
Project Manager



Deno G. Milano, RG #6093
Senior Geologist



kbc 97-0153 SC2

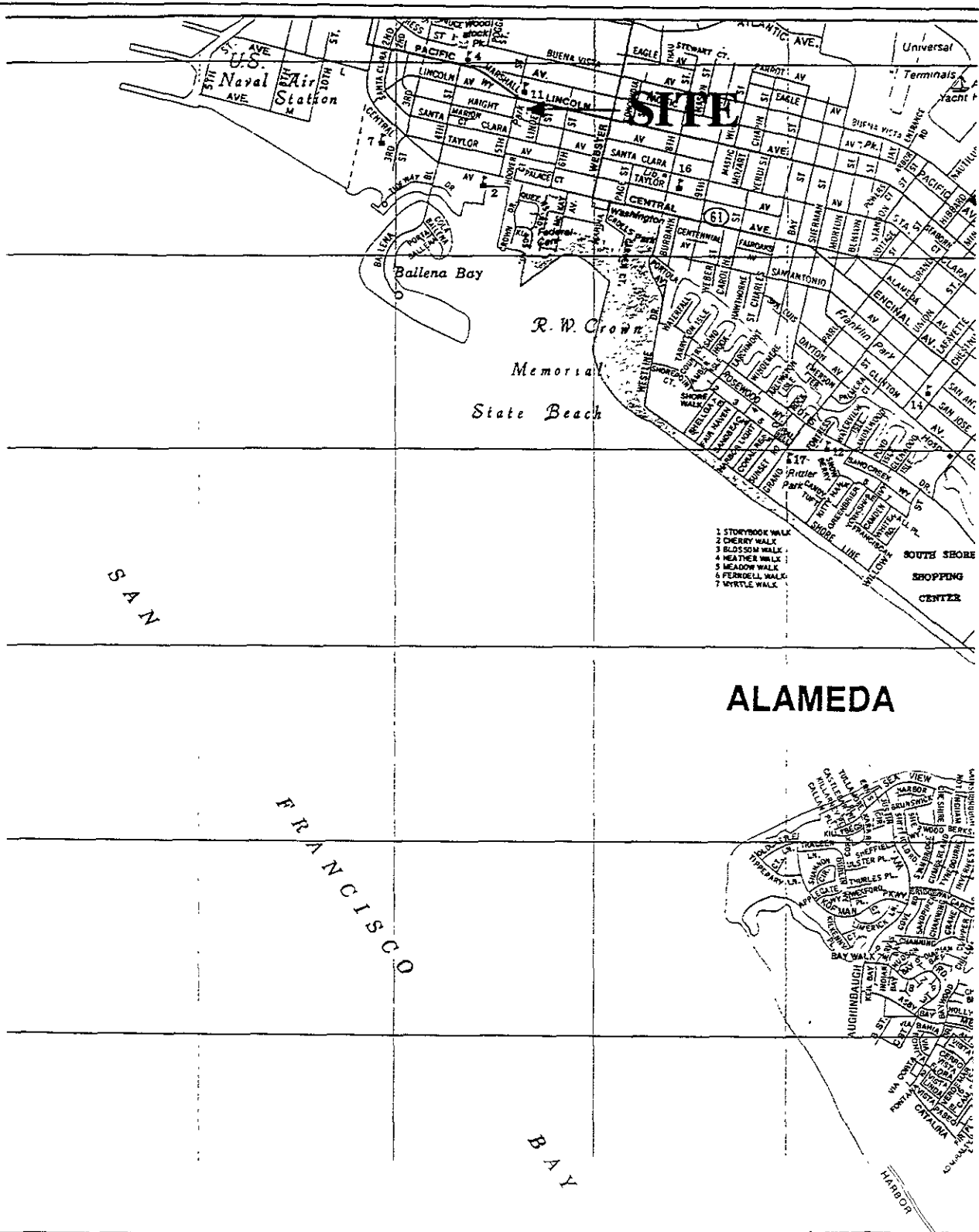
REFERENCES

California Department of Conservation, Division of Mines and Geology, 1990. Geologic Map of the San Francisco-San Jose Quadrangle, Map No. 5A.

California Regional Water Quality Control Board, San Francisco Bay Region, 1995. Water Quality Control Plan, San Francisco Bay Basin (Region 2).

United States Department of the Interior, 1993. Quaternary Geologic Map of the San Francisco Bay, 4 x 6 Quadrangle, United States

HK2/SEMCO, 1996. Tank Removal Report, Apartment Complex, 510 Lincoln Avenue, Alameda, California (September).



HK2, INC./ SEMCO
 1751 Leslie Street
 San Mateo, California 94402

Project No. 97-0153

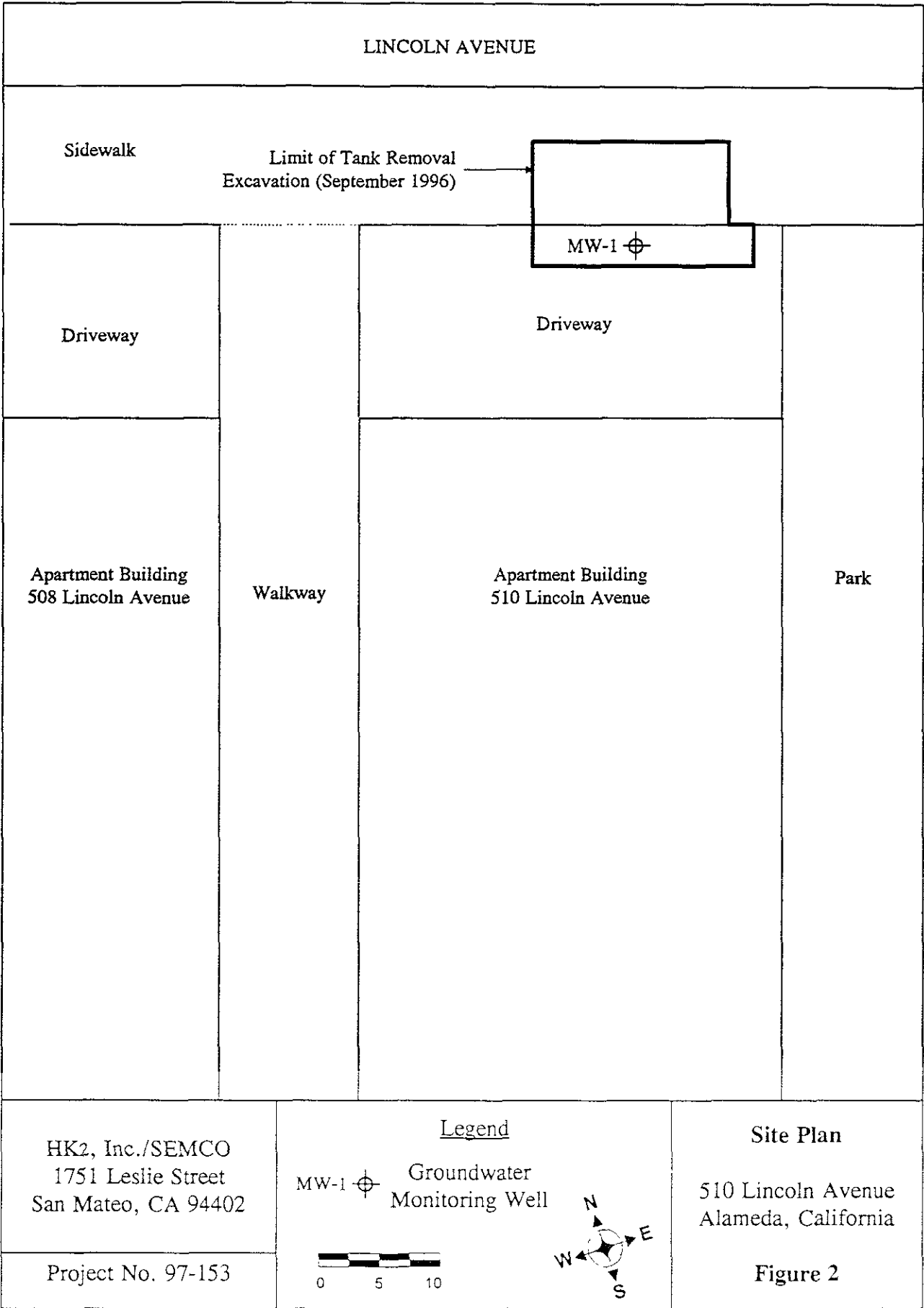
Legend

1 inch Equals
 Approximately
 1/2 mile

Site Location Map

510 Lincoln Avenue
 Alameda, California

Figure 1

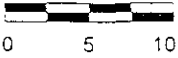


HK2, Inc./SEMCO
 1751 Leslie Street
 San Mateo, CA 94402

Project No. 97-153

Legend

MW-1  Groundwater Monitoring Well



Site Plan

510 Lincoln Avenue
 Alameda, California

Figure 2

APPENDIX A

**CORRESPONDENCE, GENERAL FIELD PROCEDURES, PERMITS,
AND BORING LOG**

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



March 27, 1997

Mr. William & Ed Sheehan
1236 Bay Street
Alameda, CA 94501

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION, LOP
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

STTD 5844

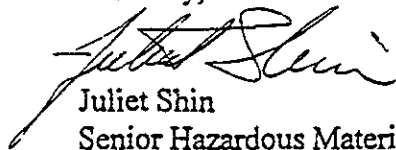
Re: Workplan for investigations at 510 Lincoln Avenue, Alameda, CA

Dear William & Ed Sheehan,

This office has reviewed SEMCO/HK₂, Inc.'s workplan, dated March 20, 1997, for the above site. This workplan is acceptable to this office. Per the workplan, this work shall be implemented within 30 days of the date of this letter, and a report documenting the work shall be submitted to this office within 45 days after completing field activities.

Please notify this office one week in advance of implementing the field work. If you have any questions or comments, please contact me at (510) 567-6763.

Sincerely,



Juliet Shin
Senior Hazardous Materials Specialist

cc: Deno Milano
SEMCO/HK₂, Inc.
1751 Leslie Street
San Mateo, CA 94402

Acting Chief

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



October 1, 1996

William & Ed Sheehan
1236 Bay Street
Alameda, CA 94501

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

STID 5844

Re: Investigations at 510 Lincoln Avenue, Alameda, California

Dear William & Ed Sheehan,

One 1,500-gallon heating oil underground storage tank (UST) was removed from the above site on September 20, 1996. According to my conversations with Mark Dysert, with HK2, Inc./SEMCO, and William Sheehan, this UST contained #6 diesel fuel. Soil samples, and one "grab" groundwater sample were collected from the UST pit and analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) and benzene, toluene, ethylbenzene, and xylenes (BTEX). Although analysis of soil samples did not identify any contaminants above detection limits, analysis of the groundwater sample identified elevated levels of TPHd at 27,000 parts per billion (ppb). According to some references, these concentrations of #6 diesel in the groundwater could be indicative of separate-phase hydrocarbons (i.e., free product).

Guidelines established by the California Regional Water Quality Control Board (RWQCB) require that soil and ground water investigations be conducted when there is evidence to indicate that a release to groundwater may impact human health or the environment (please refer to attached RWQCB interim guidelines). Per these guidelines, the primary goals for the site are the following: 1) to remove any ongoing source of contaminants, including free product; 2) to adequately characterize the extent and severity of the groundwater contaminant plume; 3) to assure that the groundwater contaminant plume is not significantly migrating; and 4) to assure that there is no significant risk to human health or the environment.

Consequently, this office is requesting that a workplan be submitted addressing the concerns outlined in the RWQCB interim guidelines. Based on the recent studies, it has been shown that Polynuclear Aromatic Hydrocarbons (PNAs) are the driving risk in TPHd due to the carcinogenic nature and volatility of many of these constituents. Therefore, the next sampling event should include the analysis for PNAs, in addition to TPHd.

Please submit the requested workplan to this office within 60 days of the date of this letter (i.e., by November 26, 1996).

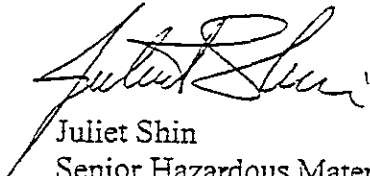
William & Ed Sheehan
Re: 510 Lincoln
October 1, 1996
Page 2 of 2

Per our earlier conversations, the State Water Resources Control Board has a Petroleum Underground Storage Tank Cleanup Fund available to sites to assist in investigations and cleanup. This office encourages you to look into applying to this fund. The address and phone number of the Trust Fund is:

State Water Resources Control Board
Division of Clean Water Programs
UST Cleanup Fund Program
2014 T Street, Ste 130
P.O. Box 944212
Sacramento, CA 94244-2120
(916) 227-4307

Any questions regarding the State Trust Fund can be directed to Cheryl Gordon at (916) 227-4539. If you have any other questions, please contact me at (510) 567-6763.

Sincerely,



Juliet Shin
Senior Hazardous Materials Specialist

ATTACHMENT

cc: Mark Dysert ;
HK2, Inc./SEMCO
1751 Leslie Street
San Mateo, CA 94402

Acting Chief

GENERAL FIELD PROCEDURES

SOIL SAMPLING

The SIMCO Earthprobe 200 can percussion drill a 2.5-inch-diameter boring or, with the rotary drive attachment, rotary drill a 6-inch-diameter boring. Soil samples are collected by hydraulically hammering a 2-foot-long, 1-inch-inner-diameter split-spoon sampler that contains a hollow acetate tube. Following sample retrieval, the acetate tube is removed from the sampler, cut, and the open ends covered with Teflon tape and plastic caps. The date, project number, and sample identification number are written on the tube, then the sample is placed in an ice chest chilled to approximately 4 degrees centigrade. The same information is also recorded on a chain of custody form. The remaining soil in the split-spoon sampler is screened by an organic vapor analyzer and described using the Unified Soil Classification System. Soil samples are collected at a minimum frequency of once every 5 feet, but may also be collected at changes in lithology or within the capillary fringe. Drilling rods, augers, and samplers are steam cleaned, or cleaned with a phosphate free TSP solution and rinsed with water prior to drilling each boring or collecting each sample.

FLUID-LEVEL MONITORING AND GROUNDWATER SAMPLING

Fluid-levels in monitoring wells are measured using an electronic probe or fiberglass tape coated with pastes that indicate the presence of water or free product. Depth to fluid is measured from the top of the well casing which is typically surveyed to a local Bench Mark.

Monitoring wells are purged of groundwater in accordance with the guidelines established by the lead agency. Temperature, pH, and specific conductance are typically measured after one well and annular sand pack volume of water has been removed, and every ½ volume thereafter. Purging is considered complete when these measurements vary by less than 10% from the previous measurements, the well does not recharge to 80% of its pre-purged volume within two hours, or when three borehole volumes of fluid have been removed. The purged water is either pumped directly into a vacuum truck or into labeled drums which are temporarily stored onsite.

Groundwater samples are collected immediately after purging is terminated. The samples are generally collected by lowering a bottom-fill, disposable Teflon bailer into the well to just below the water level. The samples are carefully transferred from the check-valve-equipped bailer to zero-headspace 1-liter or 40-milliliter glass containers fitted with Teflon-lined caps. The project and sample number, date of collection, and sampler's initials are written on each sample and the chain of custody record. The samples are placed in an ice chest and kept chilled to approximately 4° C until they are delivered to a state-certified laboratory for analysis.

WASTE GENERATION AND DISPOSAL

Well purge water and equipment wash and rinse water is pumped into a vacuum truck or temporarily stored onsite in labeled 55-gallon drums. The label indicates drum contents, accumulation date, consultant, consultant phone number, and site address. The fluid in the drums is either discharged to the sewer (as permitted by the local wastewater agency) or transported to an appropriate disposal facility following receipt of analytical results. A copy of each waste manifest is submitted to the lead regulatory agency.



ZON 7 WATER AGENCY

5997 PARKSIDE DRIVE, PLEASANTON, CALIFORNIA 94528-5127 PHONE (510) 484-2600 X235
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 510 Lincoln Avenue
Alameda Ca

PERMIT NUMBER 97269

WELL NUMBER _____

APN _____

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT
Name William Sheehan
Address 1236 Bay ST Phone (510) 522-0978
City Alameda Ca Zip 94501

A. GENERAL

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

APPLICANT
Name HK2, Inc/Securo
Address 1751 Leslie ST Fax (415) 572-9734
City San Mateo Ca Phone (415) 572-9033
Zip 94402

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

- | | | | |
|---------------------|-------------------------------------|----------------------------|-------------------------------------|
| Construction | <input type="checkbox"/> | Geotechnical Investigation | <input type="checkbox"/> |
| Cathodic Protection | <input type="checkbox"/> | General | <input type="checkbox"/> |
| Water Supply | <input type="checkbox"/> | Contamination | <input checked="" type="checkbox"/> |
| Monitoring | <input checked="" type="checkbox"/> | Well Destruction | <input type="checkbox"/> |

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

- | | | | |
|--------------|--------------------------|----------------------|--------------------------|
| New Domestic | <input type="checkbox"/> | Replacement Domestic | <input type="checkbox"/> |
| Municipal | <input type="checkbox"/> | Irrigation | <input type="checkbox"/> |
| Industrial | <input type="checkbox"/> | Other _____ | <input type="checkbox"/> |

DRILLING METHOD:

- | | | | | | |
|------------|--------------------------|------------|-------------------------------------|------------------|-------------------------------------|
| Mud Rotary | <input type="checkbox"/> | Air Rotary | <input type="checkbox"/> | Auger | <input type="checkbox"/> |
| Cable | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> | Perussion Hammer | <input checked="" type="checkbox"/> |

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

DRILLER'S LICENSE NO. C-57-719103

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

WELL PROJECTS

Drill Hole Diameter	<u>2.5</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>15</u> ft.
Surface Seal Depth	<u>None</u> ft.	Number	<u>5</u>

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS

GEOTECHNICAL PROJECTS

Number of Borings	<u>5</u>	Maximum	
Hole Diameter	<u>2.5</u> in.	Depth	<u>15</u> ft.

Temporary wells will be destroyed after sampling. Only 1 boring will be completed on May 2, 1997 and the others will be scheduled 2 weeks later if required by Alameda County.

ESTIMATED STARTING DATE May 1, 1997

ESTIMATED COMPLETION DATE May 16, 1997

Approved Wyman Hong Date 30 Apr 97

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-88.

APPLICANT'S SIGNATURE Keith B Craig Date 4-25-97

CITY OF ALAMEDA
ENGINEERING OFFICE

2251 Central Ave., Room 250
Alameda, CA 94501

EXCAVATION PERMIT

Permit No: EX97-005
STATUS: APPROVED

Applied : 04/28/97
Approved : 04/30/97

JOB ADDRESS : 510 LINCOLN AVE
Parcel number : 074 -0439-002-00
OWNER : SHEERAN WILLIAM J & RENEE G & ED
1236 BAY ST
ALAMEDA CA 94501

APPLICANT : HK2 INC DBA SEMCO
1751 LESLIE STREET
SAN MATEO, CA 94402
415-572-8033

JOB DESCRIPTION: SOIL SAMPLES
Project Desc. : SOIL SMPAPLES
CONTRACTOR : HK2 INC DBA SEMCO
1751 LESLIE STREET
SAN MATEO, CA 94402

Lic. C 719103 415-572-8033

Fee description	Units	Fee/Unit	Ext fee	Date
FILING FEE (ENTER "Y" IF YES)		30.00		Y
EXCAVATION PERMIT FEE.....	51.51		51.51	
TOTAL			81.51	

*** Fees Required *** Fees Collected & Credits ***

Account No.	Receipt No	Date	Payment
001-300-4210-3720	R9701821	04/28/97	51.51
001-300-4240-3725	R9701511	04/28/97	30.00
001-300-4240-3790	R9701921	04/28/97	5.00
310-300-9409-3790	R9701821	04/29/97	5.14
001-300-4240-3792	R9701821	04/29/97	5.06
Fees:	81.51		
Adjustments:	.00	Total Credits:	.00
Total fees:	81.51	Total Payments:	81.51
		Balance Due:	.00

CALL 748-4614 OR 748-4518 FOR INSPECTION.
=====

NOTE: ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY MUST HAVE BARRICADES WITH FLASHERS FOR NIGHT TIME PROTECTION.

THIS IS TO CERTIFY THAT THE ABOVE WORK HAS BEEN COMPLETED TO MY SATISFACTION AND APPROVAL.

Date _____
INSPECTOR

CALL 748-4614 OR 748-4518 FOR INSPECTION

**CITY OF ALAMEDA
CENTRAL PERMIT OFFICE**

510-748-4530

2250 CENTRAL AVENUE, ROOM 190
ALAMEDA, CA 94501

APPLICATION FOR PERMIT TO EXCAVATE IN THE RIGHT-OF-WAY OF THE CITY OF ALAMEDA

SERVICE NUMBER _____

DATE April 27 19 97

Application is hereby made for a permit to excavate on the 510 North side of
510 Lincoln Ave. St. 100 feet East of
5th St.

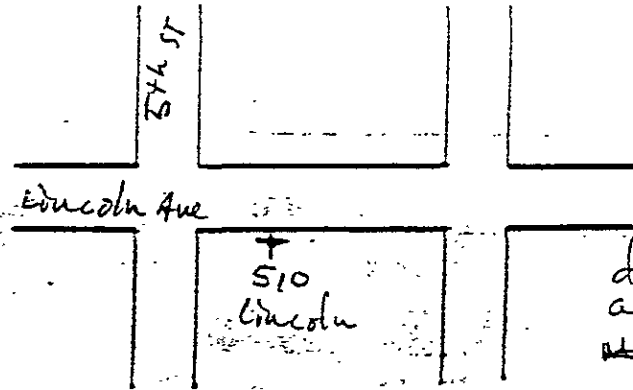
House No. 510 Owner William Sheehan

For the purpose of drilling and sampling of soil and groundwater
as part of the decontamination of an underground storage tank

Name of Applicant North County/CEMCO Address 1751 Leslie St San Mateo

Phone (415) 572-8033

VERBAL APPROVAL
Date _____
By _____
Reasons: _____



drilling is on private property adjacent to sidewalk.

Diagram of Proposed Work

FOR OFFICE USE ONLY

- This permit to be Inspected by ENGINEERING DIVISION MAINTENANCE DIVISION
- ALL STRIPING, PAINTED GRAPHICS AND PAVEMENT MARKERS DAMAGED OR DESTROYED BY STREET EXCAVATION WORK ARE TO BE RESTORED BY THE PERMITEE.
- ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY MUST HAVE BARRICADES WITH FLASHERS FOR NIGHT TIME PROTECTION.
- ALL WORK INVOLVED IS TO BE DONE IN ACCORDANCE WITH STANDARD CITY OF ALAMEDA SPECIFICATIONS AND CITY OF ALAMEDA PRACTICES ALL TO THE SATISFACTION OF THE CITY ENGINEER. INSPECTION CHARGES SHALL BE PAID TO THE CITY MONTHLY ACCEPTANCE OF THIS PERMIT CONSTITUTES ACCEPTANCE OF THE CONDITIONS INCLUDED.

CONCRETE PERMIT REQUIRED _____ SIGNATURE _____ DATE _____

NO OPEN TRENCH CUTTING _____ SIGNATURE _____ DATE _____

STATE PERMIT REQUIRED _____ SIGNATURE _____ DATE _____

SPECIAL CONDITIONS _____ SIGNATURE _____ DATE _____

RECEIVED DATE 4-28-97 SIGNED [Signature] PERMIT # EX97-005

APPROVAL DATE 4-30-97 SIGNED [Signature]

Depth (Feet)	Recovery/ Sample ID	Blow Counts	Organic Vapor (ppm)	USCS Soil Type	Description	Well Construction Detail
1	NA	NA	NA		Concrete	Well box & well cap
						Neat Cement
						Bentonite Seal
						Blank Casing
5				SP	Moist to saturated, dark brown SAND	▼ Screened Casing (0.020 inch)
						#2/12 Sand
10				SP-SM	Saturated, moderate brown, fine-to medium-grained SAND with silt	
						Threaded end cap
15						Native Soil
20						
25						

WELL NUMBER	MW-1	LEGEND
LOCATION	510 Lincoln Avenue Alameda, California	
PROJECT NO	97-0153	NA = not applicable
DRILLING CONTRACTOR	HK2, Inc./SEMCO	Borehole diameter = 6 inch
DRILLING METHOD	Hollow-stem Auger	Well diameter = 0.75 inch
DRILLING DATE	May 16, 1997	▼ = depth to water measured on May 16, 1997
LOGGED BY	K. Craig	Borehole terminated at 15 feet below grade

APPENDIX B

**WELL PURGING LOG, LABORATORY REPORTS,
AND CHAIN OF CUSTODY RECORDS**

Quarterly Monitoring Data Sheet

Date: 6-5-99
 Project Location: 570 Lincoln Ave
Haneda
 Sampler: K. Kulkarny

Well Diameter: 3/4" Well ID: MW-1
 Well Type: Monitoring well
 Total Depth as Built: 13.0'
 Screened Interval: 13 to 3'

Water Level Data

Time Depth Sounded: 1345
 Measured Depth to Water: 4.40
 Measured Total Depth: 13.0

Purge Calculation (Min 3 Casing Volumes)

gal/ft X ft = gal X 3 = gal
 _____ X _____ = _____ X 3 = _____

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (F)	EC (µs/cm)	pH	Turbidity (NTU)
1420	0.1	2.0	82.6	2600	7.75	Highly
1500		4.5	79.3	4040	8.31	Moderately
1530		6.0	79.5	3200	8.40	Moderately
1545		7.0	79.3	3700	8.41	
1600		9.0	79.1	3000	8.20	Slightly
1630		11.0	79.0	2900	8.10	Slightly

Observations/Comments: 1645 12.0 79.0 2700 8.05 slightly

Laboratory Analysis:

Data for Volume Calculation:

1 cu. ft. = 7.48 gal = 62.4 lbs (approx) 1 gal = 0.134 cu. ft. = 8.34 lbs (approx)
 2" well = 0.163 gal/linear ft. 3" well = 0.367 gal/linear ft.
 4" well = 0.653 gal/linear ft. 6" well = 1.469 gal/linear ft.

GE Global Environmental Laboratory, Inc.

4118 CLIPPER COURT, FREMONT, CA 94539

PHONE: (510) 498-1991 FAX: (510) 498-1994

TPH-DIESEL REPORT
(ug/L)

Client: Mr. Deno Milano
Semco
1751 Leslie St.
Man Mateo, CA 94402
Project: 510 Lincoln, Alameda
Matrix: Water

Date Sampled: 06-05-97
Date Received: 06-06-97
Date Analyzed: 06-13-97
Date Reported: 06-17-97
Lab Job #: 970606A

Client I.D.	Lab. I.D.		8015M Diesel		Dilution Factor
MW 1	970113A01		ND		1
Reporting Limit			50 ug/L		

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

ELAP#: 2132


Lisheng Wu, Laboratory Manager

EPA 8100 REPORT
(ug/L)

Attn.: Mr. Deno Milano
Semco
1751 Leslie St.
Man Mateo, CA 94402
Project: 510 Lincoln, Alameda
Matrix: Water
Client ID# MW-1

Date Sampled: 06-05-97
Date Received: 06-08-97
Date Analyzed: 06-10-97
Date Reported: 06-17-97
Lab. Project #: 970606A
Lab. ID# 970606A01
Dilution Factor 1

COMPOUND	Result	Reporting Limit
naphthalene	ND	1.0
acenaphthene	ND	1.0
acenaphthylene	ND	1.0
fluorene	ND	1.0
phenanthrene	ND	1.0
anthracene	ND	1.0
fluoranthene	ND	1.0
pyrene	ND	1.0
benzo (a) anthracene	ND	1.0
chrysene	ND	1.0
benzo(b) fluoranthene	ND	1.0
benzo(k) fluoranthene	ND	1.0
benzo(a) pyrene	ND	1.0
indeno(1,2,3-cd)pyrene	ND	1.0
dibenzo(a,h)anthracene	ND	1.0
benzo(g,h,i) perylene	ND	1.0

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

ELAP#: 2132



Lei Chen, Laboratory Director

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #. 970606A

Lab I.D. : 970606A-MSP
 Client Project: 1751 Leslie St.
 Ext/Prep. Method: EPA 3510
 Date: 06-17-97

Analytical Method: EPA M. 8015
 Analysis date: 06-17-97
 Matrix: Water
 Unit: ug/L

Analyte	Sample Result	Spike Level	SP Result	SP %R	SPD Result	SPD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
TPH Diesel	0.0	1000.0	884.9	88.5	841.6	84.2	86.3	70.0	130.0	5.0	30.0

Notes:

- Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
- Spike Level- Level of Concentration Added to the Sample
- MSP Result- Matrix Spike Result
- MSP %R- Matrix Spike Percent Recovery
- MSPD Result- Matrix Spike Duplicate Result
- MSPD %R- Matrix Spike Duplicate Percent Recovery
- AVG. %R - Average Recovery for MSP & MSPD % Recovery
- LCL- Lower Criteria Level
- UCL- Upper Criteria Level
- RPD- Relative Percent Difference

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 970606A

Lab I.D. Number: 970606A-MSP
 Client Project: 510 Lincoln, Alameda
 Ext/Prep. Method: EPA 3510
 Date: 06-10-97

Analytical Method: EPA 8100
 Analysis date: 06-15-97
 Matrix: Water
 Unit: ug/L

Analyte	Sample Result	Spike Level	MS Result	MS %R	MSD Result	MSD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
Acenaphthene	0	20	19.84	99	20.59	103	101	46	118	4	31
Pyrene	0	20	19.34	97	20.08	100	99	26	127	4	31
Chrysene	0	20	19.37	97	21.79	109	103	26	127	12	31

Notes:

- Spike Level- Level of Concentration Added to the Sample
- MS Result- Matrix Spike Result
- MS %R- Matrix Spike Percent Recovery
- MSD Result- Matrix Spike Duplicate Result
- MSD %R- Matrix Spike Duplicate Percent Recovery
- LCL- Lower Criteria Level
- UCL- Upper Criteria Level
- RPD- Relative Percent Difference

Jun-18-97 11:11A



North State Environmental Analytical Laboratory

Phone: (415) 588-9652 Fax: (415) 588-1950

Chain of Custody / Request for Analysis
Lab Job No.: _____ Page 1 of 1

Client: SEMCO		Report to: <u>Dano Milano</u>		Phone: <u>(415) 572-8033</u>		Turnaround Time <u>STANDARD</u>		
Mailing Address <u>1751 Leslie Street</u> <u>San Mateo, Ca 94402</u>		Billing to: <u>SAME</u>		Fax: <u>415-572-9734</u>		Date: <u>6-6-97</u>		
Project / Site Address: <u>510 Lincoln Alameda</u> <u>San Mateo Ca</u>		Analysis Requested		PO# / Billing Reference: <u>97-0153</u>		Sampler: <u>Keith Craig</u>		
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Analysis Requested			Comments/Hazards
<u>MW-1</u>	<u>Water</u>	<u>2 Amber liters</u>	<u>no</u>	<u>6-5-97 1730</u>	<u>3015(m)</u> <u>TPH-diesel</u>	<u>8100</u> <u>PNAS</u>		
Relinquished by: <u>[Signature]</u>	Date: <u>6/6/97</u>	Time: <u>11 am</u>	Received by: <u>[Signature]</u>	Time: <u>1:50</u>				Lab Comments
Relinquished by:	Date: <u>6/1/97</u>	Time: <u>11:00</u>	Received by:					
Relinquished by:	Date:	Time:	Received by:					



North State Environmental
Chemical Waste Disposal · Trucking · Consulting

CERTIFICATE OF ANALYSIS

Lab Number: 97-417
Client: Semco HK2
Project: 510 Lincoln Ave., Alameda, CA #97-0153

Date Reported: 06/02/97

Diesel Range Hydrocarbons by Method 8015 M
Benzene, Toluene, Ethylbenzene and Xylenes by Method 8020
Total Cadmium, Chromium, Nickel, Lead and Zinc by AA Spectro

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-417-01		Client ID: SP-1,2,3			SOIL COMP.
Benzene	8020	ND		05/16/97	05/23/97
Ethylbenzene	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Cadmium	7130	ND			05/21/97
Chromium	7190	32	mg/Kg		
Lead	7420	12	mg/Kg		
Nickel	7520	26	mg/Kg		
Zinc	7950	25	mg/Kg		
Diesel	8015M	ND			05/29/97



North State Environmental
 Chemical Waste Disposal - Trucking - Consulting

CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number: 97-417
 Client: Semco HK2
 Project: 510 Lincoln Ave., Alameda, CA #97-0153

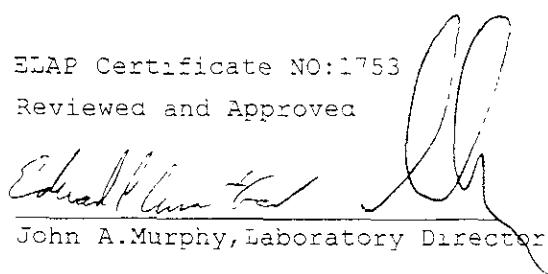
Date Reported: 06/02/97

Diesel Range Hydrocarbons by Method 8015 M
 Benzene, Toluene, Ethylbenzene and Xylenes by Method 8020
 Total Cadmium, Chromium, Nickel, Lead and Zinc by AA Spectro

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
Cadmium	7130	2.0	mg/Kg	ND	102	1
Chromium	7190	5.0	mg/Kg	ND	102	10
Lead	7420	2.0	mg/Kg	ND	104	5
Nickel	7520	5.0	mg/Kg	ND	117	6
Zinc	7950	1.0	mg/Kg	ND	109	6
Benzene	8020	.005	mg/Kg	ND	84	9
Ethylbenzene	8020	.005	mg/Kg	ND	89	9
Toluene	8020	.005	mg/Kg	ND	89	8
Xylenes	8020	.010	mg/Kg	ND	85	5
Diesel	8015M	1.0	mg/Kg	ND	79	1

ELAP Certificate NO: 1753

Reviewed and Approved


 John A. Murphy, Laboratory Director



North State Environmental Analytical Laboratory

Chain of Custody/Request for Analysis

97-417

(415) 588-9652

Client: SEMCO		Phone: (415) 572-8033		Report to: Deno Milano			Turnaround Time: Normal		
Mailing Address: 1751 Leslie St San Mateo, Ca 94402				Billing to: Same			8 Hr <input type="checkbox"/>		24 Hr <input type="checkbox"/>
Site Address: 510 Lincoln Ave Alameda				PO# / Billing Reference: 97-0153 BILL TO SAN MATEO			40 Hr <input type="checkbox"/>		5 Days <input type="checkbox"/>
Sampler: Keith Craig		Date: 5-19-97		Other <input type="checkbox"/>					
Sample ID	Sample Description	Container # / type	Sampling Time/Date	ANALYSIS REQUESTED					Remarks
				TPH-D	TPH-G	BTEX	O+G	LUFT SAMPLERS	
SP-1	Soil Stockpile	Brassliner	5-16-97 1530	X		X		X	Composite ↓
SP-2	↓		↓	X		X		X	
SP-3	↓		↓	X		X		X	
* COMPOSITE THE THREE SAMPLES INTO ONE SAMPLE ANALYZE THE COMPOSITE									
				3 BT. COMPOSITE					
Relinquished by: Milano		Date: 5/19/97 Time: 12:30 PM		Received by: [Signature]			Yes <input type="checkbox"/>		No <input type="checkbox"/>
Relinquished by:		Date: Time:		Received by:			Were samples Preserved ? <input type="checkbox"/>		<input type="checkbox"/>
Relinquished by:		Date: Time:		Received in lab by: [Signature]			In good condition ? <input type="checkbox"/>		<input type="checkbox"/>