UNDERGROUND STORAGE TANK (UST) REMOVAL, SOIL SAMPLING AND LABORATORY ANALYSIS AT WINDSOR SQUARE AUTO SERVICE, 1900 LEWELLING BOULEVARD, SAN LEANDRO, CALIFORNIA FOR VERL'S CONSTRUCTION, INC.

NO. EV-500/E163-01
OCTOBER 18, 1990

ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.
CONSULTANTS IN APPLIED EARTH SCIENCE

EGC

ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.
CONSULTANTS IN APPLIED EARTH SCIENCE

2495 INDUSTRIAL PARKWAY WEST, HAYWARD, CALIFORNIA 94545
TELEPHONE (415) 786-0243 · FAX (415) 732-0289

No. EV-500/E163-01
October 18, 1990

Verl's Construction, Inc.
753 Peralta Ave.
San Leandro, CA 94577

Attention: Mr. Merlin Bowen

SUBJECT: Underground Storage Tank (UST) Removal, Soil Sampling and Laboratory Analysis at Windsor Square Auto Service, 1900 Lewelling Blvd., San Leandro, California.

Gentlemen:

This report describes the results of soil sampling and laboratory results by Environmental Geotechnical Consultants, (EGC) at the above referenced site. The site location is shown on Figure 1. Field work and laboratory analysis were performed in compliance with current Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, dated August 10, 1990.

SCOPE OF WORK

EGC was contracted by Verl's Construction, Inc., (VCI) to perform soil sampling and laboratory analysis of soil samples collected underneath an underground storage tank.

UST REMOVAL

The 285 gallon tank contained waste oil for an unknown length of time. The approximate location of the tank is shown on Figure 2. The UST was removed by VCI. Permits for UST removal, the Closure Plan and the Uniform Hazardous Waste Manifest are included as Appendix A. Excavation began on September 25, 1990. As asphalt surrounding the tank fill pipe was removed, a thick, black, oily substance was observed underneath the asphalt. On September 26, 1990, the interior of the tank was pressure washed and the rinsate vacuumed out by Waste Oil Recovery Systems and taken to their facility in San Leandro.

Solid carbon dioxide (dry ice) was introduced into the tank to displace potentially explosive vapors. City of San Leandro Hazardous Materials Inspector, Mr. Mike Bakaldin, verified safe lower explosive limit (LEL) levels within the tank with a combustible gas indicator. The tank was removed from the excavation and

inspected by Mr. Mike Bakaldin. The 3 foot diameter by 4 foot long tank showed no signs of failure and the UST was loaded onto an H&H Environmental Services flatbed truck and taken to their facility in San Francisco.

FIELD OBSERVATIONS

The approximate extent of the excavation is shown on Figure 2. The excavation was about six feet deep. Backfill soil around the tank was sandy clay and showed stains typical of petroleum product contamination. Photoionization detector (PID) readings on this soil ranged from 40 to 90 ppm as organic vapors. Black, native clay sampled two feet below the excavation had an obvious petroleum product odor. Groundwater was not encountered. The pit was not backfilled, but the area was secured with barricades pending further phases of study.

SAMPLING

The sample point location is shown on Figure 2. Inspector Bakaldin made the decision where to collect the sample as well as indicating which soil represented native material. The sample was taken from the bucket of the backhoe which collected it from eight feet below grade. Each brass liner was packed with soil and both ends were wrapped in aluminum foil and sealed with plastic end caps.

The sample was labelled, logged on a chain-of-custody form and transferred on blue ice to NET Pacific, Inc., an environmental laboratory certified by the California Department of Health Services to perform the required tests. The sample was analyzed for the following:

1. Total Petroleum Hydrocarbons as Gasoline (TPH-G) including Benzene, Toluene, Ethyl Benzene and Xylene (BTEX) by EPA methods 8015 modified/8020.

2. Total Petroleum Hydrocarbons as Diesel (TPH-D) by Department of Health Services - Leaking Underground Fuel Tank Analysis.

3. Oil and Grease by Standard Method 503D/E.

4. Chlorinated Hydrocarbons by EPA method 8240.

5. Additional samples were placed on "HOLD" status for the following analyses pending the results of the EPA 8240 analysis
   Polychlorinated biphenyls (PCB) by EPA method 8080.
   Polynuclear Aromatic Hydrocarbons (PNA) by EPA method 8270.
   Pentachlorophenol (PCP) by EPA method 8270.
   Creosote by EPA method GC/FID/3550.
   Cadmium, Chromium, Lead, Nickel, and Zinc by EPA methods 6010 and 7421.

SUMMARY OF RESULTS

Analyses in micrograms/liter (ppb) unless otherwise noted.

Analysis	Sample No. S-926-1
TPH-D (ppm)	ND
TPH-G (ppm)	160
B	440
T	3,200
E	1,400
X	8,600
Oil/Grease (ppm)	4,600
Chlorinated Hydrocarbons (EPA METHOD 8240)	
Benzene	170
Acetone	150
Carbon disulfide	32
Ethyl benzene	900
Tetrachloroethane	210
Toluene	1,700
1,1,1-Trichloroethane	210
Xylenes, total	5,800
Additional Analyses	
PCP	ND
PCB	ND
Polynuclear Aromatics (EPA METHOD 8270)	
2-Methylnaphthalene	20,000
Naphthalene	12,000
Phenanthrene	2,400
Creosote	ND
Cadmium	ND
Chromium (ppm)	26
Lead (ppm)	15
Nickel (ppm)	28
Zinc (ppm)	29

ND = Analyte not present above laboratory detection limits
Laboratory results are included as Appendix B.

This report has been prepared to aid others in evaluating the current status of the subject property. It is your responsibility to make this report availble to the agency noted below.

Responsible Agency

Mr. Mike Bakaldin
City of San Leandro Fire Department
Civic Center 835 E. 14th Street
San Leandro, California 94577
(415) 577-3331

LIMITATIONS

The scope of work of this project was strictly limited to the sampling and analysis of a single soil sample from underneath an UST. Geotechnical services such as soil borings, compaction testing and observations were not a part of this scope of work. No warranty, express or implied, is given with regard to the general environmental condition of the subject property.

Please contact EGC if you have any questions or require additional information.

Very truly yours,

ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.

Nick Giuntoli
Environmental Specialist

Gregory R. Millikan
Senior Project Hydrogeologist

Reviewed by:

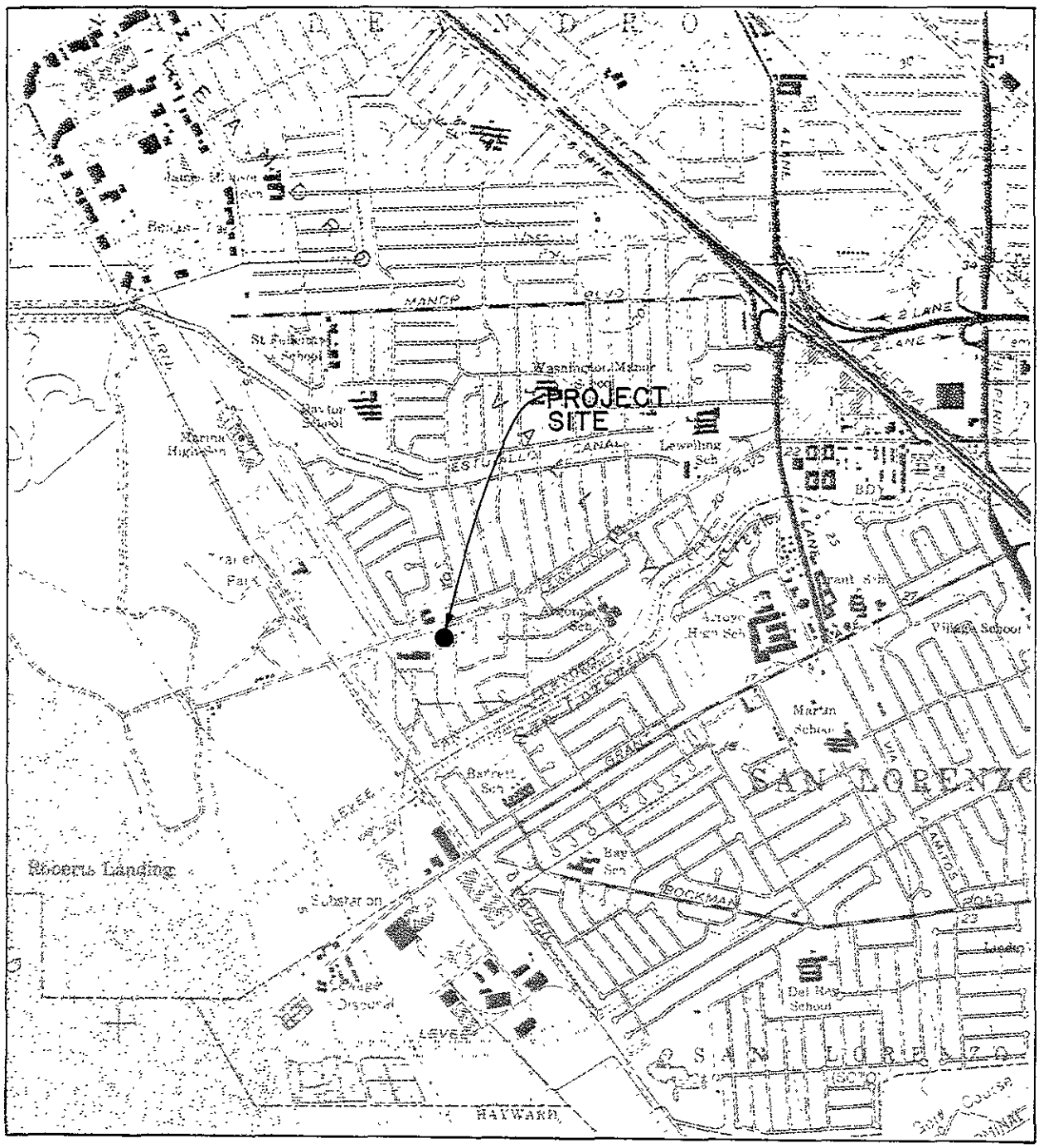
Irving D. Affeldt, CEG, REA
Principal

REGISTERED GEOLOGIST
IRVING DEAN AFFELDT
NO 1106
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

mak

FIGURES

125311



0 2000 4000 FT
APPROXIMATE SCALE

NOTES

1. BASE MAP TAKEN FROM USGS SAN LEANDRO (1980), CALIFORNIA, 7.5 MINUTE QUADRANGLE.

DATE	10/09/90
JOB NO.	E163-01
DWG. NO.	E163-01/1
DRAWN	N TOOR
CHK'D	G MILLIKAN
APP'D	J HICKS

EGC ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.
CONSULTANTS IN APPLIED EARTH SCIENCE

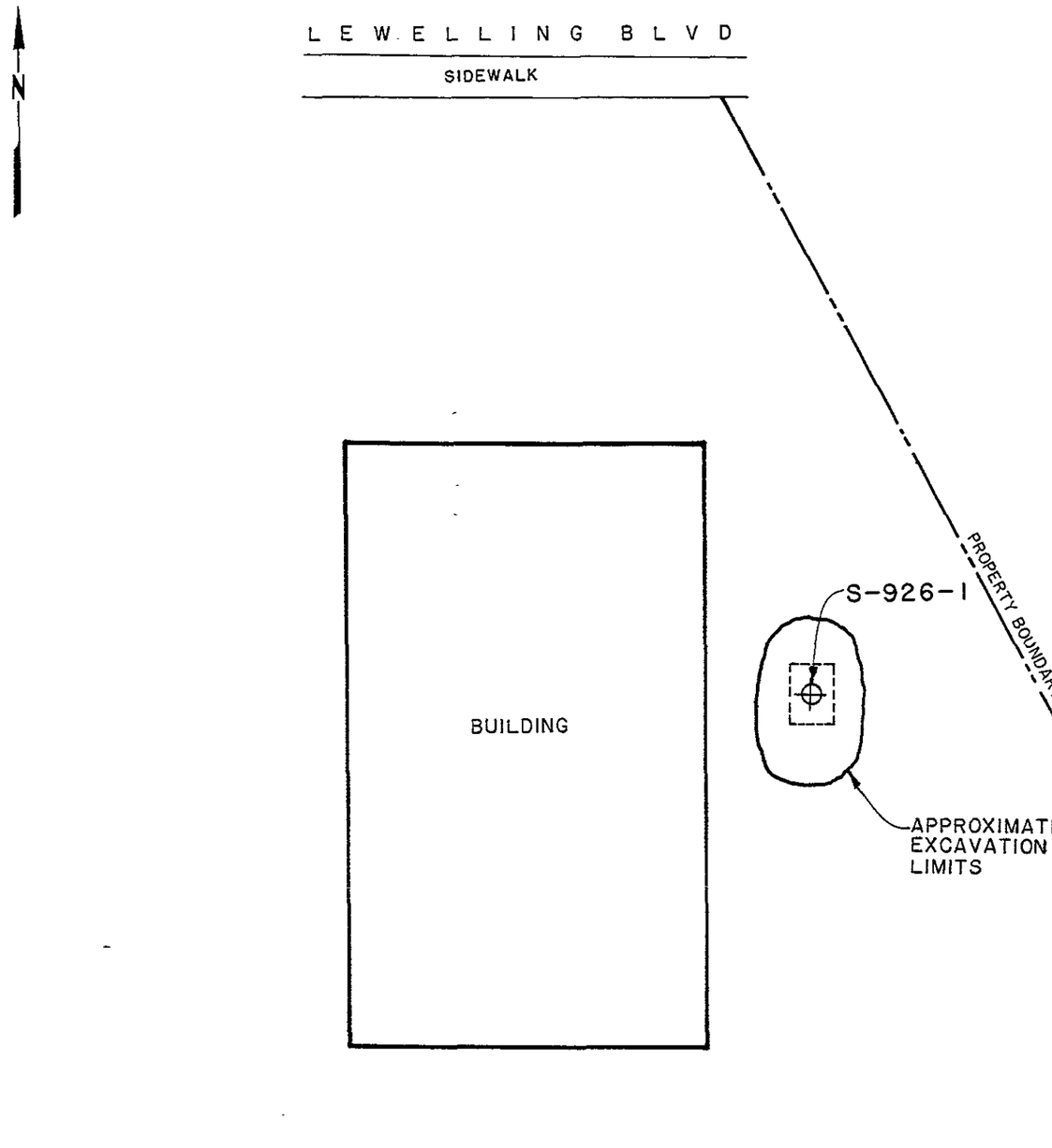
PROJECT SITE LOCATION MAP

WINDSOR SQUARE
1900 LEWELLING BLVD, SAN LEANDRO, CALIFORNIA
VERL'S CONSTRUCTION, INC

FIGURE NO. 1

REV NO.

120619



NOTES

1. MAP BASED ON APPROXIMATE FIELD MEASUREMENTS (09/26/90).

EXPLANATION

⊕ APPROXIMATE SOIL SAMPLE LOCATION

▭ APPROXIMATE FORMER TANK LOCATION

0 10 20 FT
APPROXIMATE SCALE

NO.	DATE	ZONE	DESCRIPTION	DRAWN	APPROVED

REVISIONS

PROFESSIONAL SEAL

DATE	10/09/90
JOB NO.	E163-01
DWG NO.	E163-01/2
DRAWN	N TOOR
CHK'D	G MILLIKAN
APP'D	J HICKS

EGC ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.
CONSULTANTS IN APPLIED EARTH SCIENCE

SITE PLAN AND SOIL SAMPLE LOCATION MAP

WINDSOR SQUARE
1900 LEWELLING BLVD, SAN LEANDRO, CA

VERL'S CONSTRUCTION INC.

FIGURE NO. 2

REV NO.

APPENDIX A

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

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

NOTIFICATION FORM

☒ Removal or Replacement of Tanks
☐ Excavation of Contaminated Soil

SITE INFORMATION

Close

ADDRESS 1900 LEWELLING ST.
CITY, ZIP SAN LEANDRO, CA. 94579
OWNER NAME JOHNNY LIN
CROSS LOCATION OF PROJECT? CROSS WINDSOR MARKET

TANK REMOVAL

SCHEDULED STARTUP DATE 9-26-90
VAPORS REMOVED BY: 11:00 A.M.
☐ WATER WASH
☐ VAPOR FREEING (CO^2)
☐ VENTILATION

CONTAMINATED SOIL EXCAVATION

SCHEDULED STARTUP DATE _____
STOCKPILES WILL BE COVERED? YES ____ NO ____
ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):

(MAY REQUIRE PERMIT)

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

SEP 24 RECD

CONTRACTOR INFORMATION

NAME VERL'S CONSTRUCTION INC CONTACT MERLIN BOWEN
ADDRESS 753 PERALTA AVE. PHONE (415) 352-1234 351-2525
CITY, STATE, ZIP SAN LEANDRO, CA. 94577

CONSULTANT INFORMATION
(IF APPLICABLE)

NAME E.G.C. CONTACT GREG MILIKAN
ADDRESS 2495 INDUSTRIAL BLVD PHONE (415) 786-0243
CITY, STATE, ZIP HAYWARD, CA. 94804

OFFICE USE ONLY

FORM RECEIVED 9-24-90 BY _____ (INIT.)
INSPECTOR NO. 492 DATE 9-25-90 BY _____ (INIT.)
PHONE UPDATE: CALLER _____ CHANGE MADE _____
PO # _____

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM

- [ ] 1 NEW PERMIT
- [ ] 2 INTERIM PERMIT
- [ ] 3 RENEWAL PERMIT
- [ ] 4 AMENDED PERMIT
- [ ] 5 CHANGE OF INFORMATION
- [ ] 6 TEMPORARY TANK CLOSURE
- [ ] 7 PERMANENTLY CLOSED TANK
- [X] 8 TANK REMOVED

FACILITY / SITE NAME WHERE TANK IS INSTALLED: WINDSOR SQUARE

I. TANK DESCRIPTION

COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN

A. OWNER'S TANK I.D. #: UNKNOWN
B. MANUFACTURED BY: D
C. YEAR INSTALLED: UNKNOWN
D. TANK CAPACITY IN GALLONS: 550 GALLON

II. TANK CONTENTS

IF A-1 IS MARKED, COMPLETE ITEM C.

A.
- [ ] 1 MOTOR VEHICLE FUEL
- [ ] 2 PETROLEUM
- [ ] 3 CHEMICAL PRODUCT
- [ ] 4 OIL
- [ ] 80 EMPTY
- [ ] 95 UNKNOWN

B.
- [ ] 1 PRODUCT
- [X] 2 WASTE

C.
- [ ] 1 UNLEADED
- [ ] 2 LEADED
- [ ] 3 DIESEL
- [ ] 4 GASAHOL
- [ ] 5 JET FUEL
- [ ] 6 AVIATION GAS
- [ ] 7 METHANOL
- [ ] 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED: ____ C.A.S. #: ____

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D

A. TYPE OF SYSTEM
- [ ] 1 DOUBLE WALLED
- [ ] 2 SINGLE WALLED
- [X] 3 SINGLE WALLED WITH EXTERIOR LINER
- [ ] 4 SECONDARY CONTAINMENT
- [ ] 95 UNKNOWN
- [ ] 99 OTHER ____

B. TANK MATERIAL (Primary Tank)
- [ ] 1 BARE STEEL
- [ ] 2 STAINLESS STEEL
- [ ] 3 FIBERGLASS
- [ ] 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC
- [ ] 5 CONCRETE
- [ ] 6 POLYVINYL CHLORIDE
- [ ] 7 ALUMINUM
- [ ] 8 100% METHANOL COMPATIBLE FRP
- [ ] 9 BRONZE
- [ ] 10 GALVANIZED STEEL
- [ ] 95 UNKNOWN
- [ ] 99 OTHER ____

C. INTERIOR LINING
- [ ] 1 RUBBER LINED
- [ ] 2 ALKYD LINING
- [ ] 3 EPOXY LINING
- [ ] 4 PHENOLIC LINING
- [ ] 5 GLASS LINING
- [X] 6 UNLINED
- [ ] 95 UNKNOWN
- [ ] 99 OTHER ____

IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ___ YES ___ NO

D. CORROSION PROTECTION
- [ ] 1 POLYETHYLENE WRAP
- [ ] 2 COATING
- [ ] 3 VINYL WRAP
- [ ] 4 FIBERGLASS REINFORCED PLASTIC
- [ ] 5 CATHODIC PROTECTION
- [ ] 91 NONE
- [X] 94 UNKNOWN
- [ ] 99 OTHER ____

IV. PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE (MARK ALL THAT APPLY)

A. SYSTEM TYPE: A (U) 1 SUCTION; A U 2 PRESSURE; A U 3 GRAVITY; A U 99 OTHER
B. CONSTRUCTION: A (U) 1 SINGLE WALLED; A U 2 DOUBLE WALLED; A U 3 LINED TRENCH; A U 95 UNKNOWN; A U 99 OTHER
C. MATERIAL AND CORROSION PROTECTION: A (U) 1 BARE STEEL; A U 2 STAINLESS STEEL; A U 3 POLYVINYL CHLORIDE (PVC); A U 4 FIBERGLASS PIPE; A U 5 ALUMINUM; A U 6 CONCRETE; A U 7 STEEL W/ COATING; A U 8 100% METHANOL COMPATIBLE FRP; A U 9 GALVANIZED STEEL; A U 10 CATHODIC PROTECTION; A U 95 UNKNOWN; A U 99 OTHER ____
D. LEAK DETECTION: A U 1 AUTOMATIC LINE LEAK DETECTOR; A U 2 LINE TIGHTNESS TESTING; A U 99 OTHER ____

V. TANK LEAK DETECTION

MARK ALL THAT APPLY

- [ ] 1 VISUAL CHECK
- [ ] 2 INVENTORY RECONCILIATION
- [ ] 3 VAPOR MONITORING
- [ ] 4 AUTOMATIC TANK GAUGING
- [ ] 5 GROUND WATER MONITORING
- [ ] 6 TANK TESTING
- [ ] 7 INTERSTITIAL MONITORING
- [X] 91 NONE
- [ ] 95 UNKNOWN
- [ ] 99 OTHER

VI. TANK CLOSURE INFORMATION

1. ESTIMATED DATE LAST USED (MO/YR): UNKNOWN
2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING: UNKNOWN GALLONS
3. WAS TANK FILLED WITH INERT MATERIAL? YES [ ] NO [ ]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE): CATHERINE L. MAYER — DATE: ____

LOCAL AGENCY USE ONLY

COUNTY # | JURISDICTION # | FACILITY ID # | TANK ID #

PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE | STATE SURCHARGE AMOUNT

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED.

FORM B (1-90)

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM: [X] 1 NEW PERMIT [ ] 2 INTERIM PERMIT [ ] 3 RENEWAL PERMIT [ ] 4 AMENDED PERMIT [ ] 5 CHANGE OF INFORMATION [ ] 6 TEMPORARY SITE CLOSURE [ ] 7 PERMANENTLY CLOSED SITE

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

FACILITY/SITE: WINDSOR SQUARE	CARE OF ADDRESS INFORMATION:
ADDRESS: 700 LEWELING BLVD.	NEAREST CROSS STREET:
CITY NAME: SAN LEANDRO	STATE: CA; ZIP CODE: 94579; SITE PHONE # WITH AREA CODE: 415-352-5422

[ ] OWNER OCCUPIED [ ] CORPORATION [ ] INDIVIDUAL [ ] PARTNERSHIP [ ] LOCAL AGENCY [ ] COUNTY AGENCY [ ] STATE AGENCY [ ] FEDERAL AGENCY

TYPE OF BUSINESS: [X] 1 GAS STATION [ ] 2 DISTRIBUTOR [ ] 3 FARM [ ] 4 PROCESSOR [ ] 5 OTHER

[ ] ✓ IF INDIAN RESERVATION OR TRUST LANDS

OF TANKS AT SITE: 7

E.P.A. I.D. # (IF KNOWN): CAC000576000

EMERGENCY CONTACT PERSON (PRIMARY)

DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
JOHNNY LIN	415-352-5422
NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE

EMERGENCY CONTACT PERSON (SECONDARY) - optional

DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
MERLIN BOWEN	415-568-1234
NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME: JOHANNY. LIN	CARE OF ADDRESS INFORMATION:
MAILING OR STREET ADDRESS: P.O. Box 4154	✓ box to indicate: [X] INDIVIDUAL [ ] LOCAL AGENCY [ ] STATE AGENCY [ ] CORPORATION [ ] PARTNERSHIP [ ] COUNTY AGENCY [ ] FEDERAL AGENCY
CITY NAME: SAN LEANDRO	STATE: CA. ZIP CODE: 94579 PHONE # WITH AREA CODE: 415-352-5422

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME: JOHNNY LIN	CARE OF ADDRESS INFORMATION:
MAILING OR STREET ADDRESS: P O. Box 4154	✓ box to indicate: [X] INDIVIDUAL [ ] LOCAL AGENCY [ ] STATE AGENCY [ ] CORPORATION [ ] PARTNERSHIP [ ] COUNTY AGENCY [ ] FEDERAL AGENCY
CITY NAME: SAN LEANDRO	STATE: CA. ZIP CODE: 94579 PHONE # WITH AREA CODE: 415-352-5422

IV. LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I. [ ] II. [X] III. [ ]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE
VEALS CONSTRUCTION INC. CATHERINE A. MAYER	

LOCAL AGENCY USE ONLY

COUNTY #	JURISDICTION #	FACILITY ID #	# OF TANKS AT SITE

LOCATION CODE - OPTIONAL	CENSUS TRACT # - OPTIONAL	SUPERVISOR - DISTRICT CODE - OPTIONAL

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

FORM A (1-93)

UNDERGROUND STORAGE TANK CLOSURE PLAN/PERMIT E.P.A. I.D.# CAC000516000

Facility Name: WINDSOR SQUARE Address: 1900 LEWELLING STREET SAN LEANDRO, CA. 94579

Contact Person: JOHNNY LIN Phone No.: 415-352-5422

Contractor: VERL'S CONSTRUCTION, INC. License Type & No.: A, B, & HAZ.

Address: 753 PERALTA AVE., SAN LEANDRO, CA. 94577

Contact Person: MERLIN BOWEN Phone No.: 415-568-1234

Sampling to be performed by: E. G. C. Phone No.: 415-786-0243

Laboratory services to be provided by: NATIONAL ENVIRONMENTAL TESTING INC.

DOHS Certificate No.: 178 Phone No.: 707-526-7200

Tank Hauler: ERICSON EPA ID No.: CAD009466392

Address: 255 PARR BLVD. RICHMOND, CA. 94201 Phone No.: 415-235-1395

Destination of Tank(s): PARR BLVD., RICHMOND, CA.

Method of inerting tank(s): INERTION BY CARBON DIOXIDE

Type or explosimeter or combustible gas meter to be provided: _____

Tanks to be removed:

	Size	Content	Material of Construction	Age	Sample Analysis Method
Tank 1	550 G.	WASTE OIL	STEEL	UNKNOWN	BTEX 8015 MOD 8020
Tank 2					
Tank 3					
Tank 4					
Tank 5					
Piping					

APPENDIX B

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Nick Giuntoli
Environmental Geotechnical
2495 Industrial Parkway W.
Hayward, CA 94545

Date: 10-18-90
NET Client Acct. No: 362
NET Pacific Log No: 4048
Received: 09-27-90 0800

Client Reference Information

VCI-Windsor Square, Project: E-163-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
Oil & Grease(Total)	9071	50	4,600	mg/Kg
Oil & Grease(Non-Polar)	SM503D/E	100	4,000	mg/Kg
Cadmium	6010	5	2	mg/Kg
Chromium	6010	5	26	mg/Kg
Lead (EPA 7421)	7421	0.2	15	mg/Kg
Nickel	6010	5	28	mg/Kg
Zinc	6010	2	29	mg/Kg

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
METHOD 8080				
DATE EXTRACTED			10-07-90	
DATE ANALYZED			10-10-90	
DILUTION FACTOR *			10	
POLYCHLORINATED BIPHENYLS			--	
Aroclor 1016		100	ND	ug/Kg
Arolcor 1221		500	ND	ug/Kg
Aroclor 1232		200	ND	ug/Kg
Aroclor 1242		100	ND	ug/Kg
Aroclor 1248		100	ND	ug/Kg
Aroclor 1254		50	ND	ug/Kg
Aroclor 1260		50	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			20	
DATE ANALYZED			10-01-90	
METHOD GC FID/5030			--	
as Gasoline		1	160	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			20	
DATE ANALYZED			10-01-90	
Benzene		2.5	440	ug/Kg
Ethylbenzene		2.5	1,400	ug/Kg
Toluene		2.5	3,200	ug/Kg
Xylenes, total		2.5	8,600	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			2300	
DATE EXTRACTED			09-27-90	
DATE ANALYZED			09-29-90	
METHOD GC FID/3550			--	
as Diesel		1	ND	mg/Kg
as Motor Oil		10	9,300	mg/Kg
as Creosote		10	ND	mg/kg

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
METHOD 8240				
DATE ANALYZED			10-02-90	
DILUTION FACTOR *			1	
Benzene		5	170	ug/Kg
Acetone		10	150	ug/Kg
Bromodichloromethane		5	ND	ug/Kg
Bromoform		5	ND	ug/Kg
Bromomethane		5	ND	ug/Kg
2-Butanone		10	ND	ug/Kg
Carbon disulfide		5	32	ug/Kg
Carbon tetrachloride		5	ND	ug/Kg
Chlorobenzene		5	ND	ug/Kg
Chloroethane		5	ND	ug/Kg
2-Chloroethyl Vinyl Ether		10	ND	ug/Kg
Chloroform		5	ND	ug/Kg
Chloromethane		5	ND	ug/Kg
Dibromochloromethane		5	ND	ug/Kg
1,2-Dichlorobenzene		5	ND	ug/Kg
1,3-Dichlorobenzene		5	ND	ug/Kg
1,4-Dichlorobenzene		5	ND	ug/Kg
1,1-Dichloroethane		5	ND	ug/Kg
1,2-Dichloroethane		5	ND	ug/Kg
1,1-Dichloroethene		5	ND	ug/Kg
trans-1,2-Dichloroethene		5	ND	ug/Kg
1,2-Dichloropropane		5	ND	ug/Kg
cis-1,3-Dichloropropene		5	ND	ug/Kg
trans-1,3-Dichloropropene		5	ND	ug/Kg
Ethylbenzene		5	900	ug/Kg
2-Hexanone		10	ND	ug/Kg
Methylene chloride		5	ND	ug/Kg
4-Methyl-2-pentanone		10	ND	ug/Kg
Styrene		5	ND	ug/Kg
1,1,2,2-Tetrachloroethane		5	ND	ug/Kg
Tetrachloroethene		5	210	ug/Kg
Toluene		5	1,700	ug/Kg
1,1,1-Trichloroethane		5	210	ug/Kg
1,1,2-Trichloroethane		5	ND	ug/Kg
Trichloroethene		5	ND	ug/Kg
Trichlorofluoromethane		5	ND	ug/Kg
Vinyl Acetate		10	ND	ug/Kg
Vinyl chloride		5	ND	ug/Kg
Xylenes, total		5	5,800	ug/Kg
SURROGATE RESULTS			--	
Toluene-d8			112	% Rec.
Bromofluorobenzene			119	% Rec.

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
1,2-Dichloroethane-d4			102	% Rec.

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
METHOD 8270				
DATE EXTRACTED			10-12-90	
DATE ANALYZED			10-15-90	
DILUTION FACTOR *			5	
Acenaphthene		330	ND	ug/Kg
Acenaphthylene		330	ND	ug/Kg
Aldrin		1600	ND	ug/Kg
Anthracene		330	ND	ug/Kg
Benzidine		1600	ND	ug/Kg
Benzo(a)anthracene		330	ND	ug/Kg
Benzo(b)fluoranthene		330	ND	ug/Kg
Benzo(k)fluoranthene		330	ND	ug/Kg
Benzo(a)pyrene		330	ND	ug/Kg
Benzo(g,h,i)perylene		330	ND	ug/Kg
Benzoic Acid		1600	ND	ug/Kg
Benyzl Alcohol		660	ND	ug/Kg
Butyl benzyl phthalate		330	ND	ug/Kg
delta-BHC		1600	ND	ug/Kg
gamma-BHC		1600	ND	ug/Kg
bis(2-chloroethyl)ether		330	ND	ug/Kg
bis(2-chloroethoxy)methane		330	ND	ug/Kg
bis(2-chloroisopropyl)ethe		330	ND	ug/Kg
bis(2-ethylhexyl)phthalate		330	7,300	ug/Kg
4-Bromophenyl phenyl ether		330	ND	ug/Kg
4-Chloroanaline		660	ND	ug/Kg
2-Chloronaphthalene		330	ND	ug/Kg
4-Chlorophenyl phenyl ethe		330	ND	ug/Kg
Chrysene		330	ND	ug/Kg
4,4'-DDD		1600	ND	ug/Kg
4,4'-DDE		1600	ND	ug/Kg
4,4'-DDT		1600	ND	ug/Kg
Dibenzo(a,h)anthracene		330	ND	ug/Kg
Dibenzofuran		330	ND	ug/Kg
Di-n-butylphthalate		330	ND	ug/Kg
1,2-Dichlorobenzene		330	ND	ug/Kg
1,3-Dichlorobenzene		330	ND	ug/Kg
1,4-Dichlorobenzene		330	ND	ug/Kg
3,3'-Dichlorobenzidine		660	ND	ug/Kg
Dieldrin		1600	ND	ug/Kg
Diethylphthalate		330	ND	ug/Kg
Dimethyl phthalate		330	ND	ug/Kg
2,4-Dinitrotoluene		330	ND	ug/Kg
2,6-Dinitrotoluene		330	ND	ug/Kg
Di-n-octyl phthalate		330	ND	ug/Kg
Endrin aldehyde		1600	ND	ug/Kg

SAMPLE DESCRIPTION: S-926-1 09-26-90
LAB Job No: (-63916)

Parameter	Method	Reporting Limit	Results	Units
Fluoranthene		330	ND	ug/Kg
Fluorene		330	ND	ug/Kg
Heptachlor		1600	ND	ug/Kg
Heptachlor epoxide		1600	ND	ug/Kg
Hexachlorobenzene		330	ND	ug/Kg
Hexachlorobutadiene		330	ND	ug/Kg
Hexachlorocyclopentadiene		330	ND	ug/Kg
Hexachloroethane		330	ND	ug/Kg
Indeno(1,2,3-cd)pyrene		330	ND	ug/Kg
Isophorone		330	ND	ug/Kg
2-Methylnaphthalene		330	20,000	ug/Kg
Naphthalene		330	12,000	ug/Kg
2-Nitroaniline		1600	ND	ug/Kg
3-Nitroaniline		1600	ND	ug/Kg
4-Nitroaniline		1600	ND	ug/Kg
Nitrobenzene		330	ND	ug/Kg
N-Nitroso-Di-N-propylamine		330	ND	ug/Kg
N-Nitrosodiphenylamine		330	ND	ug/Kg
Phenanthrene		330	2,400	ug/Kg
Pyrene		330	ND	ug/Kg
1,2,4-Trichlorobenzene		330	ND	ug/Kg
4-Chloro-3-methylphenol		660	ND	ug/Kg
2-Chlorophenol		330	ND	ug/Kg
2,4-Dichlorophenol		330	ND	ug/Kg
2,4-Dimethylphenol		330	ND	ug/Kg
2,4-Dinitrophenol		1600	ND	ug/Kg
4,6-Dinitro-2-methylphenol		330	ND	ug/Kg
2-Nitrophenol		330	ND	ug/Kg
4-Nitrophenol		1600	ND	ug/Kg
Pentachlorophenol		1600	ND	ug/Kg
Phenol		330	ND	ug/Kg
2,4,6-Trichlorophenol		330	ND	ug/Kg
2-methylphenol		330	ND	ug/Kg
4-methylphenol		330	ND	ug/Kg
2,4,5-Trichlorophenol		330	ND	ug/Kg
SURROGATE RESULTS			--	
Nitrobenzene-d5			66	% Rec.
2-Fluorobiphenyl			86	% Rec.
p-Terphenyl-d14			47	% Rec.
Phenol-d5			52	% Rec.
2-Fluorophenol			38	% Rec.
2,4,6-Tribromophenol			61	% Rec.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	1	mg/Kg	108	ND	73	77	4.6
Benzene	2.5	ug/Kg	98	ND	84	79	6.1
Toluene	2.5	ug/Kg	103	ND	90	87	3.1

COMMENT: Blank Results were ND on other analytes tested.

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Cadmium	5	mg/Kg	110	ND	93	97	4.4
Chromium	5	mg/Kg	105	ND	104	108	3.1
Lead	0.2	mg/Kg	98	ND	87	92	4.0
Nickel	5	mg/Kg	106	ND	102	107	3.8
Zinc	5	mg/Kg	106	ND	101	107	4.9

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Acenaphthene	330	ug/Kg	102	ND	75	104	32
1,4-Dichlorobenzene	330	ug/Kg	113	ND	39	72	60
2,4-Dinitrotoluene	330	ug/Kg	138	ND	27	32	17
Pyrene	330	ug/Kg	125	ND	166	253	41
1,2,4-Trichlorobenzene	330	ug/Kg	100	ND	60	89	38
2-Chlorophenol	330	ug/Kg	109	ND	37	72	64
4-Nitrophenol	1600	ug/Kg	92	ND	30	29	3
Phenol	330	ug/Kg	110	ND	45	75	50

COMMENT: Blank Results were ND on other analytes tested.

Ref: PACIFIC Windsor Square, Project: E-163-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Oil & Grease(Total)	50	mg/Kg	99	ND	92	94	2.7
Oil & Grease(Non-Polar)	100	mg/Kg	99	ND	N/A	N/A	N/A

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
1,1-Dichloroethane	5	ug/Kg	108	ND	94	93	1.1
Trichloroethene	5	ug/Kg	100	ND	77	77	<1
Benzene	5	ug/Kg	99	ND	76	74	2.7
Toluene	5	ug/Kg	102	ND	89	92	3.3
Chlorobenzene	5	ug/Kg	97	ND	96	98	2.1

COMMENT: Blank Results were ND on other analytes tested.

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	97	ND	66	71	7.3
Motor Oil	10	mg/Kg	64	ND	N/A	N/A	N/A

[redacted] Laboratory [redacted]
435 Tesconi Circle, Santa Rosa, CA 95401

2[redacted] I[redacted]str[redacted] Pa[redacted]ay [redacted]t [redacted]
Hayward, CA. 94545
(415) 786-0243 FAX (415) 732-0289

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
E-163-01	VCI- ~~Dee~~ Windsor Square

SAMPLERS: (Signature) N. Giuntoli (Giuntoli)

STA. NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8015 mod / 8020 TPH G BTEX	TPH-D DOHS-LUFT	Oil & Grease EPA 5520	Cd, Cr, Pb, Zn, Ni	PCP, ~~PC~~ PCB, PNA, Creosote
S-926-1	9/26/90			X	soil	3	X	X	X	X	X	X

ANALYSIS: 8015 mod / 8020 TPH G BTEX; TPH-D DOHS-LUFT; Oil & Grease; EPA 6240; Cd, Cr, Pb, Zn, Ni; PCP, ~~PC~~ PCB, PNA, Creosote

Hold on this analysis pending further instructions.

TURNAROUND TIME
( ) 24-48 HOURS
(X) 1 WEEK
( ) 2 WEEKS

4048

custody seal intact 9/27
custody seal 9/26/90 @ 19:00

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
N. Giuntoli	9/26/90 4:25P	Jeff W[illegible] 17:00 9/26/90
Relinquished by: (Signature) Jeff W[illegible]	9/26/90	Received by: (Signature)
Relinquished by: (Signature)	9/27/90 0100	Received for Laboratory by: (Signature) [illegible]

REMARKS: Hold 2 soil tubes for Cd, Cr, Pb, Ni, Zn, PCP, PNA, PCB and Creosote pending further instructions.