SCS ENGINEERS

October 1, 1990 File No. 0389080.01

Mr. Verl Rothlisberger Verl's Construction, Inc. 753 Peralta Avenue San Leandro, California 94577

Subject: Final Report, Groundwater Investigation,

342-105th Avenue

Oakland, California 5463

Dear Mr. Rothlisberger:

SCS Engineers (SCS) is pleased to present this final report on the groundwater and soil investigations at the site located at 342 - 105th Avenue in Oakland, California. The excavation beneath the former fuel oil tank was discussed with Kent Madenwald and it was agreed that the material should be excavated and analyzed to ascertain the amount of contaminated soil in the area beneath the tank. Based upon the analysis of the soil from that investigation, the contamination level ascertained will determine how remediation or disposal of the soil should be handled.

Additionally, the soil samples taken beneath the former underground storage tank should be tested for soluble chromium levels to make absolutely certain that the chromium will not move into the groundwater.

SCS recommends that the groundwater levels be remeasured in the three monitoring wells installed at the site and the gradient checked. Further, because there are no known action levels with respect to the various phthalates, the wells should be analyzed quarterly, to assess whether or not there is an increase in contamination within the groundwater. This recommendation is based on the fact that there are presently no standards or maximum contamination levels identified by the Department of Health Services for the phthalates which were found in the groundwater. The site has no other noticeable groundwater contamination of concentrations exceeding action levels.

The soil excavation and the tests for chromium should be completed. Quarterly monitoring of the groundwater wells should be accomplished as well as the determination of surface to first groundwater measurements. Other than the actions discussed above, SCS does not recommend any further excavation or remediation of

Mr. Verl Rothlisberger October 1, 1990 Page Two

the soil at the site and does not believe that the groundwater requires remediation based upon the analysis performed to date.

This report has been specifically prepared for Verl's Construction, Inc. with specific application to hazardous waste site investigations at the subject site and the data therein. This report has been prepared in accordance with the care and skill generally exercised by reputable professionals under similar circumstances, in this or similar localities. No warranties either expressed or implied are made to the advice presented. Verl's Construction, Inc. shall not use this report for any other purpose other than for which it was originally prepared.

If you have any questions, please contact either of the undersigned at (415) 829-0661.

Sincerely,

John P. Cummings, Ph.D., R.E.A., R.E.P.

Office Director SCS Engineers

JPC/JNA/egh

John N. Alt, C.E.G. Project Geologist

SCS Engineers

JOHN N. ALT

Nº 1136

CERTIFIED

EXTREPING

GEOLOGIST

SOURCE CONTROL PROJECT FORMER TURINI NURSERY **344 105TH AVENUE** OAKLAND, CALIFORNIA FOR VERL'S CONSTRUCTION, INC.

NO. EV-500/E158-01

OCTOBER 4, 1990

destate pertient faction for a site assessment for present housing development.

Jeke

CA LIC. #487537

August 10, 1990

Mr. Ariu Levi Hazardous Materials Specialist Department of Environmental Health Division of Hazardous Materials Alameda County Health Care Services Agency 80 Swan Way, Room 200 Oakland, CA. 94621

Dear Mr. Levi:

The enclosed report deals with a mobile test laboratory which we have retained for a August 29th starting date (they are busy and hard to get), however; in order to be ready for them we have a lot of work to do.

We have secured the area with a 6 foot high fence across the front to keep people out. We have built an enclosed area on the site with a 6 foot high fence and gate which is used to store equipment, security trailer with phone, security power pole and miscelaneous tools. Our security man stays on site to help keep out trespassers.

Our equipment is on site and we will plan on starting excavation on August 15, 1990 unless you tell us otherwise. I will try to contact you on Monday the 13 for any problems that you may foresee.

Sincerely Yours,

Verl K. Rothlisberger

President

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who's going to sign report
8/21/90 Stamped copy in the mail

- will find out the name of lab
have been digging since hollsaid OK

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ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.

CONSULTANTS IN APPLIED EARTH SCIENCE

2495 INDUSTRIAL PARKWAY WEST, HAYWARD, CALIFORNIA 94545 TELEPHONE (415) "86-0243" - FAX (415) "32-0289

> No. EV-500/E158-01 October 4, 1990

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

Attention:

Mr. Verl Rothlisberger

SUBJECT:

Source Control Project, Former Turini Nursery, 344 105th Avenue.

Oakland, California.

Gentlemen:

This report describes the results of field activities performed on August 29 and 30, and September 4, 1990 by Environmental Geotechnical Consultants (EGC) at the above referenced site (see Figure 1).

PURPOSE AND SCOPE

Our work was performed to reduce the source of potential hydrocarbon contamination at the site. Veri's Construction, Inc. removed the contaminated soil with a backhoe, and a representative of EGC obtained sixteen soil samples from the site. The approximate locations of the excavation pit and soil piles are shown on Figure 2 and the approximate soil sampling locations are shown on Figure 3. Field work and laboratory analytical methods were performed in compliance with current State of California Regional Water Quality Control Board, San Francisco Region (SFRWQCB) procedures for conducting environmental investigations relating to possible leaks from underground fuel tanks.

EXCAVATION AND FIELD TESTING

On August 29 through September 4, 1990, the existing excavation for one underground storage tank was enlarged to remove contaminated soil. The extent of the final excavation is shown on Figure 3. EGC understands that this underground tank contained both diesel fuel and waste oil,

As the backhoe removed material, a portable photoionization detector (Thermo Instruments Model OVM 580A) was used to obtain a field measurement of the level of volatile organic compounds in the excavated soils. The test procedure consisted of half-filling a one-pint glass jar, sealing the jar with aluminum foil, and capping it with a threaded metal lid. The jar was placed in a warm area for 20 to 30 minutes. The foil was then pierced, and the probe of the OVM was placed in the head space

to measure total hydrocarbon vapors. Readings were recorded in parts per million (ppm).

Outstandie Conformatin Core.

Soil Piles Nes. 1 and 2 (see Figure 2) represent the top 10 feet of soil from the excavation. This soil did not appear to be contaminated and had PID readings of less than 5 ppm. PID readings as high as 100 ppm were recorded from a gray green soil below a depth of 10 feet. All of this discolored soil was removed and placed on triple thickness visqueen on the site. This soil is labeled as Soil Pile No. 3 on Figure 2. PID readings were taken from the walls and base of the excavation after the contaminated soil was removed, and the in place soil was then sampled when readings of less than 5 ppm were recorded. Wall samples were taken just above the existing water table which was at a depth of 18 feet. Base samples were taken in a light brown clay at a depth of 20 to 22 feet.

The existing monitoring well located in the middle of the excavation was left standing for most of the excavation process. Approximately 4 feet of soil was left around the well casing during the work. On August 30, the well casing collapsed under its own weight and was subsequently removed. The area of the removed well was excavated to the full well depth of 25 feet, and a sample was taken at the base (Sample No. 19). Two wall samples were taken from the soil surrounding the monitoring well prior to removal of the well (Sample Nos. 13 and 14).

SOIL SAMPLING

Sixteen soil samples were obtained from the site during this project. Eight samples were taken from the walls of the excavation, five samples from the base of the excavation, two samples from Pile No. 1 and one sample from Soil Pile No. 2. Each sample was obtained by inserting a decontaminated, brass, two-inch diameter tube into the soil. The tube was packed with soil to lessen the possibility of head space, and each end was wrapped with aluminum foil, sealed with plastic end caps, and wrapped in duct tape. The samples were labeled, logged on a chain-of-custody form and kept on ice for Net Pacific, Inc., an environmental laboratory certified by the State of California Department of Health Services to perform the required testing.

Samples were collected on three separate days. Twelve samples were collected on August 29 and 30. These samples were tested on August 30 in the NET Pacific, Inc. Mobile Lab at the site. Four additional samples were collected on September 4 after completion of the excavation. These samples were sent to the NET Pacific, Inc. Laboratory in Santa Rosa During the course of work at the site, soil was excavated beyond the extent of areas where samples had already been collected. These samples were not tested since their results would have been irrelevant in determining the limit of soil contamination in the existing excavation. Chain-of-custody protocol was maintained throughout the transferring of samples, and records are included as Appendix A.

SOIL ANALYTICAL RESULTS

Soil samples were analyzed for Total Petroleum Hydrocarbons (volatile) as Diesel, in the Soil samples were analyzed for Total Petroleum Hydrocarbons (volatile) as Diesel, using Environmental Protection Agency (EPA) method 8015 (modified). Soil samples collected from the walls and base of the final excavation had no detectable contamination. Samples No. 13 and 14, taken from the soil surrounding the existing monitoring well within the excavation, had TPH-D concentrations of 58 ppm and 660 ppm, respectively. This soil was eventually removed along with the monitoring well. Tests on samples from Soil Piles Nos. 1 and 2 did not detect TPH-D, but motor oil was detected at concentrations of 180 ppm and 43 ppm, respectively. Analytical results are included in our report as Appendix A.

It is the client's responsibility to make this information available to the guidance agency at the following address:

> Mr. Ariu Levi Hazardous Materials Specialist Department of Environmental Health Division of Hazardous Materials Alameda County Health Care Services Agency 800 Swan Way, Room 200 Oakland, CA 94621

LIMITATIONS

The scope of work for this project was strictly limited to the sampling and analysis of excavated soil and soil within the excavation. No warranty, express or implied, is given with regard to the general environmental condition of the subject property.

This report has been prepared to aid in the evaluation of the current status of the subject site. Upon request, EGC will provide recommendations for future action.

Please do not hesitate to contact our office if you have any questions or require additional information.

Very truly yours,

ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.

John F. Hicks, P.E., R.E.A.

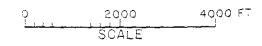
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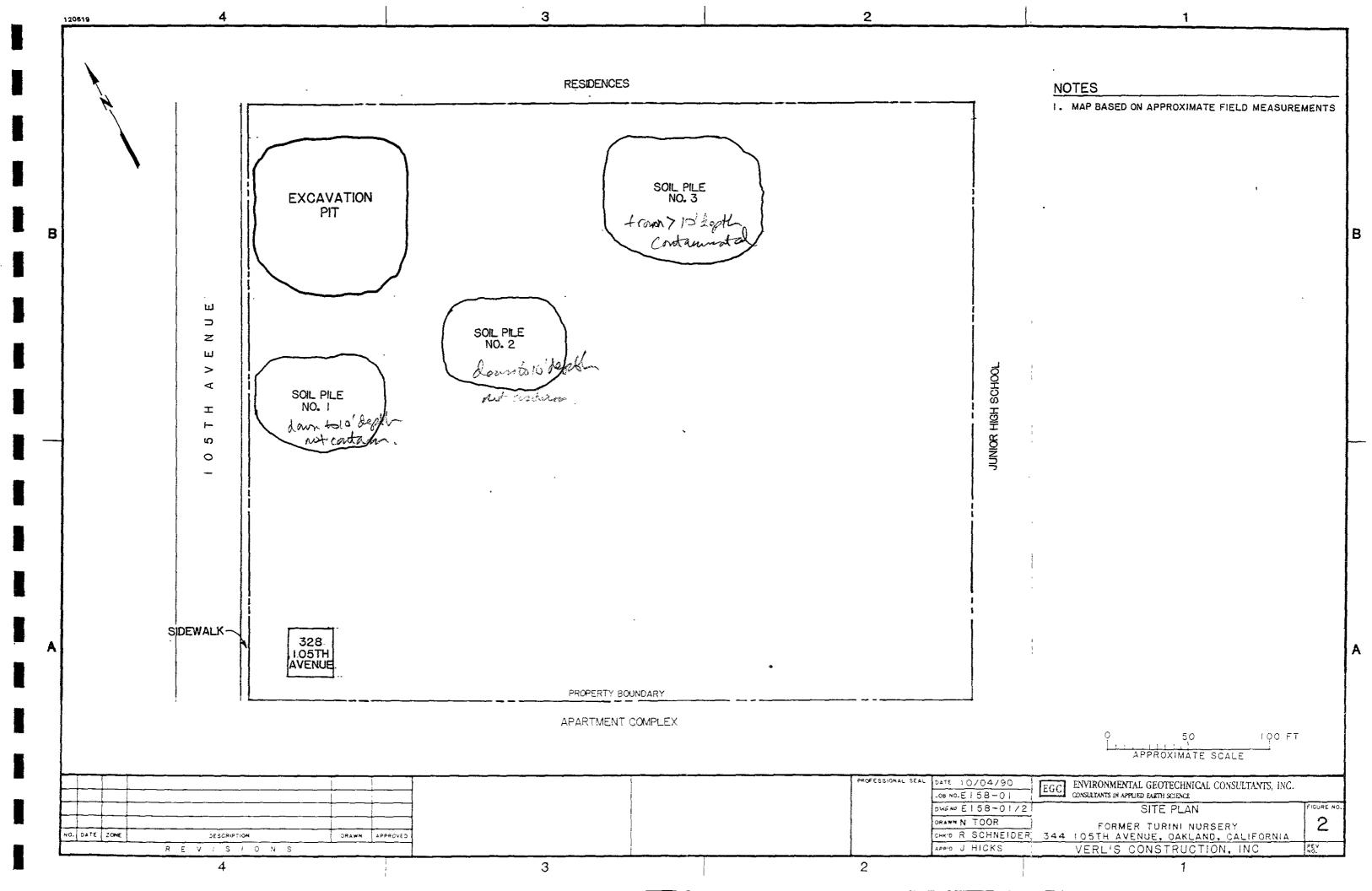
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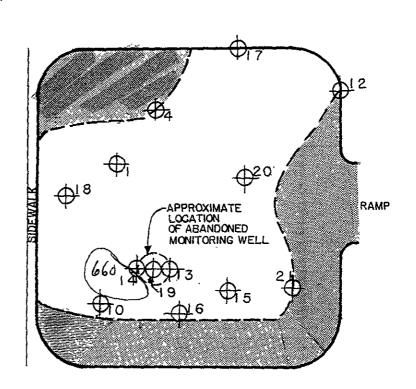


I. BASE MAP TAKEN FROM	JOS 40. E 58-0	EGC ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC CONSULTANTS IN APPLIED EARTH SCIENCE					
USGS SAN LEANDRO, CALIFORNIA 7.5 MINUTE	0wa xo. E158-01/1	PROJECT SITE LOCATION MAP	FIGURE 40				
QUADRANGLE.	DRAWH N TOOR	FORMER TURINI NURSERY	}				
	CHEO G MILLIKAN	344 105TH AVENUE, OAKLAND, CALIFORNIA					
	APPID J HICKS	VERL'S CONSTRUCTION, INC	REV ₩O				





OSTH AVENUE



NOTES

- I. MAP BASED ON APPROXIMATE FIELD MEASUREMENTS (08/30/90).
- 2. SOIL SAMPLE NO.'S 4,10,12,13,14,16,17 AND 21 TAKEN FROM THE EXCAVATION WALLS.
- 3. SOIL SAMPLE NO.'S 1,15,18,19, AND 20 TAKEN FROM THE EXCAVATION BASE.
- 4. SQIL SAMPLE NO'S_8 AND_23 TAKEN FROM SQIL PILE NO.1 (SEE FIGURE NO.2).
- 5. SOIL SAMPLE NO.22 TAKEN FROM SOIL PILE NO.2 (SEE FIGURE NO.2).

EXPLANATION

APPROXIMATE EXCAVATION DEPTH IO- FT

APPROXIMATE EXCAVATION DEPTH 15 TO 25- FT

ф.

APPROXIMATE SOIL SAMPLE LOCATION

O 30 60 FT
APPROXIMATE SCALE

DATE 10/04/90 NOTES ENVIRONMENTAL GEOTECHNICAL CONSULTANTS. INC EGC JOB 40.E158-01 CONSULTANTS IN APPLIED EARTH SCIENCE FIGUAE NO. DHCNAE 158-01/3 SOIL SAMPLE LOCATION MAP 3 DRAWN N TOOR FORMER TURINI NURSERY CHKID R SCHNEIDER 105TH AVENUE, OAKLAND, CALIFORNIA REV APPID J HICKS VERL'S CONSTRUCTION, INC

APPENDIX A

SOIL ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY RECORD



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

Greg Millikan Environmental Geotechnical 2495 Industrial Parkway W. Hayward, CA 94545 Oate: 09-12-90

NET Client Acct No: 362 NET Pacific Log No: 3656 Received: 09-06-90 0800

Client Reference Information

Street; Former Turini Nursery

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)

Rer: Former Purini Nursery

Descriptor, Lab No. and Results

Oate: 09-07-90 Page: 2

		1 08-29-90	4 08-29-90	8 08-29 -9 0	
	Reporting	1500	1555	1630	
Parameter	Limit	61869	61870	61871	Units
PETROLEUM HYDROCARBONS			_		
EXTRACTABLE (SOIL)		7			
DILUTION FACTOR* DATE ANALYZED		1 08-30-90	1 08-30-90	1 08-30 -9 0	
METHOD GC FID/3550					-
as Diesel	1	ND	ND	ND	mg/Kg

Ref: Former Purini Nursery

Date: 09-07-90 Page: 3

Descriptor,	Lab	No.	and	Results
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Parameter	Reporting Limit	10 08-30-90 0900 61872	12 08-30-90 1130 61873	13 08-30-90 1215 61874	Units
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL) DILUTION FACTOR* DATE ANALYZED METHOD GC FID/3550 as Diesel	1	 1 08-30-90 — ND	 1 08-30-90 ND	 1 08-30-90 58	mg/Kg

Ref: Former Purini Nursery

Date: 09-07-90 Page: 4

Descriptor,	Lab	No.	and	Results
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	Reporting	14 08-30-90 1240	15 08-30-90 1330	16 08-30-90 1345	
Parameter	Limit	61875	61876	61877	Units
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL) DILUTION FACTOR* DATE ANALYZED METHOD GC FID/3550 as Diesel	1	1 08-30-90 			mg/Kg

Ref: Former Purini Nursery

Descriptor, Lab No. and Results

Date: 09-07-90 Page: 5

Parameter	Reporting Limit	17 08-30-90 1430 61878	18 08-30-90 1520 61879	19 08-30-90 1605 61880	Units
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL) DILUTION FACTOR* DATE ANALYZED METHOD GC FID/3550 as Dieset	1	1 08-30-90 NO	1 08-30-90 ND	1 08-30-90 NO	mg/Kg

Ref: Former Purini Nursery

Date: 09-07-90 Page: 6

Parameter	Reporting Limit Units	Method 81ank	ICVS (%)	Matrix Spike (%)	Matrix Spike Dup.(%)	RP0 (%)
Diesel	l mg/Kg	ND	103	91	93	2.2



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

Greg Millikan Environmental Geotechnical 2495 Industrial Parkway W. Hayward, CA 94545

Date: 09-07-90 NET Client Acct No: 362 NET Pacific Log No: 364

NET Pacific Log No: 3645 Received: 08-31-90 1620

REVISED 09-10-90

Client Reference Information

Former Purini Nursery

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)

Client Acct: 362

Client Name: Environmental Geotechnical NET Log No: 3656

Ref:; Former Turini Nursery

Descriptor, Lab No. and Results

Date: 09-12-90

Page: 2

	Dononting	no. 20 09-04-90 1430	no. 21 09-04-90 1435	
Parameter	Reporting Limit	61907	61908	Units
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL) DILUTION FACTOR * DATE EXTRACTED DATE ANALYZED METHOD GC FID/3550 as Diesel as Motor Oil	1 10	 1 09-06-90 09-09-90 ND ND	 1 09-06-90 09-09-90 ND	mg/Kg mg/Kg

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Ref:; Former Turini Nursery

Date: 09-12-90 Page: 3

Bescriptor,	Lab	No.	and	Results
DCDC1 IDCC1 3		110	4114	110000

	_			
		no. 22 09-04-90 1450	no. 23 09-04-90 1450	
Parameter	Reporting Limit	61909	61910	Units
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL) DILUTION FACTOR * DATE EXTRACTED DATE ANALYZED METHOD GC FID/3550 as Diesel as Motor Oil	1 10	2 09-06-90 09-09-90 ND 43	10 09-06-90 09-11-90 ND 180	mg/Kg mg/Kg

Client Acct: 362
Client Name: Environmental Geotechnical
NET Log No: 3656

Oate: 09-12-90
Page: 4

Ref:; Former Turini Nursery

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Ouplicate Spike % Recovery	e RPD
Diesel	1	mg/Kg	105	ND	134	91	38
Motor Oil	10	mg/Kg	121	ND	N/A	N/A	N/A

KEY TO ABBREVIATIONS and METHOD REFERENCES

 Less than; When appearing in results column indicates analyte not detected at the value following, which supercedes the

listed reporting limit.

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.

MD : Not detected; the analyte concentration is less than applicable listed

reporting limit.

NTU : Nephelametric 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.

unhos/an : Micranhos per centimeter.

Method References

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", J.S. EPA Sw-846, 3rd edition, 1986.

^{*} 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.

125311			 -	
SAMPLER SCHNEIDER CARRIER			DATE SHIPPED	
COOLER NO NO. OF COOLERS DATE RECEIVED				
SHIP TO: TURNAROUND FIME: SEND RESULTS TO: ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC. 2495 INDUSTRIAL PARKWAY WESD.				
SOUTH ROSA, CA WEEK HAYWARD. CA 94545 TEL(415)786-0243 FAX(415)732-0289				3656
ATTN: GREG MILLIKAN				
JOB NAME: VERL'S CONSTRUCTION / 105TH STREET JOB NO.: E158-01				
RELINQUISHED, BY: (SIGNATURE) RECEIVED BY: (SIGNATURE) DATE: 9/5/90				
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		SIS REQUES		SAMPLE CONDITION
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SPECIAL INSTRUCTIONS AND/OR COMMENTS:				
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CUSTONS ON 19/5/90 C 19:00 DATE DATE EGC: ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.				
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