RUST ENVIRONMENT & INFRASTRUCTURE

RUST Environment & Infrastructure Inc.
12 Metro Park Road
Albany, NY 12205
Tel. (518) 458-1313 • FAX (518) 458-2472

October 25, 1994

Joseph S. Moran, Esq.
Assistant General Counsel - Environmental
American National Can Company
Mail Suite 14C
8770 West Bryn Mawr Avenue
Chicago, Illinois 60631-3542

Subject: Building #12 Samples
American National Can Company
Former Oakland, California Facility

Dear Mr. Moran:

This letter provides the results of the recent soil investigation conducted at the northern end of former Building #12. The investigation was conducted on September 27, 1994 to evaluate the extent of impacted soil reportedly encountered during plant demolition activities. The investigation included the drilling and sampling of 9 test borings (T-1 through T-4 and S-1 through S-5) as proposed in our August 30, 1994 letter to you.

Figure 1 is a map that shows the locations of the 9 borings. Borings T-1 and S-1 were drilled immediately adjacent to the respective T-1 and S-1 samples collected by PES Environmental, Inc. in June and July, 1994. A PES representative provided RUST personnel with their sampling locations. Detailed soil boring logs are appended which depict subsurface conditions, and the intervals where samples were collected for laboratory analysis. The logs also show the results of headspace screening for volatile organic compounds with a photoionization detector (PID).

Soil samples collected from borings S-1 (6.0 feet deep), S-5 (5.0 feet deep) and T-4 (5.0 feet deep) contained mineral spirits at a concentration of less than 1 part per million (ppm). Mineral spirits were detected in the sample collected at 3.0 feet from boring S-4 at 9.7 ppm. The sample collected at 6.5 feet from boring T-1 was reported to contain 1700 ppm of mineral spirits. All other samples collected did not reveal the presence of mineral spirits at the detection limit of 0.5 ppm.

Based on laboratory analytical results, a contour map (Figure 2) was prepared to present the lateral and vertical extent of potentially impacted soil. The values used in contouring reflect the deepest contamination that was detected, based on laboratory analytical results and PID headspace screening results. The amount of soil delineated as potentially impacted is roughly 125 to 150 cubic yards.

However, based on the headspace screening results, it is likely that actual contamination is confined to the near surface of less permeable soils (soil class CL and CH shown on the borings logs) as lateral distance increases from boring T-1. It is therefore probable that a substantial amount of surficial soil (0-3 feet) in the contoured area is <u>not</u> impacted.

At this time, we can not determine the potential for contaminants to have reached the water table. The sample from T-1 was collected at a depth of approximately 2.5 feet above the water table. We recommend that PES provide us with the analytical results from the samples they had analyzed so that we may more fully evaluate the results of this investigation. Following review of the PES data, we would prepare a detailed workplan for the excavation and removal of contaminated soil.

The workplan would provide for post excavation confirmatory sampling and would likely incorporate the relocation of the excavated soils to the pad designated for Area 4 soils. Based on a recent telephone conversation with Rob Creps, he concurs with the conceptual plan of staging Building 12 soil alongside, but separate from, Area 4 soil.

Please contact me with any questions.

Very truly yours,

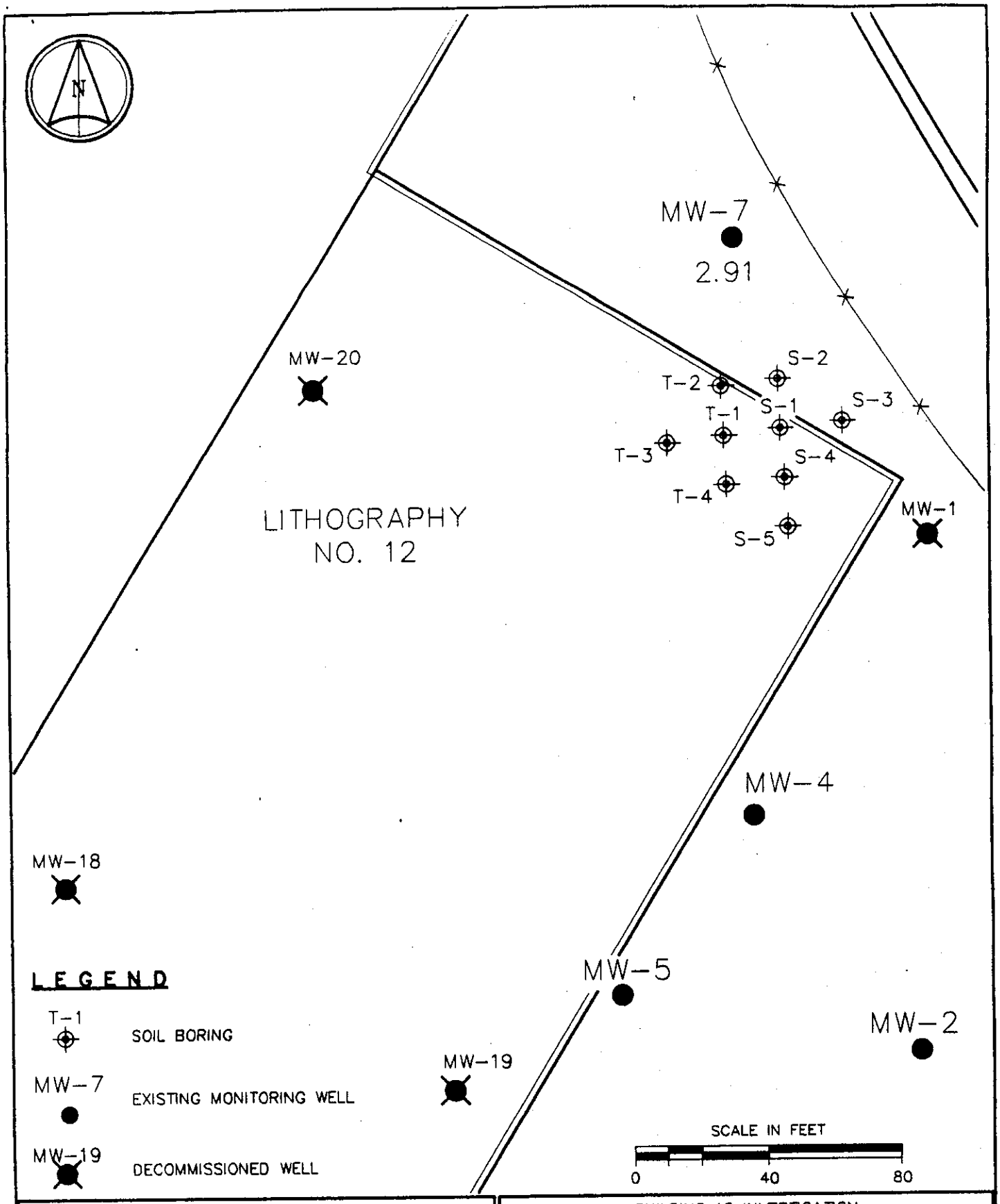
Edward W. Alusow

Edward W. Alusow
Senior Project Manager

EWA/me

cc: E. Rawlings
J. Peters
J. Kessler
R. Creps
J. Renauer

Enclosures

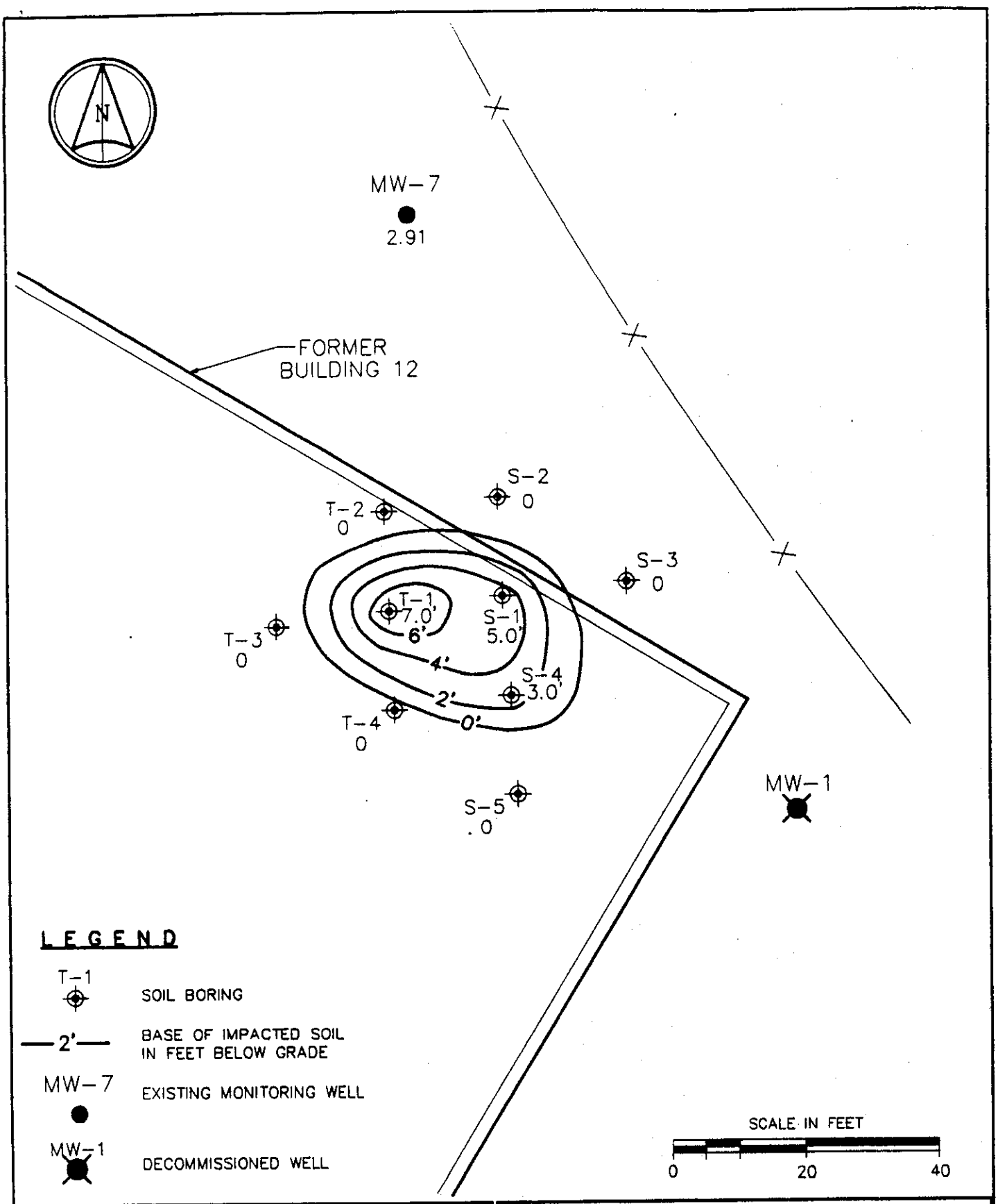


RUST ENVIRONMENT & INFRASTRUCTURE

BUILDING 12 INVESTIGATION
SOIL BORING LOCATION MAP

AMERICAN NATIONAL CAN COMPANY
FORMER OAKLAND CALIFORNIA PLANT

PROJECT NO. 35195.630	DATE 10/94	DWG. NO. 35195-07	SCALE 1"=40'	FIGURE NO. 1



RUST ENVIRONMENT & INFRASTRUCTURE

EXTENT OF POTENTIAL SOIL CONTAMINATION

AMERICAN NATIONAL CAN COMPANY
FORMER OAKLAND CALIFORNIA PLANT

PROJECT NO. 35195.630	DATE 10/94	DWG. NO. 35195-08	SCALE 1"=20'	FIGURE NO. 2

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MR. WALTER HOWARD
RUST ENVIRONMENT AND INFRASTRUCTURE
12 METRO PARK ROAD
ALBANY, NY 12205

Workorder # : 9409220
Date Received : 09/27/94
Project ID : 35195.650
Purchase Order: E-25237

The following samples were received at Anametrix for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9409220- 1	S1-6.0
9409220- 2	T1-6.5
9409220- 3	T3-5.0
9409220- 4	T2-2.0
9409220- 5	T2-4.0
9409220- 6	S2-4.0
9409220- 7	S3-4.0
9409220- 8	S4-3.0
9409220- 9	S4-4.5
9409220-10	T4-5.0
9409220-11	S5-5.0

This report is organized in sections according to the specific Anametrix laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Anametrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call us as soon as possible. Thank you for using Anametrix.

Grinnellam for
Doug Robbins
Laboratory Director

10/10/94
Date

This report consists of 12 pages.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. WALTER HOWARD
RUST ENVIRONMENT AND INFRASTRUCTURE
12 METRO PARK ROAD
ALBANY, NY 12205

Workorder # : 9409220
Date Received : 09/27/94
Project ID : 35195.650
Purchase Order: E-25237
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9409220- 1	S1-6.0	SOIL	09/27/94	TPHg
9409220- 2	T1-6.5	SOIL	09/27/94	TPHg
9409220- 3	T3-5.0	SOIL	09/27/94	TPHg
9409220- 4	T2-2.0	SOIL	09/27/94	TPHg
9409220- 5	T2-4.0	SOIL	09/27/94	TPHg
9409220- 6	S2-4.0	SOIL	09/27/94	TPHg
9409220- 7	S3-4.0	SOIL	09/27/94	TPHg
9409220- 8	S4-3.0	SOIL	09/27/94	TPHg
9409220- 9	S4-4.5	SOIL	09/27/94	TPHg
9409220-10	T4-5.0	SOIL	09/27/94	TPHg
9409220-11	S5-5.0	SOIL	09/27/94	TPHg

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. WALTER HOWARD
RUST ENVIRONMENT AND INFRASTRUCTURE
12 METRO PARK ROAD
ALBANY, NY 12205

Workorder # : 9409220
Date Received : 09/27/94
Project ID : 35195.650
Purchase Order: E-25237
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as mineral spirits for sample S1-6.0 is primarily due to the presence of a petroleum product of hydrocarbon range C6-C12, possibly gasoline.

Cheryl Balmer 10/5/94
Department Supervisor Date

Lucia Shor 10/10/94
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(MINERAL SPIRITS)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9409220
Matrix : SOIL
Date Sampled : 09/27/94

Project Number : 35195.650
Date Released : 10/05/94

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S1-6.0 -01	Sample I.D.# T1-6.5 -02	Sample I.D.# T3-5.0 -03	Sample I.D.# T2-2.0 -04	Sample I.D.# T2-4.0 -05
TPH as Mineral Spirits	0.5	0.84	1700	ND	ND	ND
% Surrogate Recovery		92%	115%	90%	84%	68%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		09/29/94	10/04/94	10/04/94	10/03/94	10/03/94
RLMF		1	250	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as mineral spirits is determined by GC/FID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Shor 10/10/94
Analyst Date

Cheryl Balman 10/7/94
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(MINERAL SPIRITS)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9409220
Matrix : SOIL
Date Sampled : 09/27/94

Project Number : 35195.650
Date Released : 10/05/94

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S2-4.0 -06	Sample I.D.# S3-4.0 -07	Sample I.D.# S4-3.0 -08	Sample I.D.# S4-4.5 -09	Sample I.D.# T4-5.0 -10
TPH as Mineral Spirits	0.5	ND	ND	9.7	ND	0.62
% Surrogate Recovery		75%	91%	95%	94%	91%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/03/94	10/03/94	10/04/94	10/03/94	10/03/94
RLMF		1	1	2.5	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as mineral spirits is determined by GC/FID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Dina Sher 10/10/94
Analyst Date

Cheryl Burman 10/7/94
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(MINERAL SPIRITS)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9409220
Matrix : SOIL
Date Sampled : 09/27/94

Project Number : 35195.650
Date Released : 10/05/94

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S5-5.0 -11	Sample I.D.# BS2901E1 BLANK	Sample I.D.# BO0301E1 BLANK	Sample I.D.# BO0302E1 BLANK	Sample I.D.# BO0304E1 BLANK
TPH as Mineral Spirits	0.5	0.67	ND	ND	ND	ND
% Surrogate Recovery		86%	108%	95%	104%	91%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/04/94	09/29/94	10/03/94	10/04/94	10/04/94
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as mineral spirits is determined by GC/FID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 10/10/97 Date

Supervisor 10/7/94 Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 35195.650 T2-2.0
Matrix : SOIL
Date Sampled : 09/27/94
Date Analyzed : 09/29/94

Anametrix I.D. : 9409220-04
Analyst : IS
Supervisor : [illegible]
Date Released : 10/06/94
Instrument ID : HP12

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS *
MINERAL SPIRITS	0.50	0.12	0.67	110%	0.77	130%	17%	48-149
P-BFB				92%		83%		53-147

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 09/29/94

Anametrix I.D. : MS2902E1
Analyst : IS
Supervisor : JB
Date Released : 10/06/94
Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS *
MINERAL SPIRITS	0.50	0.56	112%	58-130
p-BFB			104%	53-147

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 10/03/94

Anametrix I.D. : MQ0301E1
Analyst : LS
Supervisor : CB
Date Released : 10/06/94
Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS *
MINERAL SPIRITS	0.50	0.45	90%	58-130
p-BFB			95%	53-147

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 10/04/94

Anametrix I.D. : MO0401E1
Analyst : LS
Supervisor : [illegible]
Date Released : 10/06/94
Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS *
MINERAL SPIRITS	0.50	0.47	94%	58-130
p-BFB			103%	53-147

* Quality control limits established by Anametrix, Inc.

Inchcape Testing Services
Anametrix Laboratories

SAMPLE RECEIVING CHECKLIST

WORKORDER NUMBER: 9409220 CLIENT PROJECT ID: 36195.650

COOLER

Shipping slip (airbill, etc.) present?	YES	NO	(N/A)
If YES, enter carrier name and airbill # : _____			
Custody Seal on the outside of cooler?	YES	NO	(N/A)
Condition: INTACT ____ BROKEN ____			
Temperature of sample (s) within range?	YES	(NO)	N/A
List temperature of cooler (s): 21°C			

SAMPLES

Chain of custody seal present for each container?	YES	NO	(N/A)
Condition: INTACT ____ BROKEN ____			
Samples arrived within holding time?	(YES)	NO	N/A
Samples in proper containers for methods requested?	(YES)	NO	
Condition of containers: INTACT ✓ BROKEN ____			
If NO, were samples transferred to proper container? ____			
Were VOA containers received with zero headspace?	YES	NO	(N/A)
If NO, was it noted on the chain of custody? ____			
Were container labels complete? (ID, date, time preservative, etc.)	(YES)	NO	
Were samples preserved with the proper preservative?	YES	NO	(N/A)
If NO, was the proper preservative added at time of receipt? ____			
pH check of samples required at time of receipt?	YES	(NO)	
If YES, pH checked and recorded by: ____			
Sufficient amount of sample received for methods requested?	(YES)	NO	
If NO, has the client or lab project manager been notified? ____			
Field blanks received with sample batch? # of Sets: ____	YES	NO	(N/A)
Trip blanks received with sample batch? # of Sets: ____	YES	NO	(N/A)

CHAIN OF CUSTODY

Chain of custody received with samples?	(YES)	NO
Has it been filled out completely and in ink?	(YES)	NO
Sample ID's on chain of custody agree with container labels?	(YES)	NO
Number of containers indicated on chain of custody agree with number received?	(YES)	NO
Analysis methods clearly specified?	(YES)	NO
Sampling date and time indicated?	(YES)	NO
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date?	(YES)	NO
Turnaround time? REGULAR ✓ RUSH ____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: [signature] Date: 9/27/94 Project Manager: KD Date: 9/28/94

3986

RUST ENVIRONMENT & INFRASTRUCTURE

9409220 (2)

Chain of Custody Record

Custody Seal # | RUST E&I Cooler #

Project Number	Project Name/Client
35195.650	Bldg. 12 - ANC

Samplers: (Signature) Richard Burzynski

Item No.	Sample Description (Field ID Number)	Date	Time	Grab	Comp.	Lab Sample Number	Container Number	Analysis Required: EPA 8015 for mineral spirits	Matrix: Sample Type: Soil	Matrix: Sample Container: 4 oz. jar
1	S1 - 6.0	9-27-94	10:10					X	✓	1
2	T1 - 6.5	↑	10:46					X	✓	1
3	T3 - 5.0		11:10					X	✓	1
4	T2 - 2.0		11:35					X	✓	1
5	T2 - 4.0		11:45					X	✓	1
6	S2 - 4.0		12.05					X	✓	1
7	S3 - 4.0		1:10					X	✓	1
8	S4 - 3.0		1:45					X	✓	1
9	S4 - 4.5		1:50					X	✓	1
10	T4 - 5.0	↓	2:15					X	✓	1
11	S5 - 5.0	9-27-94	2:40					X	✓	1
12										
13										
14										
15										
16										
17										
18										
19										
20										

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Disposed of by: (Signature)	Items:	Date/Time
Richard Burzynski Weiss/RUST	9/27/94 1615				
Relinquished by: (Signature)	Date/Time	Received by: (Signature) [Laboratory] Josephine DeCarli	Disposed of by: (Signature)	Items:	Date/Time

Send Lab Results To: Walt Howard
% RUST - Albany N.Y.
send copy to Richard Burzynski
% RUST/WAHCER - Palo Alto

Remarks: standard QA/QC

Federal Express Airbill No.:
Lab:

Check Delivery Method:
- [x] Samples delivered in person
- [ ] Common carrier
- [ ] Mail

Laboratory Receiving Notes:
Custody Seal Intact? N/A
Temp. of Shipping Container: 21°C
Sample Condition: good

White Copy - Lab Yellow Copy - File Pink Copy - Client

Rev. 4/93 F514/Earth.Sci

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 7.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-1' Baserock and residual crushed concrete.	0				PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM	1'-5' SILTY GRAVEL W/SAND: moderate yellowish brown; dry; medium dense.	2			100%		
	5'-5.25' GRAVELLY CLAY: moderate yellowish brown (10 YR 5/4); damp; stiff; moderate plasticity; sweet hydrocarbon odor.	4					2.5'-3.0': PID = 9.8 ppm 4.0'-4.5': PID = 6.5 ppm 4.5'-5.0': PID = 32 ppm 5.0'-5.5': PID = 2.3 ppm 5.5'-6.0': PID = 3.1 ppm
CL							
GM	5.25'-6.75' SILTY GRAVEL W/SAND: same as 1'-5' interval.	6	S1-6.0				
CH	6.75'-7.0' CLAY: dusky brown; damp; stiff; high plasticity.		PES				
	Terminated boring at 7.0'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

DATA ON THIS LOG ARE AN APPROXIMATION OF THE GEOLOGIC AND SUBSURFACE CONDITIONS BECAUSE THE INFORMATION WAS OBTAINED FROM INDIRECT, DISCONTINUOUS, AND POSSIBLY DISTURBED SAMPLING NECESSITATED BY USE OF SMALL- DIAMETER HOLES. ROTARY AND WASH BORING HOLES HAVE FURTHER COMPLICATIONS IN THIS REGARD BECAUSE OF THE NEED TO USE DRILLING FLUID AND/OR CASING IN ADVANCING HOLES.

THIS LOG INDICATES CONDITIONS IN THIS HOLE ONLY ON THE DATE INDICATED AND MAY NOT REPRESENT CONDITIONS AT OTHER LOCATIONS AND ON OTHER DATES. ANY WATER LEVELS SHOWN ARE SUBJECT TO VARIATION.

THIS HOLE WAS LOGGED IN SUCH A WAY AS TO PROVIDE DATA PRIMARILY FOR DESIGN PURPOSES AND NOT NECESSARILY FOR THE PURPOSES OF SPECIFIC CONTRACTORS.

THE STRATIFICATION LINES OR DEPTH INTERVALS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES, AND THE TRANSITIONS MAY BE GRADUAL.

SOIL CLASSIFICATIONS SHOWN ON LOGS ARE FIELD CLASSIFICATIONS BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM.

RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET: 1 of 1	S-1
		35195.650		

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-1' Baserock and residual crushed concrete.	0				PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
CL	1'-2' SILTY CLAY w/trace sand: moderate olive brown (5 Y 4/9) with dusky brown (5 YR 2/2) concretions; damp; stiff; moderate plasticity.	2					
CH	2.0'-5.0' CLAY: dusky brown (5 YR 2/2); damp; stiff; high plasticity. 5.0'-5.5' CLAY: dark yellowish brown (10 YR 4/2) w/dusky brown (5 yr 2/2) concretions; damp; stiff; inclusions of weathered rock fragments.	4	S2-4.0 PES		100%		1.0'-1.5': PID = 1.7 ppm 2.5'-3.0': PID = 1.8 ppm
GM CH	5.5'-6.0' SILTY CLAY: moderate yellowish brown (10 YR 5/4); damp; firm; moderate plasticity; 5% sand.	6					
	Terminated boring at 6.0'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

DATA ON THIS LOG ARE AN APPROXIMATION OF THE GEOLOGIC AND SUBSURFACE CONDITIONS BECAUSE THE INFORMATION WAS OBTAINED FROM INDIRECT, DISCONTINUOUS, AND POSSIBLY DISTURBED SAMPLING NECESSITATED BY USE OF SMALL-DIAMETER HOLES. ROTARY AND WASH BORING HOLES HAVE FURTHER COMPLICATIONS IN THIS REGARD BECAUSE OF THE NEED TO USE DRILLING FLUID AND/OR CASING IN ADVANCING HOLES.

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	S-2

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-0.5' Baserock and residual crushed concrete.	0					Advanced 2-1/4" outer casing by percussion drilling (PD).
CL	.5'-1.0' SILTY CLAY w/gravel: moderate olive brown (5 Y 4/4) with dusky brown (5 YR 2/2) concretions; damp; stiff; moderate plasticity.					PD	Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
CH	1.0'-3.5' CLAY: dusky brown (5 YR 2/2); damp; stiff; high plasticity.	2					1.0'-1.5': PID = 1.6 ppm
CL	3.5'-4.0' SILTY CLAY: moderate olive brown (5 Y 4/4) w/dusky brown (5 YR 2/2) concretions; damp; stiff; moderate plasticity.	4	S3-4.0 PES		100%		2.5'-3.0': PID = 1.1 ppm 3.5'-4.0': PID = 0.5 ppm
CL	4.0'-6.0' SILTY CLAY: moderate olive brown (5 Y 4/4); damp; stiff; moderate plasticity; trace gravel.	6					5.0'-5.5': PID = 0.5 ppm
	Terminated boring at 6.0'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

DATA ON THIS LOG ARE AN APPROXIMATION OF THE GEOLOGIC AND SUBSURFACE CONDITIONS BECAUSE THE INFORMATION WAS OBTAINED FROM INDIRECT, DISCONTINUOUS, AND POSSIBLY DISTURBED SAMPLING NECESSITATED BY USE OF SMALL- DIAMETER HOLES. ROTARY AND WASH BORING HOLES HAVE FURTHER COMPLICATIONS IN THIS REGARD BECAUSE OF THE NEED TO USE DRILLING FLUID AND/OR CASING IN ADVANCING HOLES.

THIS LOG INDICATES CONDITIONS IN THIS HOLE ONLY ON THE DATE INDICATED AND MAY NOT REPRESENT CONDITIONS AT OTHER LOCATIONS AND ON OTHER DATES. ANY WATER LEVELS SHOWN ARE SUBJECT TO VARIATION.

THIS HOLE WAS LOGGED IN SUCH A WAY AS TO PROVIDE DATA PRIMARILY FOR DESIGN PURPOSES AND NOT NECESSARILY FOR THE PURPOSES OF SPECIFIC CONTRACTORS.

THE STRATIFICATION LINES OR DEPTH INTERVALS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES, AND THE TRANSITIONS MAY BE GRADUAL.

SOIL CLASSIFICATIONS SHOWN ON LOGS ARE FIELD CLASSIFICATIONS BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM.

RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	S-3

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-.5' Baserock and residual crushed concrete.	0				PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM	.5'-2.5' SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.	2					
CL	2.5'-4.5' GRAVELLY CLAY: moderate yellowish brown (10 YR 5/4); damp; stiff; moderate plasticity.	4	S4-3.0 PES		100%		1.0'-1.5': PID = 1.1 ppm 2.5'-3.0': PID = 149 ppm 4.0'-4.5': PID = 0.6 ppm
CL	4.5'-6.0' SILTY CLAY: moderate olive brown (5 Y 4/4); damp; stiff; moderate plasticity; trace gravel.	6	S4-4.5 PES				
	Terminated boring at 6.0'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	S-4

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GM	0'-4.5'? SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.	0			100%	PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
		2			67%		1.0'-1.5': PID = 1.0 ppm
CH	4.5'?-5.5' CLAY: dusky brown; damp; stiff; high plasticity.	4			50%		2.5'-3.0': PID = 0.9 ppm
CL	5.5'-6.0' SILTY CLAY: moderate yellowish brown; damp; firm; moderate plasticity.		S5-5.0 PES				4.5'-5.0': PID = 6.6 ppm
	Terminated boring at 6.0'.	6					Grouted hole to surface with neat cement mix.
		8					
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO. 35195.650	SHEET: 1 of 1	S-5

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 7.5'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-1' Baserock and residual crushed concrete.	0			100%	PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM	1'-6.5'? SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.	2			100%		1.0'-1.5': PID = 3 ppm
		4			10%		2.5'-3.0': PID = 11.5 ppm
		6			100%		
CH	6.5'-7.5' CLAY: moderate brown; damp; stiff; high plasticity.		T1-6.5 PES		67%		
	Terminated boring at 7.5'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	T-1

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
GW	0'-1' Baserock and residual crushed concrete.	0				PD	Advanced 2-1/4" outer casing by percussion drilling (PD). Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM	1'-2' SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.						
CH	2'-4.5' CLAY: dusky brown (5 YR 2/2); damp; stiff; high plasticity.	2	T2-2.0 PES		100%		
	4.5'-5.0' CLAY: dark yellowish brown (10 YR 4/2) w/dusky brown (5 YR 2/2) concretions; damp; stiff; trace pea gravel.	4	T2-4.0 PES				1.0'-1.5': PID = 1.8 ppm 1.5'-2.0': PID = 1.6 ppm
CL	5.0'-6.0' SILTY CLAY: moderate yellowish brown (10 YR 5/4); damp; firm; moderate plasticity; trace sand.	6					
CL	Terminated boring at 6.0'.	8					Grouted hole to surface with neat cement mix.
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	T-2

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
	0'-1' Baserock and residual crushed concrete.	0					Advanced 2-1/4" outer casing by percussion drilling (PD).
GW	1'-5.75' SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.				100%	PD	Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM		2			67%		1.0'-1.5': PID = 2 ppm
		4			33%		2.5'-3.0': PID = 1.2 ppm
CH	5.75'-6.0' CLAY: moderate brown; damp; stiff;high plasticity.	6	T3-5.0 PES				4.5'-5.0': PID = 1.8 ppm
	Terminated boring at 6.0'.						Grouted hole to surface with neat cement mix.
		8					
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	T-3

BORING LOCATION: ANC - Building 12		APPROVED BY: RAB	GROUND EL:
DEPTH/ELEV.WATER : NA	DRILL CONTRACTOR: Precision Drilling		TOTAL DEPTH: 6.0'
DRILL RIG: MD-1	BORING DIA.: 2-1/4"	DATE DRILLED: 9/27/94	LOGGED BY: RAB

SOIL CLASS	DESCRIPTION	DEPTH	SAMPLE NO.	PR/RQD	REC.	MODE	REMARKS
	0'-0.5' Baserock and residual crushed concrete.	0					Advanced 2-1/4" outer casing by percussion drilling (PD).
GW	0.5'-3' SILTY GRAVEL w/sand: moderate yellowish brown; dry; medium dense.				67%	PD	Placed cuttings in plastic bag and analyzed headspace with photoionization detector (PID). Measured organic vapors in parts per million (ppm).
GM		2			33%		
—	3'-4.5' Same as 0.5'-3'??						1.0'-1.5': PID = 1.0 ppm
GM		4			10%		2.5'-3.0': PID = 5.2 ppm
CL	4.5'-6.0' SILTY CLAY: moderate olive brown (5 Y 4/4); damp; stiff; moderate plasticity.		T4-5.0 PES		100%		
	Terminated boring at 6.0'.	6					Grouted hole to surface with neat cement mix.
		8					
		10					
		12					
		14					
		16					
		18					
		20					

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RUST ENVIRONMENT & INFRASTRUCTURE	AMERICAN NATIONAL CAN OAKLAND, CALIFORNIA BUILDING 12	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO.	SHEET:	
		35195.650	1 of 1	T-4