APPENDIX C
BACKFILL OPERATION INFORMATION (CERTIFICATION OF QUALITY, ANALYTICAL RESULTS, COMPACTION DATA SUMMARY, AND COMPACTION CURVE REPORTS)

6834-11 257-016 Bulk Request

igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 573321
Page 1 of ___

Project Name/No. [1] D.O. 109 PARCEL B 773247 / HUNTER'S POINT
Sample Team Members [2] WAYNE AKIYAMA
Profit Center No. [3] 3741210
Project Manager [4] JIM Robbins
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 9/14/00
Lab Destination [8] CYME
Lab Contact [9] JP SETTEPANI
Project Contact/Phone [12] WAYNE AKIYAMA (415) 671-2408
Carrier/Waybill No. [13] CARRIER / NA

Bill to: [5] IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA. 94520-1120
ATTN: WAYNE AKIYAMA
Report to: [10] SAME AS ABOVE

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
~~001~~	~~FULL/BLEND SF~~	~~9/14/00~~	~~BAGS~~	~~X2~~	~~NA~~			
002	UNSCREEND · ANGEL SF	9/14/00	BAGS	X2	NA	Proctor Sieve w/ hypl. CHANGED PER JB	FOR LAB USE ONLY	
							FOR LAB USE ONLY	

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Wayne Akiyama (replacement COC)	Date: 10-5-00 Time: 1535	1. Received by [28] (Signature/Affiliation) ITS / [illegible]	Date: 10-5-00 Time: 1535
2. Relinquished by (Signature/Affiliation) JP.S / [illegible]	Date: 10/5/00 Time: 1720	2. Received by (Signature/Affiliation) DRC / CTL	Date: 10/5/00 Time: 1800
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

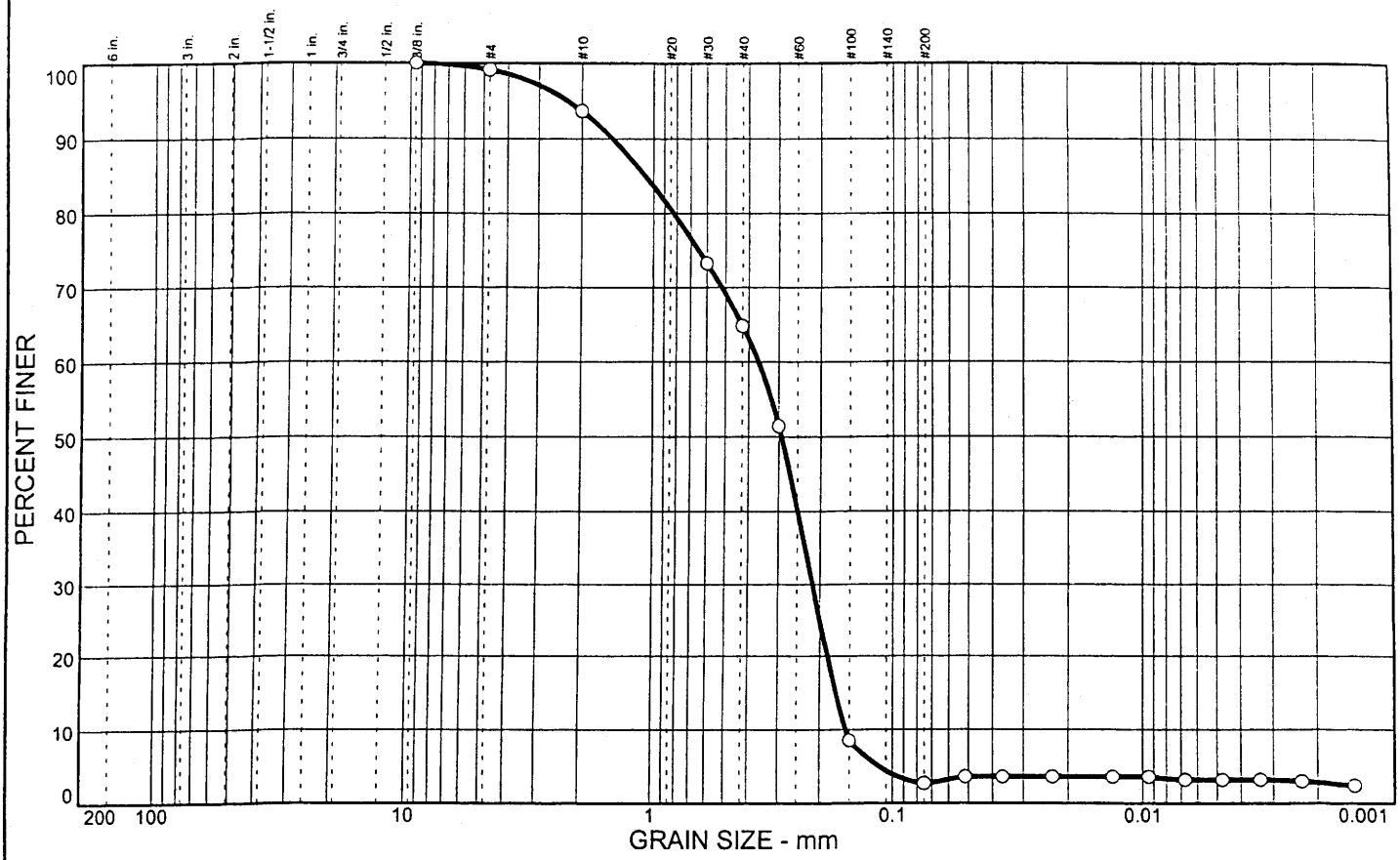
Comments: [29]

White: To accompany samples
Yellow: Field copy
*See back of form special instructions.

257-016

MCA 3/15/91

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% + 3"	% GRAVEL	% SAND	% SILT	% CLAY	% FINES	USCS	AASHTO	PL	LL
O		0.9	96.5		3.1	2.6	SP /			

SIEVE inches size	PERCENT FINER O		
3/8	100.0		
	GRAIN SIZE		
D_{60}	0.365		
D_{30}	0.216		
D_{10}	0.155		
	COEFFICIENTS		
C_c	0.82		
C_u	2.35		

SIZE	PERCENT FINER O		
#4	99.1		
#10	93.7		
#30	73.3		
#40	64.8		
#50	51.4		
#100	8.5		
#200	2.6		
0.0514 mm.	3.5		
0.0363 mm.	3.5		
0.0230 mm.	3.5		
0.0133 mm.	3.5		
0.0094 mm.	3.5		
0.0067 mm.	3.1		
0.0048 mm.	3.1		
0.0034 mm.	3.1		
0.0023 mm.	2.9		
0.0014 mm.	2.3		

SOIL DESCRIPTION

O gray brown poorly graded Sand

REMARKS:

O

O Source: 002

Sample No.: Unscreened Angle 1 (dup)

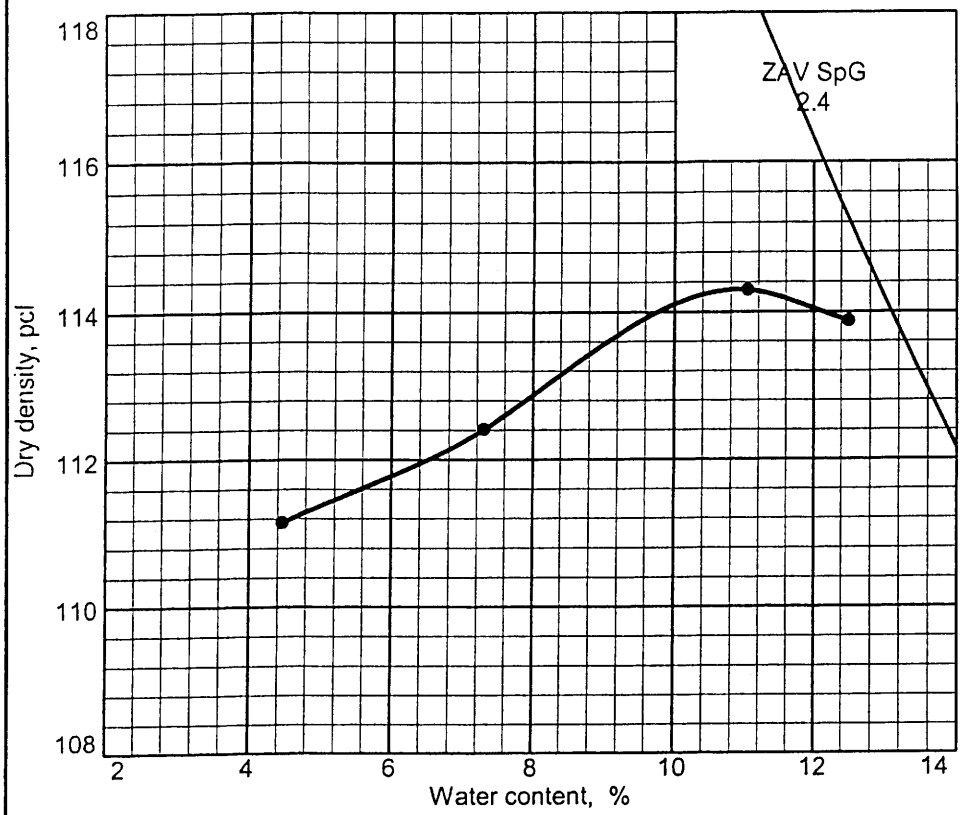
COOPER TESTING LABORATORY

Project: 773247

Feature:

Project No.: 257-016

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 1557-91 Procedure B Modified

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 25
Mold Size: .03333 cu.ft.

Test Performed on Material Passing 3/8 in. **Sieve**

Soil Data

NM _____ **Sp.G.** _____
LL _____ **PI** _____
%>3/8 in. 99.4 **%<#200** 0.2
USCS GP **AASHTO** _____

TESTING DATA

	1	2	3	4	5	6
WM + WS	9.19	9.34	9.55	9.59		
WM	5.32	5.32	5.32	5.32		
WW + T #1	616.20	602.00	601.30	601.30		
WD + T #1	591.10	564.80	544.10	537.70		
TARE #1	29.00	55.00	26.00	28.90		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	4.5	7.3	11.0	12.5		
DRY DENSITY	111.1	112.4	114.3	113.9		

TEST RESULTS

Maximum dry density = 114 pcf

Optimum moisture = 11 %

Material Description

gray brown SAND with silt & marine deposits

Project No. 257-016 **Client:** Cyme
Project: 773247

● **Source:** 002 **Sample No.:** Unscreened-Angel SF

Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

6834-01

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572502
Page 1 of ____

D.O. 109 Parcel B

Project Name/No. 1 773247 / Hunters Point
Sample Team Members 2 Wayne Akiyama
Profit Center No. 3 3741210
Project Manager 4 Jim Robbins
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 9-27-00
Lab Destination 8 Cyme
Lab Contact 9 J.P.
Project Contact/Phone 12 Wayne Akiyama (415) 671-2408 or (415) 822-9406
Carrier/Waybill No. 13 Carrier / NA

Bill to: 5 IT Corporation
4005 Port Chicago Hwy
Concord, Ca. 94520-1120
ATTN: Wayne Akiyama
Report to: 10 SAME

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
1	CLASS II AB "Pilarcitos 9-15-00"	9-27-00 / 0800	plastic bag	2 bags	none	Proctor Curve & Sieve Analysis w/ Hydrometer	FOR LAB USE ONLY	
2	TEJ 1½" drain rock from Dutra		paper bag	2 bags		Sieve Anl w/ Hydrometer		
3	TEJ ITSI "Back Fill Material Dutral	✓	paper bag	1 bag	↓	Proctor Curve & Sieve Analysis w/ Hydrometer		

Special Instructions: 23

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☑ Archive 6 months (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☒

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify):

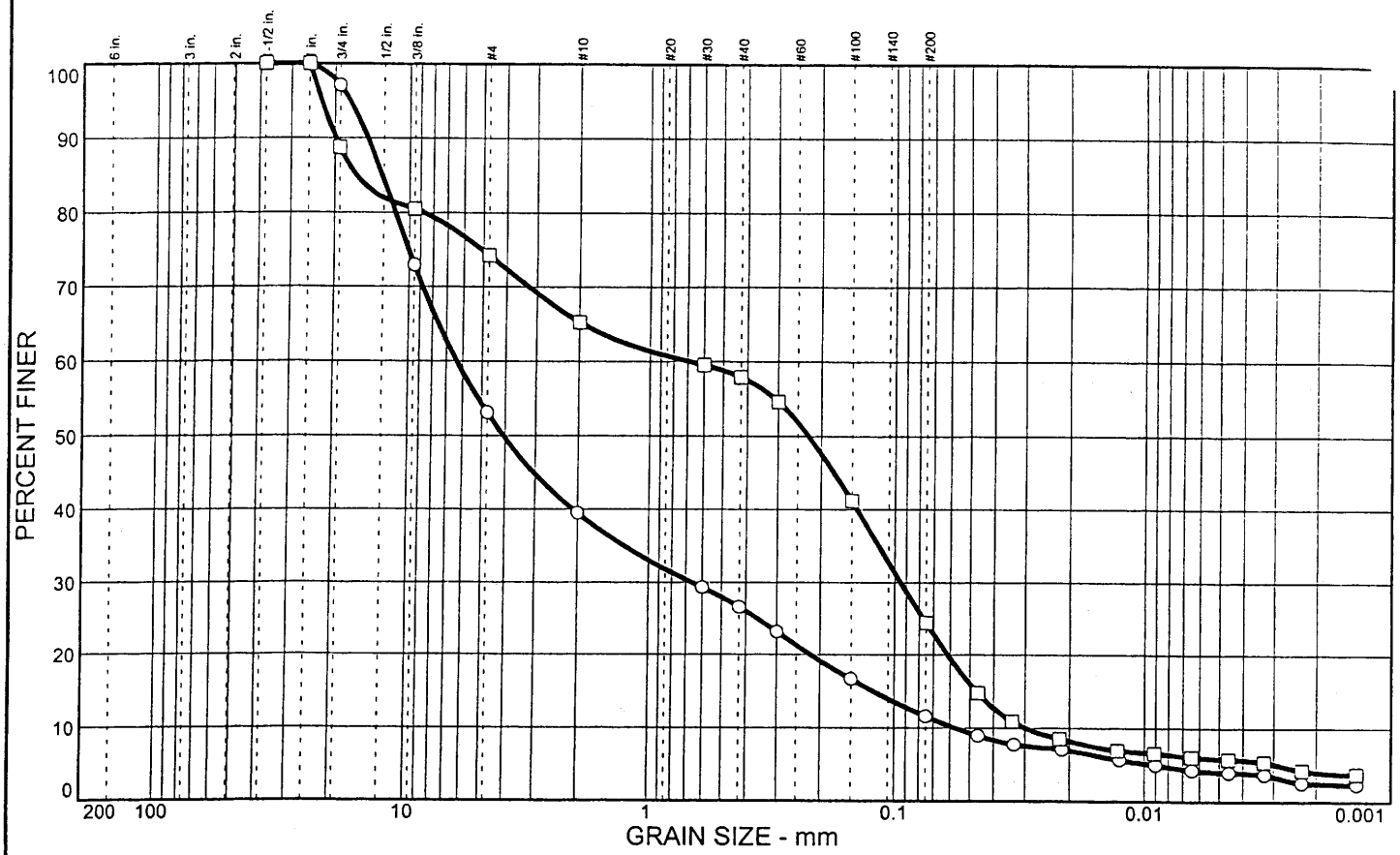
1. Relinquished by 28 (Signature/Affiliation) John Halliday, IT	Date: 9-27-00 Time: 9:15	1. Received by 28 (Signature/Affiliation) Matt [illegible] CYME, INC	Date: 27 SEPT 00 Time: 10:45
2. Relinquished by (Signature/Affiliation) JP.S. / CYME	Date: 9/27/00 Time: 13:00	2. Received by (Signature/Affiliation) Brian Dalke	Date: 9-27-00 Time: 1:00
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

FAXED 10/05

See back of form for special instructions.

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% + 3"	% GRAVEL	% SAND	% SILT	% CLAY	% FINES	USCS	AASHTO	PL	LL
○		46.9	41.5	7.7	3.9	11.6	GW-GM			
□		25.7	49.9	18.6	5.8	24.4	SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
1.5		100.0	
1	100.0	100.0	
3/4	97.1	88.8	
3/8	73.0	80.5	
	GRAIN SIZE		
D_{60}	6.34	0.691	
D_{30}	0.662	0.0949	
D_{10}	0.0574	0.0300	
	COEFFICIENTS		
C_C	1.20	0.43	
C_U	110.37	23.01	

SIZE	PERCENT FINER ○	PERCENT FINER □	
#4	53.1	74.3	
#10	39.5	65.3	
#30	29.3	59.5	
#40	26.6	57.9	
#50	23.1	54.6	
#100	16.7	41.2	
#200	11.6	24.4	
0.0463 mm.	8.9	14.8	
0.0338 mm.		10.9	
0.0332 mm.	7.7		
0.0219 mm.		8.5	
0.0214 mm.	7.0		
0.0129 mm.		6.9	
0.0126 mm.	5.6		
0.0091 mm.		6.5	
0.0090 mm.	4.9		
0.0065 mm.		6.0	
0.0064 mm.	4.2		
0.0046 mm.	3.9	5.7	
0.0033 mm.	3.6	5.3	
0.0023 mm.	2.5	4.2	
0.0014 mm.	2.3	3.7	

SOIL DESCRIPTION

○ gray well-graded Gravel with silt and sand

□ gray silty SAND with gravel

REMARKS:

○

□

○ Source: Bulk — Sample No.: 1

□ Source: Bulk — Sample No.: 3

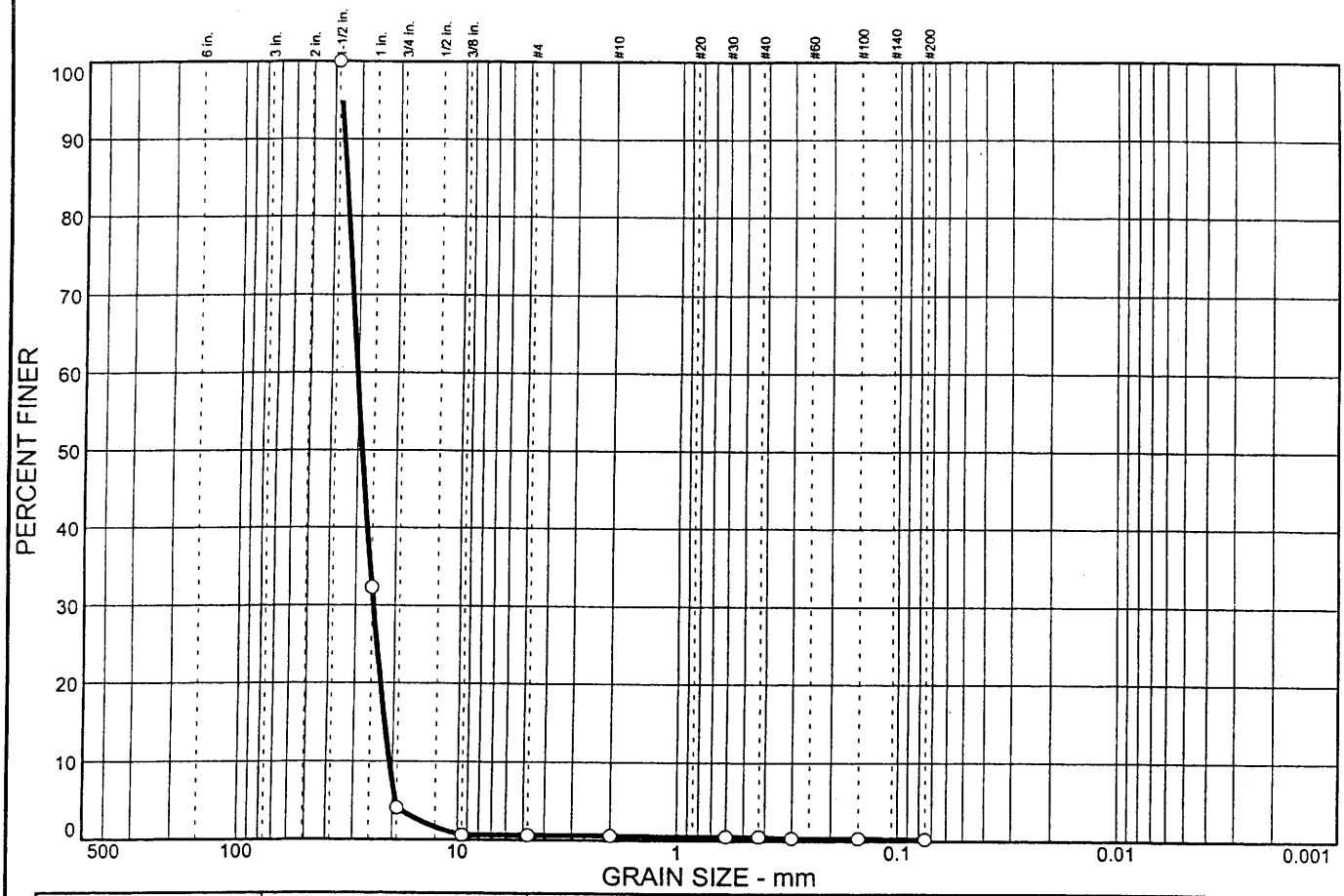
COOPER TESTING LABORATORY

Project: 307.1 / UPS Parcel B

Feature:

Project No.: 257-014

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	96.0	3.4	0.0	0.1	0.3	0.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	32.3		
3/4 in.	4.0		
3/8 in.	0.6		
#4	0.6		
#10	0.6		
#30	0.5		
#40	0.5		
#50	0.3		
#100	0.3		
#200	0.2		

* (no specification provided)

Soil Description

gray poorly graded GRAVEL

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 35.1 D_{60}= 30.4 D_{50}= 28.6
D_{30}= 25.0 D_{15}= 21.9 D_{10}= 20.7
C_u= 1.47 C_c= 0.99

Classification

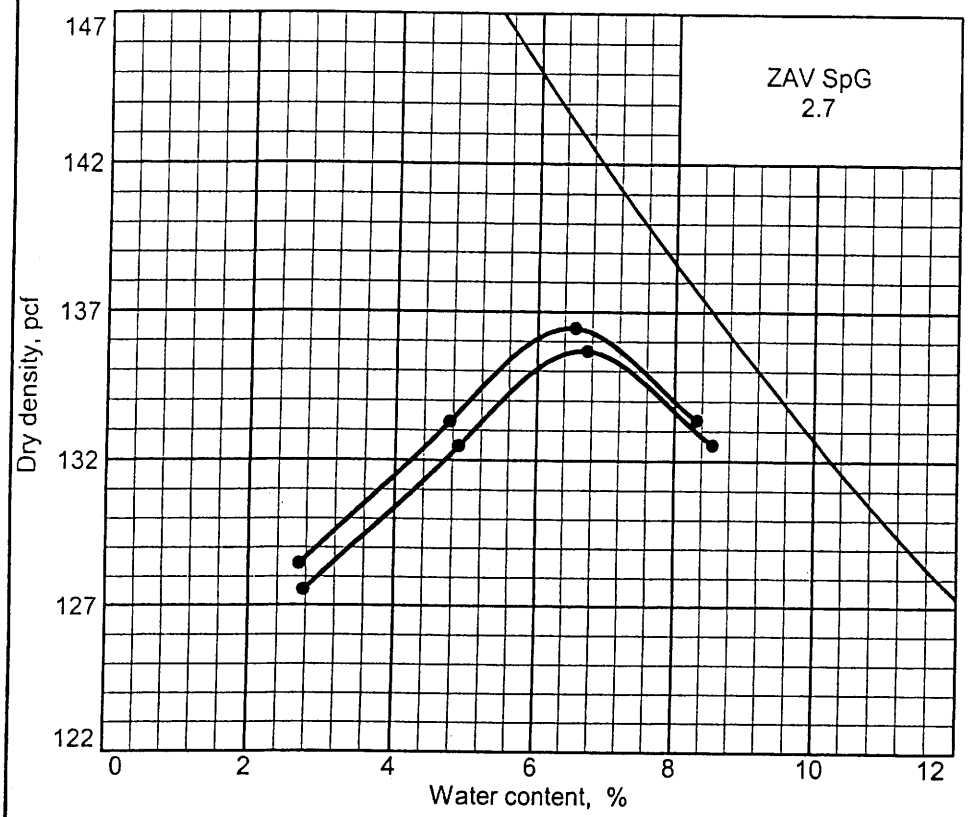
USCS= GP AASHTO=

Remarks

Sample No.: **Source of Sample:** 2 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY	**Client:** Cyme **Project:** 773247 **Project No:** 257-016 **Plate**

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 1557-91 Procedure C Modified
Oversize correction applied to each point

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 56
Mold Size: .075 cu.ft.

Test Performed on Material Passing 3/4 in. **Sieve**

Soil Data

NM _____ **Sp.G.** 2.7
LL _____ **PI** _____
%>3/4 in. 2.9 **%<#200** 11.6
USCS GW-GM **AASHTO** _____

TESTING DATA

	1	2	3	4	5	6
WM + WS	16.91	16.98	16.54	15.95		
WM	6.12	6.12	6.12	6.12		
WW + T #1	805.20	799.10	695.30	683.80		
WD + T #1	753.90	758.70	666.40	668.00		
TARE #1	154.10	158.40	74.00	95.90		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	8.3	6.6	4.8	2.7		
DRY DENSITY	133.4	136.4	133.3	128.5		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 136 pcf	136 pcf	gray well-graded Gravel with silt and sand
Optimum moisture = 6 %	7 %	

Project No. 257-014 **Client:** CYME
Project: 307.1 / UPS Parcel B

● **Source:** Bulk **Sample No.:** 1

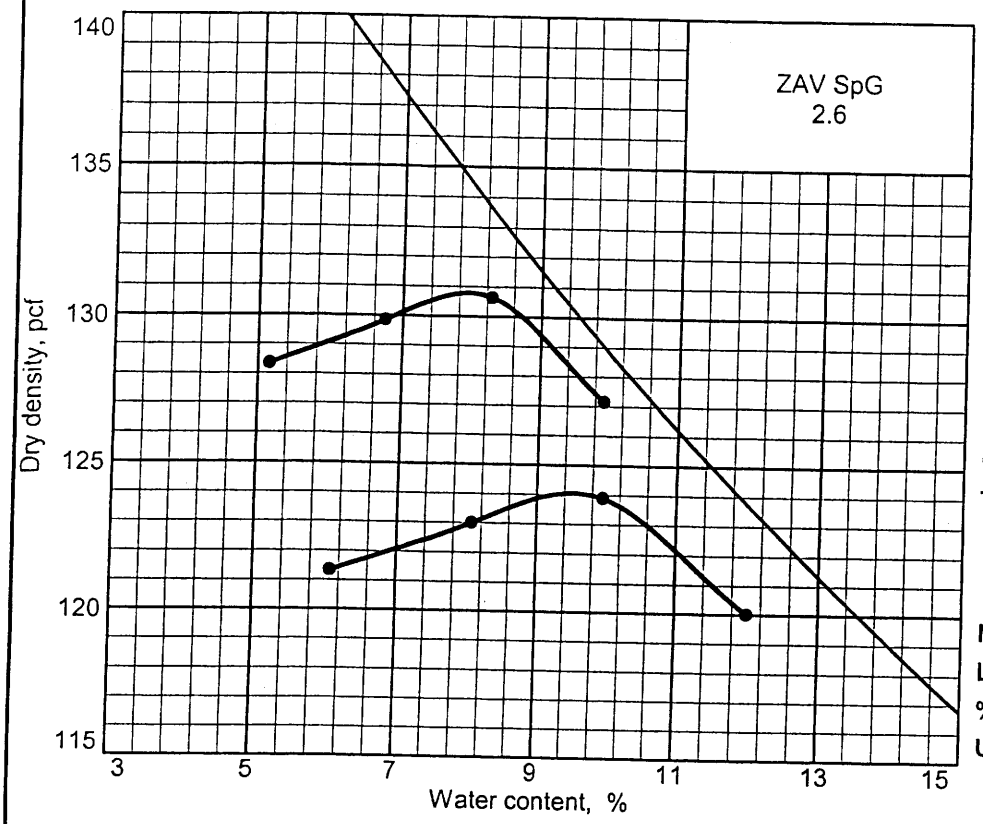
Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 1557-91 Procedure B Modified
Oversize correction applied to each point

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 25
Mold Size: .03333 cu.ft.

Test Performed on Material Passing 3/8 in. **Sieve**

Soil Data

NM		Sp.G.	2.7
LL		PI	
%>3/8 in.	19.5	%<#200	24.4
USCS	SM	AASHTO	

TESTING DATA

	1	2	3	4	5	6
WM + WS	8.91	9.02	8.96	8.77		
WM	4.48	4.48	4.48	4.48		
WW + T #1	524.70	580.50	656.20	496.90		
WD + T #1	491.10	534.70	596.50	474.00		
TARE #1	74.20	74.20	99.10	97.10		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	6.8	8.3	9.9	5.2		
DRY DENSITY	129.8	130.6	127.2	128.4		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 131 pcf	124 pcf	gray silty SAND with gravel
Optimum moisture = 8 %	10 %	

Project No. 257-014 **Client:** CYME
Project: 307.1 / UPS Parcel B

● **Source:** Bulk **Sample No.:** 3

Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

CYME

12/22

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572632
Page 1 of 1

Project Name/No. 1 DO 104 PARCEL B 775247 / HUNTERS POINT
Sample Team Members 2
Profit Center No. 3 3741210
Project Manager 4 JIM ROBINS
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 12/21/00
Lab Destination 8 CYME
Lab Contact 9 J. P.
Project Contact/Phone 12 WAYNE AKIYAMA (415) 671 2408 OR (415) 822-9400
Carrier/Waybill No. 13 CARRIER / NA

Bill to: 5 IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA 94520-1120
ATTN: WAYNE AKIYAMA
Report to: 10 SAME

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
4	CLASS II AB	12/21/00 1000	PLASTIC BAG	1 Bag	NONE	PROCTOR CURVE D698		
5	BACK FILL MATERIAL OUTER	12/21/00 1000	PLASTIC BAG	1 Bag	NONE	SIEVE ANALYSIS w/HYDROMETER PROCTOR CURVE D698 SIEVE ANALYSIS w/HYDROMETER		

FOR LAB USE ONLY

FOR LAB USE ONLY

Special Instructions: 23

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☑ Archive 6 MONTHS (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☒

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 (Signature/Affiliation) Steve Chow, IT	Date: 12/21/00 Time: 1000	1. Received by 28 (Signature/Affiliation) JP / CYME	Date: 12/21/00 Time: 1000
2. Relinquished by (Signature/Affiliation) JP / CYME	Date: 22 DEC 00 Time: 8:15	2. Received by (Signature/Affiliation) [signature]	Date: 22 DEC 00 Time: 8:15
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

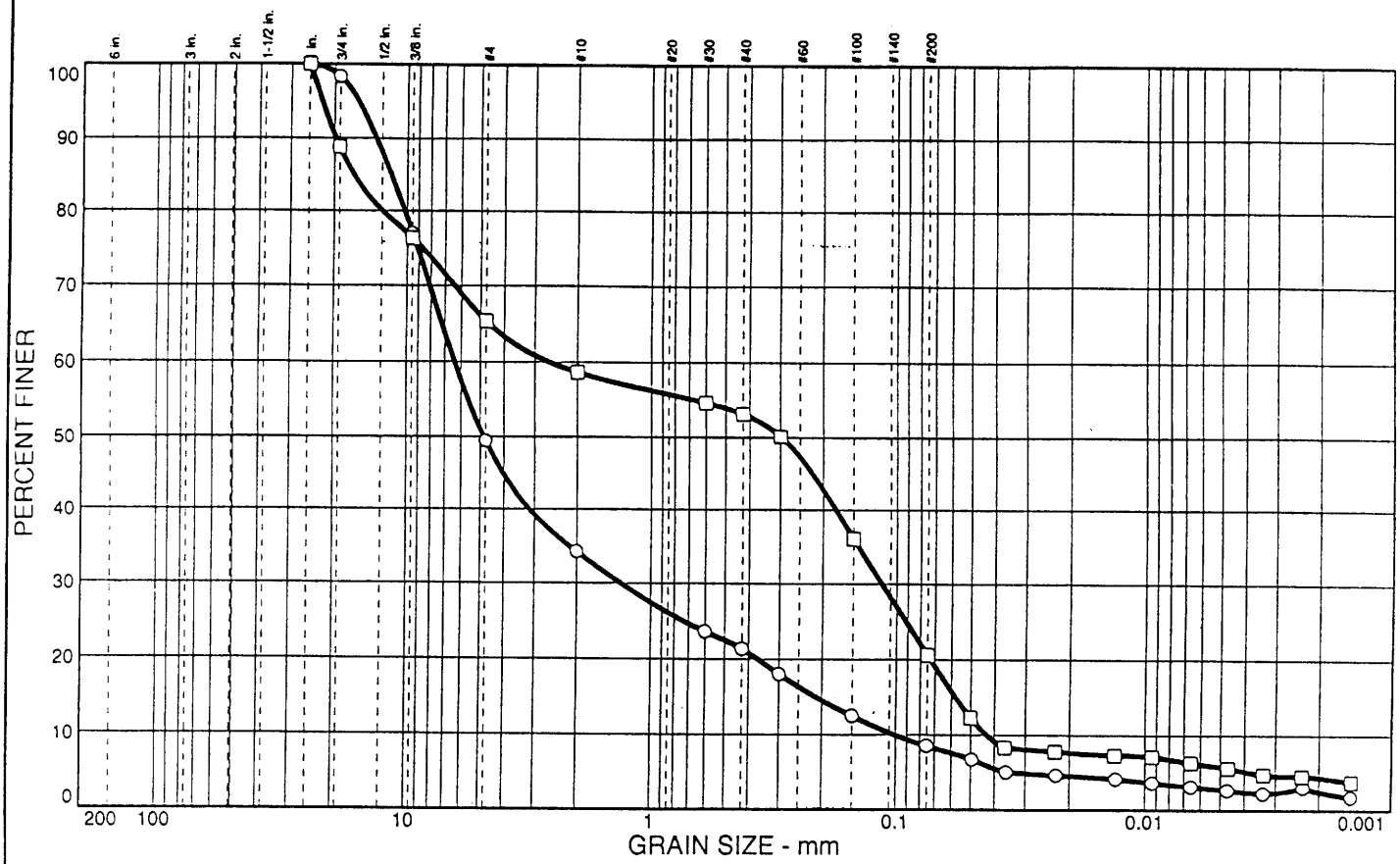
Comments: 29 PROCTOR CURVE: D698 – NOT 1557!! Thanks – JP

Yellow: field copy

*See back of form for special instructions.

MCA 3/15/91

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% + 3"	% GRAVEL	% SAND	% SILT	% CLAY	% FINES	USCS	AASHTO	PL	LL
○		50.6	40.9	5.8	2.7	8.5	GW-GM			
□		34.6	44.8	14.8	5.8	20.6	SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
1	100.0	100.0	
3/4	98.3	88.8	
3/8	76.9	76.3	
	GRAIN SIZE		
D_{60}	6.38	2.62	
D_{30}	1.32	0.115	
D_{10}	0.101	0.0431	
	COEFFICIENTS		
C_c	2.71	0.12	
C_u	63.22	60.72	

○ Source: Bulk
□ Source: Bulk

SIZE	PERCENT FINER ○	PERCENT FINER □	
#4	49.4	65.4	
#10	34.2	58.7	
#30	23.6	54.7	
#40	21.3	53.2	
#50	18.0	50.1	
#100	12.5	36.1	
#200	8.5	20.6	
0.0500 mm.		12.3	
0.0494 mm.	6.7		
0.0364 mm.		8.3	
0.0358 mm.	5.0		
0.0228 mm.		7.8	
0.0225 mm.	4.6		
0.0132 mm.		7.3	
0.0131 mm.	4.1		
0.0094 mm.		7.1	
0.0093 mm.	3.6		
0.0066 mm.	3.1	6.3	
0.0047 mm.	2.6	5.6	
0.0034 mm.	2.2	4.7	
0.0023 mm.	3.0	4.5	
0.0015 mm.	1.7	3.7	

Sample No.: 4
Sample No.: 5

SOIL DESCRIPTION

○ gray well-graded Gravel with silt and sand

□ gray silty SAND w/gravel

REMARKS:

○

□

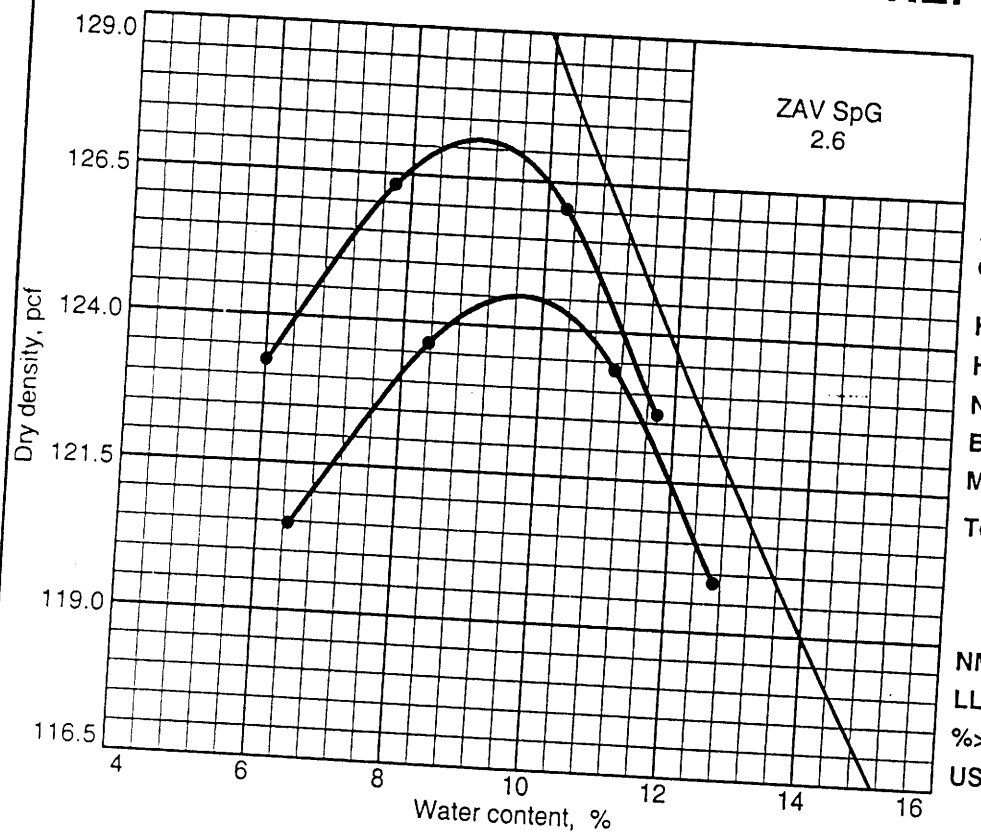
COOPER TESTING LABORATORY

Project: 773247 / Hunter Point

Feature:

Project No.: 257-037

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 698-91 Procedure C Standard
Oversize correction applied to each point

Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Number of Layers: three
Blows per Layer: 56
Mold Size: .075 cu.ft.
Test Performed on Material Passing 3/4 in. **Sieve**

Soil Data

NM		Sp.G.	2.7
LL		PI	
%>3/4 in.	7.9	%<#200	
USCS		AASHTO	

TESTING DATA

	1	2	3	4	5	6
WM + WS	15.74	16.17	16.40	16.25		
WM	6.12	6.12	6.12	6.12		
WW + T #1	673.60	593.20	745.30	729.40		
WD + T #1	638.70	554.80	680.60	655.60		
TARE #1	99.60	95.90	97.80	74.20		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	6.0	7.8	10.3	11.7		
DRY DENSITY	123.2	126.3	126.0	122.7		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 127 pcf	125 pcf	gray silty SAND
Optimum moisture = 9 %	10 %	

Project No. 257-037 **Client:** CYME
Project: 773247 / Hunter Point

Source: Bulk

Sample No.: 5

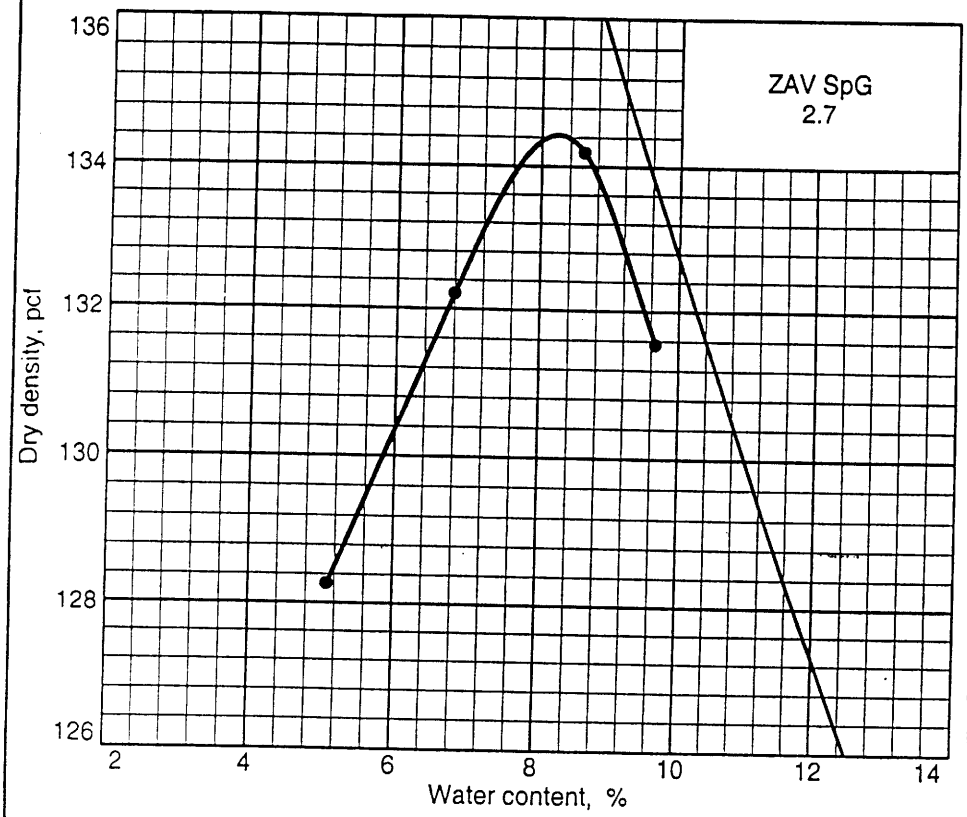
Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 698-91 Procedure C Standard

Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Number of Layers: three
Blows per Layer: 56
Mold Size: .075 cu.ft.

Test Performed on Material Passing 3/4 in. **Sieve**

Soil Data

NM _____ **Sp.G.** _____
LL _____ **PI** _____
%>3/4 in. _____ **%<#200** _____
USCS _____ **AASHTO** _____

TESTING DATA

	1	2	3	4	5	6
WM + WS	16.23	16.71	17.05	16.94		
WM	6.12	6.12	6.12	6.12		
WW + T #1	634.40	700.60	728.40	658.20		
WD + T #1	607.30	662.10	678.40	606.70		
TARE #1	75.00	95.90	97.00	74.10		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	5.1	6.8	8.6	9.7		
DRY DENSITY	128.3	132.2	134.2	131.5		

TEST RESULTS

Maximum dry density = 134 pcf

Optimum moisture = 8 %

Material Description

gray GRAVEL with silt and sand

Project No. 257-037 **Client:** CYME
Project: 773247 / Hunter Point

● **Source:** Bulk **Sample No.:** 4

Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572631
Page 1 of ____

Project Name/No. 1 1773247 / HUNTERS POINT D0109 PARCEL B
Sample Team Members 2
Profit Center No. 3 3741210
Project Manager 4 JIM ROBBINS
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 02/05/01
Lab Destination 8 CYNE
Lab Contact 9 J.P.
Project Contact/Phone 12 WAYNE AKIYAMA 415.6712408/415.8229406
Carrier/Waybill No. 13 N/A

Bill to: 5 IT. CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA 94520-1120
ATTN: W. AKIYAMA
Report to: 10 SAME

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
#7	BACK FILL MATERIAL DUTRA	02/05/01	BAG	1 BAG	NA	PROCTOR CURVE D698 SIEVE ANALYSIS W/ HYDROMETER		
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

Special Instructions: 23

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☑ Archive 6 mos (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☒

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify):

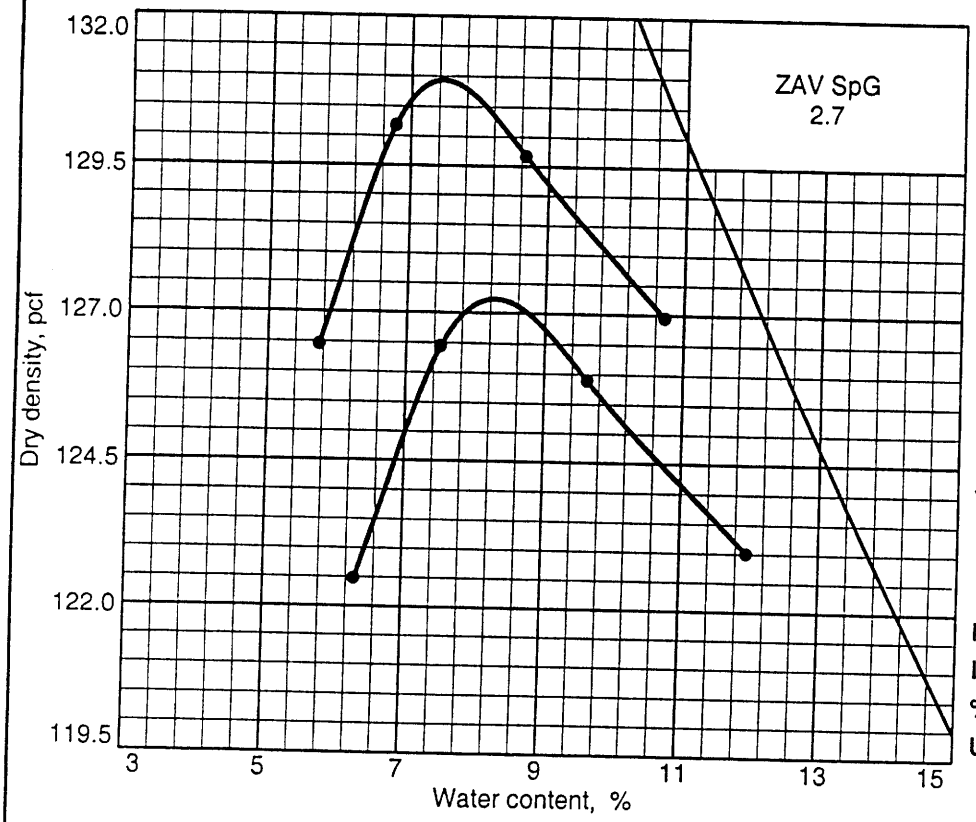
1. Relinquished by 28 (Signature/Affiliation) [signature]	Date: 02/05/01 Time: 1500	1. Received by 28 (Signature/Affiliation) JP.S / CYNE [signature]	Date: 02/05/01 Time: 1500
2. Relinquished by (Signature/Affiliation) JP.S.	Date: 02/06/01 Time: 900	2. Received by (Signature/Affiliation) [signature] (COOPER)	Date: 02/06/01 Time: 900
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

Yellow: Field copy

*See back of form for special instructions.

COMPACTION TEST REPORT



Curve No.

Test Specification:
ASTM D 698-91 Procedure B Modified
Oversize correction applied to each point

Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Number of Layers: three
Blows per Layer: 25
Mold Size: .03333 cu.ft.

Test Performed on Material Passing 3/4 in. **Sieve**

Soil Data

NM		Sp.G.	2.7
LL		PI	
%>3/4 in.	11.5	%<#200	
USCS		AASHTO	

TESTING DATA

	1	2	3	4	5	6
WM + WS	8.78	8.97	9.04	9.03		
WM	4.44	4.44	4.44	4.44		
WW + T #1	663.70	695.10	606.30	683.40		
WD + T #1	630.00	653.40	561.80	627.10		
TARE #1	96.40	97.00	99.40	156.20		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	5.7	6.8	8.7	10.7		
DRY DENSITY	126.5	130.2	129.7	127.0		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 131 pcf	127 pcf	gray silty SAND with gravel
Optimum moisture = 7 %	8 %	

Project No. 257-046 **Client:** Cyme
Project: 773247 / Hunters Point

● **Source:** Backfill Material **Sample No.:** 7

Remarks:

COMPACTION TEST REPORT

COOPER TESTING LABORATORY

Plate

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572659

Page 1 of 1

Project Name/No. [1] 773247 / P.O. 109. PARCEL B MUNZERS PI.

Samples Shipment Date [7] 03/06/01

Bill to: [5] IT CORP. 4005 PORT CHICAGO HWY CONCORD, CA 94520-1120 ATTN: W. SKIYAMA.

Sample Team Members [2] W. SKIYAMA

Lab Destination [8] CMT

Profit Center No. [3] 3741210

Lab Contact [9] JP.

Project Manager [4] J. ROBBINS

Project Contact/Phone [12] W. SKIYAMA 415 671 2408

Report to: [10] SAME

Purchase Order No. [6]

Carrier/Waybill No. [13] CARRIER/NA

Required Report Date [11]

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
9	1 1/2" DRAIN ROCK, VULCAN	03/06/01	1 BAG	1 BAG	N/A.	SIEVE ANALYSIS W/ HYDROMETER.		
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

COPY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☑ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☑

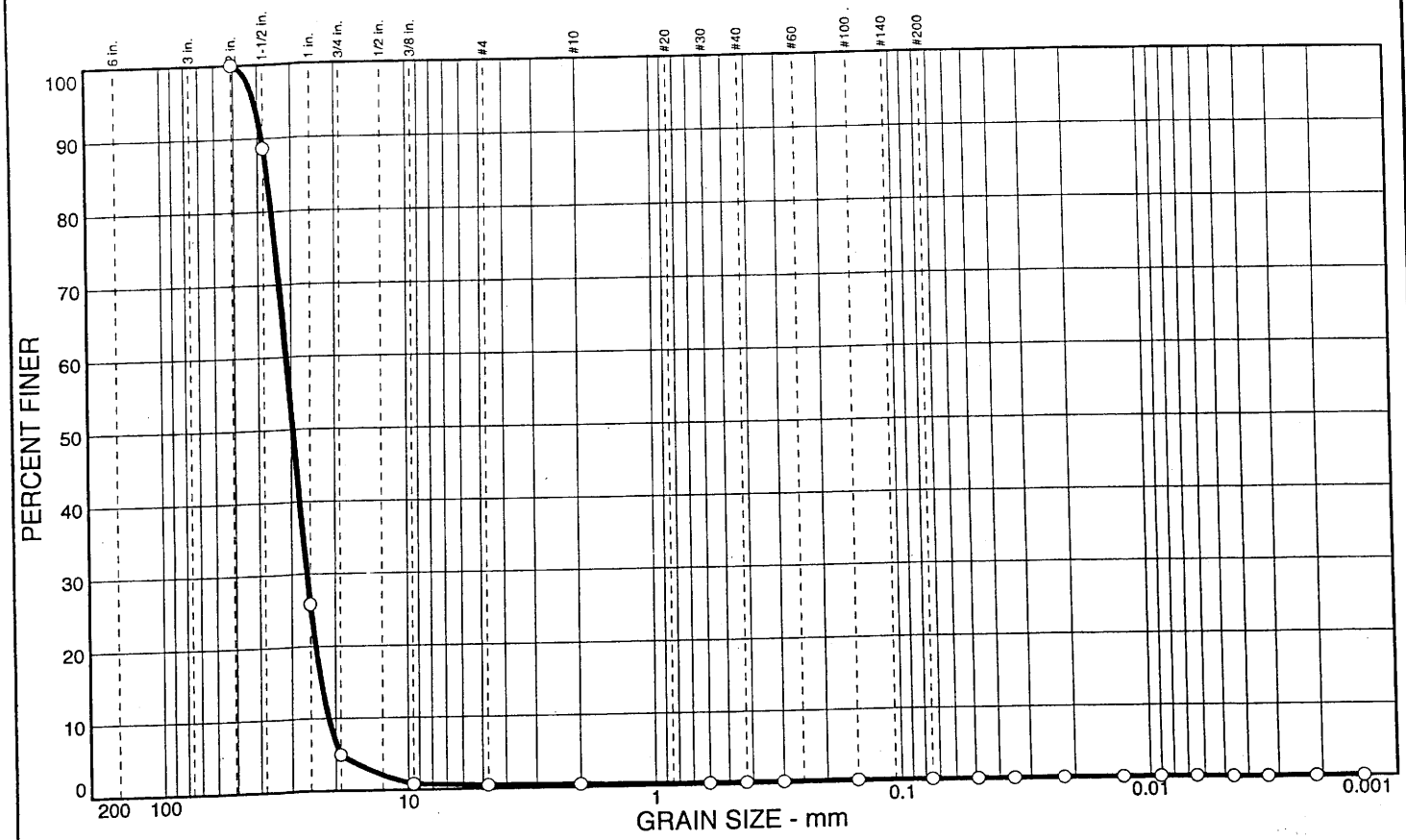
QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) [signature]	Date: 03/06/01 Time: 1320.	1. Received by [28] (Signature/Affiliation) JP-S CMT, INC.	Date: 03/06/01 Time: 13:20
2. Relinquished by (Signature/Affiliation) JP-S CMT, INC.	Date: 03/06/01 Time: 15:55	2. Received by (Signature/Affiliation) [signature]	Date: 3/06/01 Time: 15:55
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

MCA 3/15/91

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% + 3"	% GRAVEL	% SAND	% SILT	% CLAY	% FINES	USCS	AASHTO	PL	LL
○		99.5	0.4	0.1	0.0	0.1				

SIEVE inches size	PERCENT FINER ○		
2.0	100.0		
1.5	88.6		
1	25.8		
3/4	4.9		
3/8	0.8		
	GRAIN SIZE		
D_{60}	31.4		
D_{30}	26.2		
D_{10}	21.3		
	COEFFICIENTS		
C_c	1.03		
C_u	1.47		

SIZE	PERCENT FINER ○		
#4	0.5		
#10	0.4		
#30	0.2		
#40	0.2		
#50	0.2		
#100	0.2		
#200	0.1		
0.0488 mm.	0.1		
0.0349 mm.	0.1		
0.0221 mm.	0.1		
0.0128 mm.	0.1		
0.0090 mm.	0.1		
0.0065 mm.	0.1		
0.0046 mm.	0.0		
0.0033 mm.	0.0		
0.0021 mm.	0.0		
0.0014 mm.	0.0		

SOIL DESCRIPTION

○ gray Drain Rock

REMARKS:

○

○ Source: Parcel B

Sample No.: 9

COOPER TESTING LABORATORY

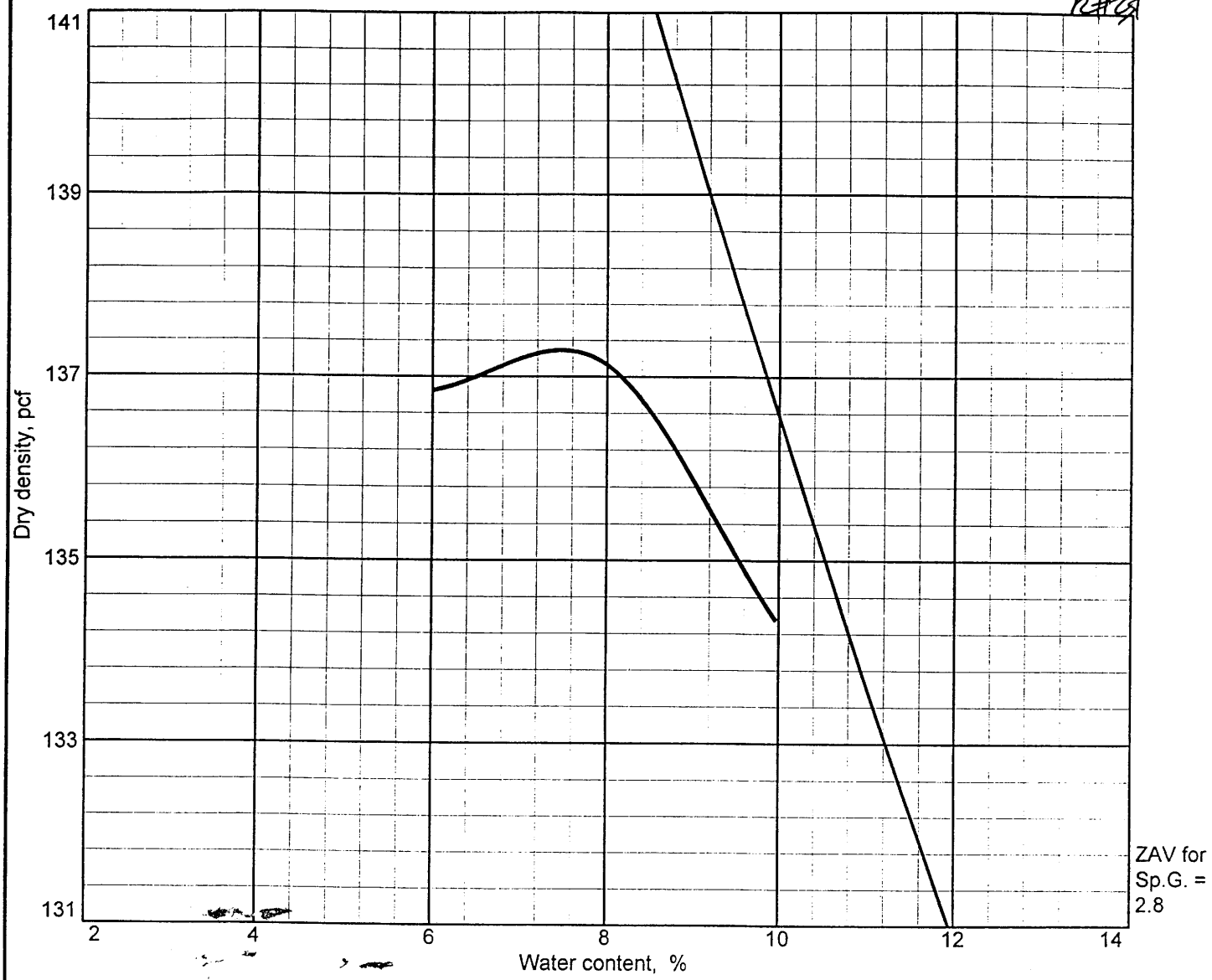
Project: Hunters Point

Feature:

Project No.: 257-052

COMPACTION TEST REPORT

E-8.4
RHG



Test specification: ASTM D 1557-78 Method C Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
Stockpile	SP-SM						0.0	10.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 137.3 pcf Optimum moisture = 7.5 %	Pilarcitos #2-Light Gray Class II Aggregate Base

Project No. 2032 **Client:** ERRG
Project: HPNS-ERRG

● **Location:** ERRG #21-015

Remarks:

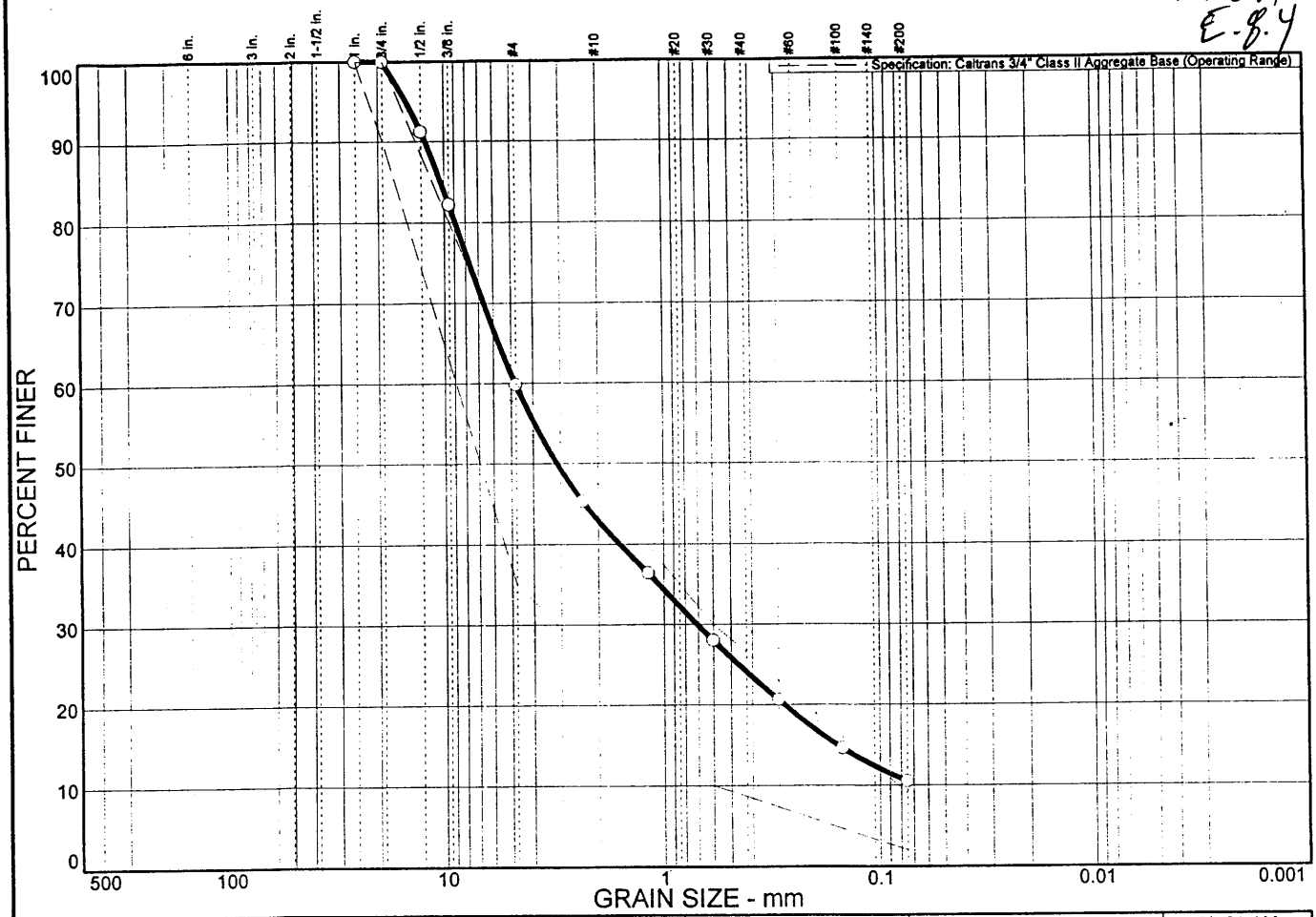
COMPACTION TEST REPORT

Smith-Emery Company

Plate 1

Particle Size Distribution Report

KH231
E-8.4



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	40.2	49.3	10.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0	100 - 100	
3/4 in.	100.0	90 - 100	
1/2 in.	91.2		
3/8 in.	82.2		
#4	59.8	35 - 60	
#8	45.3		
#16	36.4		
#30	28.0	10 - 30	
#50	20.6		
#100	14.6		
#200	10.5	2 - 9	X

* Caltrans 3/4" Class II Aggregate Base (Operating Range)

Soil Description

Pilarcitos #2-Light Gray Class II Aggregate Base

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 10.4 D_{60}= 4.78 D_{50}= 3.11
D_{30}= 0.707 D_{15}= 0.158 D_{10}=
C_u= C_c=

Classification

USCS= SP-SM AASHTO=

Remarks

F.M.=4.13

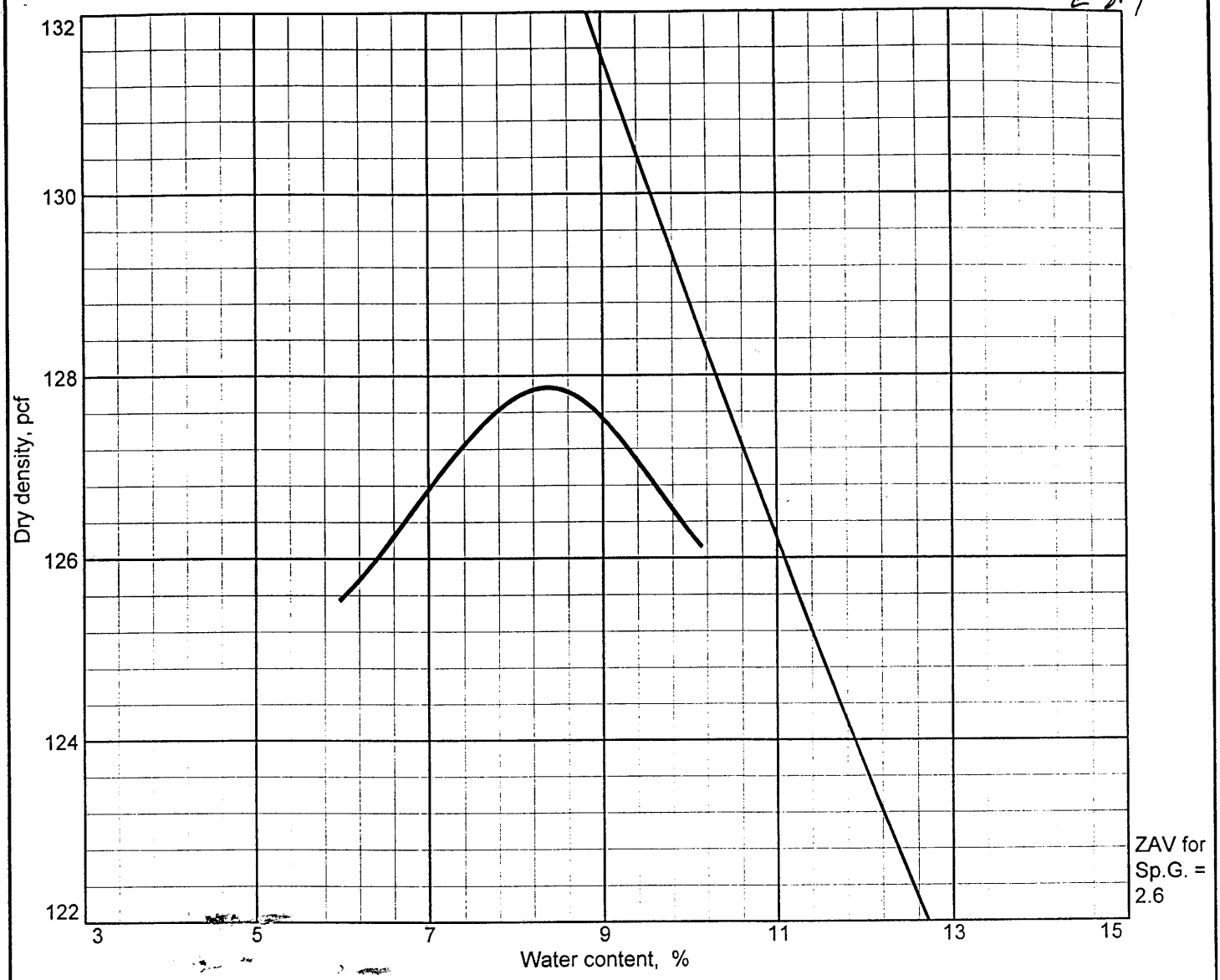
Sample No.: Pilarcitos #2 **Source of Sample:** Pilarcitos Quarry **Date:** 6/14/01
Location: ERRG #21-015 **Elev./Depth:** Stockpile

Smith-Emery Company

Client: ERRG
Project: HPNS-ERRG
Project No: 2032 **Plate** 2

COMPACTION TEST REPORT

R4231
E.8.4



Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
Stockpile								

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 127.9 pcf Optimum moisture = 8.4 %	BART Southeast - Brown silty sand with gravel

Project No. 2032 **Client:** ERRG
Project: HPNS-ERRG

- **Location:** ONSITE STOCKPILE

Remarks:

COMPACTION TEST REPORT

Smith-Emery Company

Plate 1

SMITH -EMERY COMPANY

Sieve Analysis - AGGREGATES

JOB NO.: _____ PROJECT: HPUS — EERG / I.T. DATE: 6-25-01

DATE SAMPLED: 6-25-01 BY: L.S. BORING NO.: _____ DEPTH: _____

TESTED BY: _____ COMPUTED BY: _____ CHECKED BY: _____ SAMPLE NO.: 3

SOIL CLASSIFICATION: _____

6-3 WASH SIEVE: _____ DRY SIEVE: _____ SOURCE: Pilarcitos Creek

1.64

1747.77 + Pan Dry = 1700.12 + Pan 1378.49 Net

SIEVE NO.	SIEVE USED	INDIVIDUAL WT RETAINED	INDIVIDUAL % RETAINED	CUMULATIVE WT RETAINED	CUMULATIVE % RETAINED	CUMULATIVE % PASSING	SPEC REQ
2"							
1 1/2"							
1"							
3/4"				0			
1/2"				199.27	14.45	85.6	
3/8"				322.98	23.42	76.6	
# 4				636.74	46.17	53.8	.538
PAN				742.15			
TOTAL SAMPLE				1378.89			

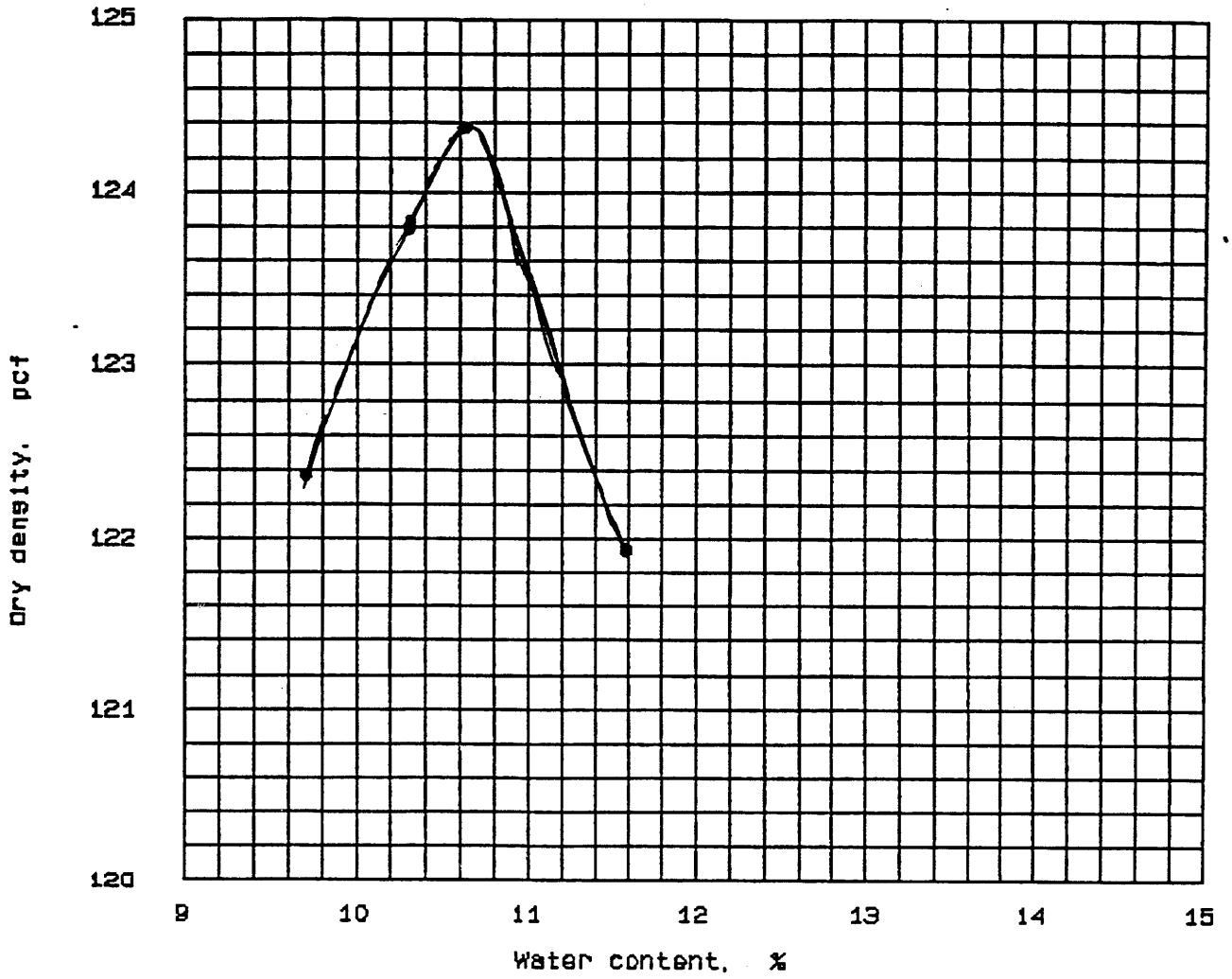
WEIGHT OF DRY SOIL BEFORE WASHING 742.15 Net WEIGHT OF DRY SOIL AFTER WASHING 609.01

SIEVE NO.	SIEVE USED	INDIVIDUAL WT RETAINED	INDIVIDUAL % RETAINED	CUMULATIVE WT RETAINED	CUMULATIVE % RETAINED	CUMULATIVE % PASSING	SPEC REQ
# 8				156.83	21.13	17.4	
#16				264.27	35.61	34.6	
#30				366.09	49.32	27.3	
#50				465.29	62.69	20.1	
#100				548.72	73.94	14.0	
#200	-			603.15	81.27	10.0	
PAN				608.95			
TOTAL SAMPLE							

PREPARED BY: T.K.F. / 6/29/90

Sieve Size	#1	#2	#3	Spec
1 in	100.0	100.0	100.0	
3/4 in	100.0	100.0	100.0	90.0 – 100.0
1/2 in	93.5	91.3	85.6	
3/8 in	88.8	82.2	76.6	
#4	65.0	59.8	53.8	35.0 – 60.0
#8	27.4	45.3	42.4	
#16	22.3	36.4	34.6	
#30	17.4	28.0	27.3	10.0 – 30.0
#50	12.7	20.6	20.1	
#100	8.9	14.6	14.0	
#200	6.4	10.5	10.0	2.0 – 9.0
	5/01/01	6/14/01	6/25/01	

Compaction Characteristics of Soils



"Modified" Proctor, ASTM D 1557, Method A

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% No.
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 10.6 Maximum dry density = 124.3	Brown Sandy Clay with Gravel #16 soil Type
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra Quarry) Date: 1-29-99	Tested by: M.Smith Date: 1-29-99 Sampled by: RK Date: 1-28-99 Remarks: Sample 22
Smith-Emery Company	Plate No. _____

E.8.4 R#199

TESTING ENGINEERS, INCORPORATED

827 Arnold Dr. Ste. 4 - Martinez, CA 94553
(925) 370-7000

Oakland
San Jose
Martinez

Laboratory Number L0141 **REPORT OF AGGREGATE TESTS** Date 2/1/00

Proj. No.: 50991
Job Data West Coast Aggregates

Sample Data:
Sampled 1/26/00 by R. Gainor, West Coast Agg.
Source: Pilarcitos Quarry
Sample Rec'd: 1/26/00 @ TEI-DV

GRADING ANALYSIS

Sample : Grayish brown silty sandy gravel (granite aggregate)
Method : Cal 202

Specification : Cal Trans Section 26-1.02A
Material Type : 3/4" Max Class 2 Aggregate Base

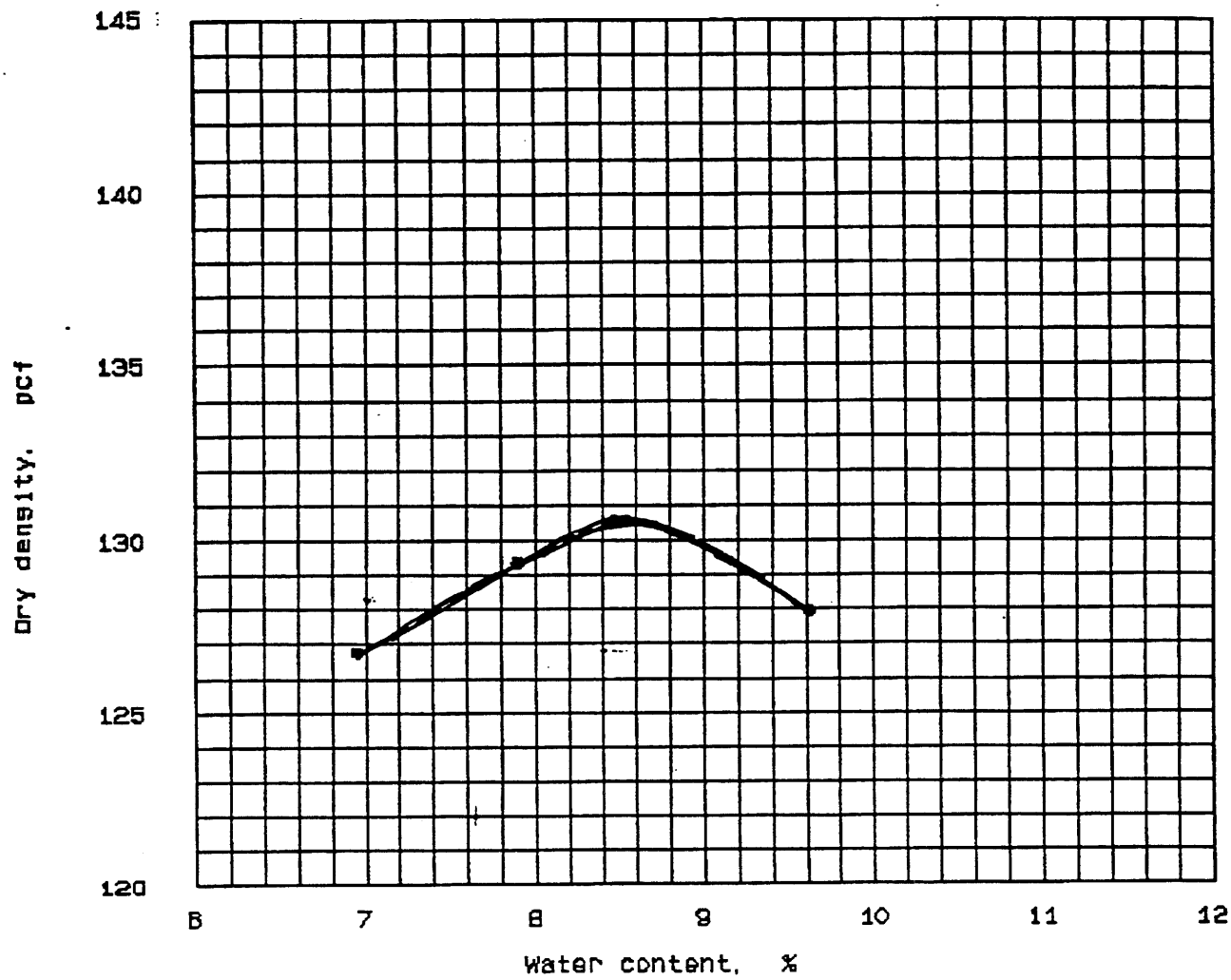
Sieve Size Inches	Sieve Size Millimeters	Percent Passing	Specified Limits: Operating Range Min	Operating Range Max	Contract Compliance Min	Contract Compliance Max
3	75.0	100%				
2½	63.0	100%				
2	50.0	100%				
1½	37.5	100%				
1	25.0	100%	100		100	
3/4	19.0	97%	90	100	87	100
1/2	12.5	86%				
3/8	9.5	72%				
#4	4.75	47%	35	60	30	65
#8	2.36	35%				
#16	1.18	27%				
#30	0.60	19%	10	30	5	35
#50	0.30	14%				
#100	0.15	10%				
#200	0.075	5.8%	2	9	0	12

Sand Equivalent (Cal 217)	38	25	22
Durability Index (Cal 229)			
Fine	61		35
Coarse	61		35
Resistance Value (Cal 301)	80		78

Warren Benson
Reviewed by, Warren Benson
Soils/Asphalt Lab Supervisor

1cc: West Coast Aggregates

Compaction Characteristics of Soils



"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 8.5 Maximum dry density = 130.5	Grey Class II AB #5 Soil Type
Job No.: 92561 Job Name: Hunter's Pt. Shipyard-Utility Corridor Sample Location: On site-Import (Dutra) Stockpile @Excavation 7-4 Date: 3-1-99	Tested by: M.Smith Date: 3-1-99 Sampled by: RK Date: 2-25-99 Remarks: Sample # 23
Smith-Emery Company	Plate No. _____

Job No. 610B Job Name WEST COAST ASS. E.8.4 R#199

Date Tested 3/4/99 By TR Sample No. 1 Source of Soil PILARCITOS QUARR

Description of Soil GR. SANDY GRAVEL / CLASS II BASE ROCK

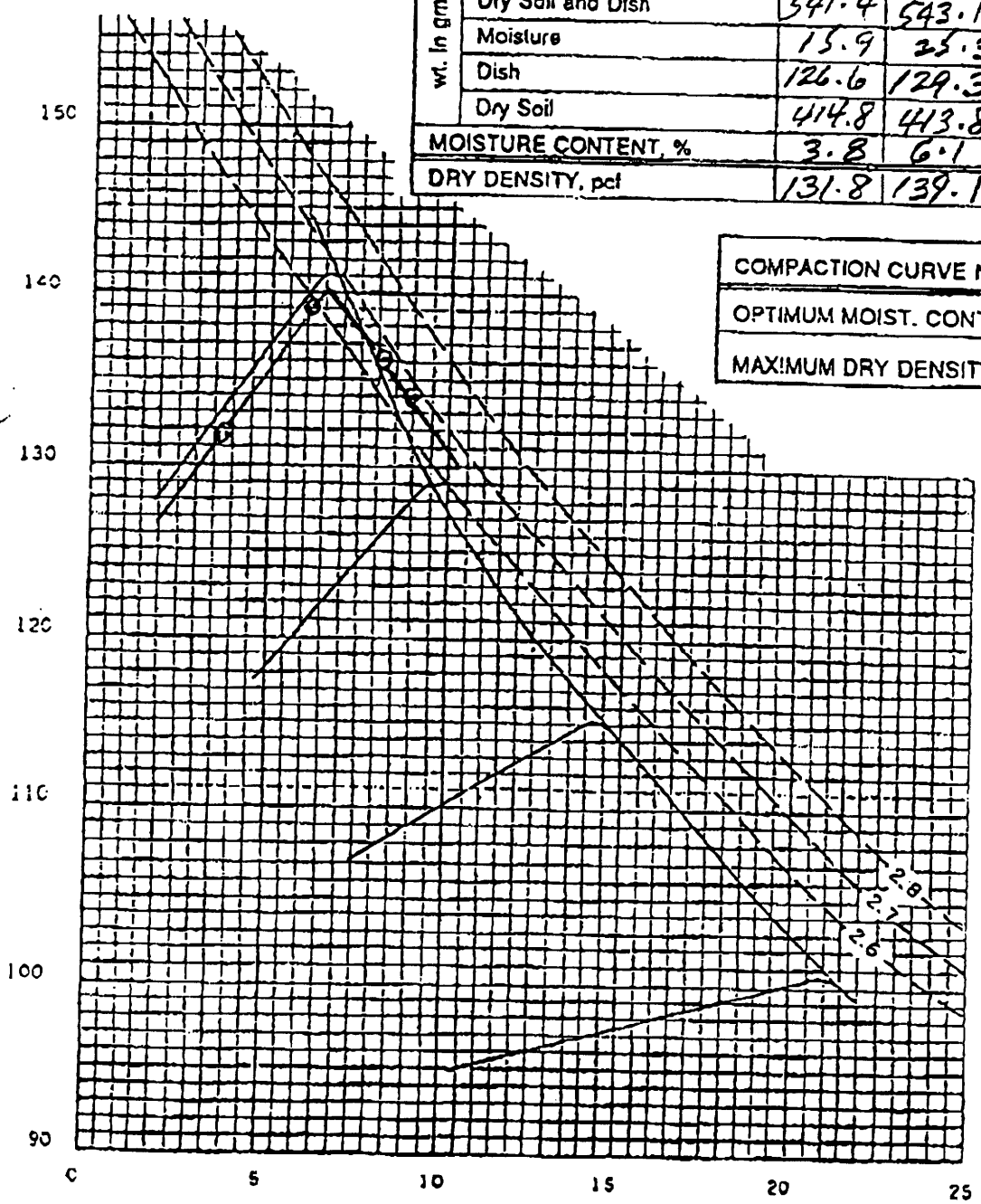
Portion Tested: All □, -¾" ☑, +¾" Repl. with No. 4 x ¾" □, -No. 4 □

☒ MODIFIED AASHO
10 lb. rammer dropped 18"
on each of 5 layers
(ASTM Des¾ D 1557-91)

☒ 4" MOLD 1/30 cu ft

wt. in lbs.	Mold and Moist Soil	9.06	9.42	9.40	9.37
	Mold	4.50	4.50	4.50	4.50
	Moist Soil	4.56	4.92	4.90	4.87
Factor (1/Vol. of Soil, cu ft)		30	30	30	30
WET DENSITY, pcf		136.8	147.6	147.0	146.1
Dish Number		Q	K	K	K
wt. in gms.	Moist Soil and Dish	557.3	568.4	633.0	636.2
	Dry Soil and Dish	541.4	543.1	595.4	594.3
	Moisture	15.9	25.3	37.6	41.9
	Dish	126.6	129.3	129.3	129.3
	Dry Soil	414.8	413.8	466.1	465.0
MOISTURE CONTENT, %		3.8	6.1	8.1	9.0
DRY DENSITY, pcf		131.8	139.1	136.0	134.0

COMPACTION CURVE NO.	1
OPTIMUM MOIST. CONTENT	6½
MAXIMUM DRY DENSITY	140



MOISTURE CONTENT IN PERCENT OF DRY WEIGHT

BAS

TESTING ENGINEERS, INCORPORATED

827 Arnold Dr. Ste. 4 - Martinez, CA 94553
(925) 370-7000

Oakland
San Jose
Martinez

Laboratory Number L-0152

REPORT OF AGGREGATE TESTS

Date 3/13/00

Proj. No.: 50991 SC895
Job Data West Coast Aggregates

Sample Data:
Sampled 3/7/00 by R. Gainor, West Coast Agg.
Source: Pilarcitos Quarry
Sample Rec'd: 3/8/00 @ TEI-SJ

GRADING ANALYSIS

Sample : Gray sandy gravel
Method : Cal 202

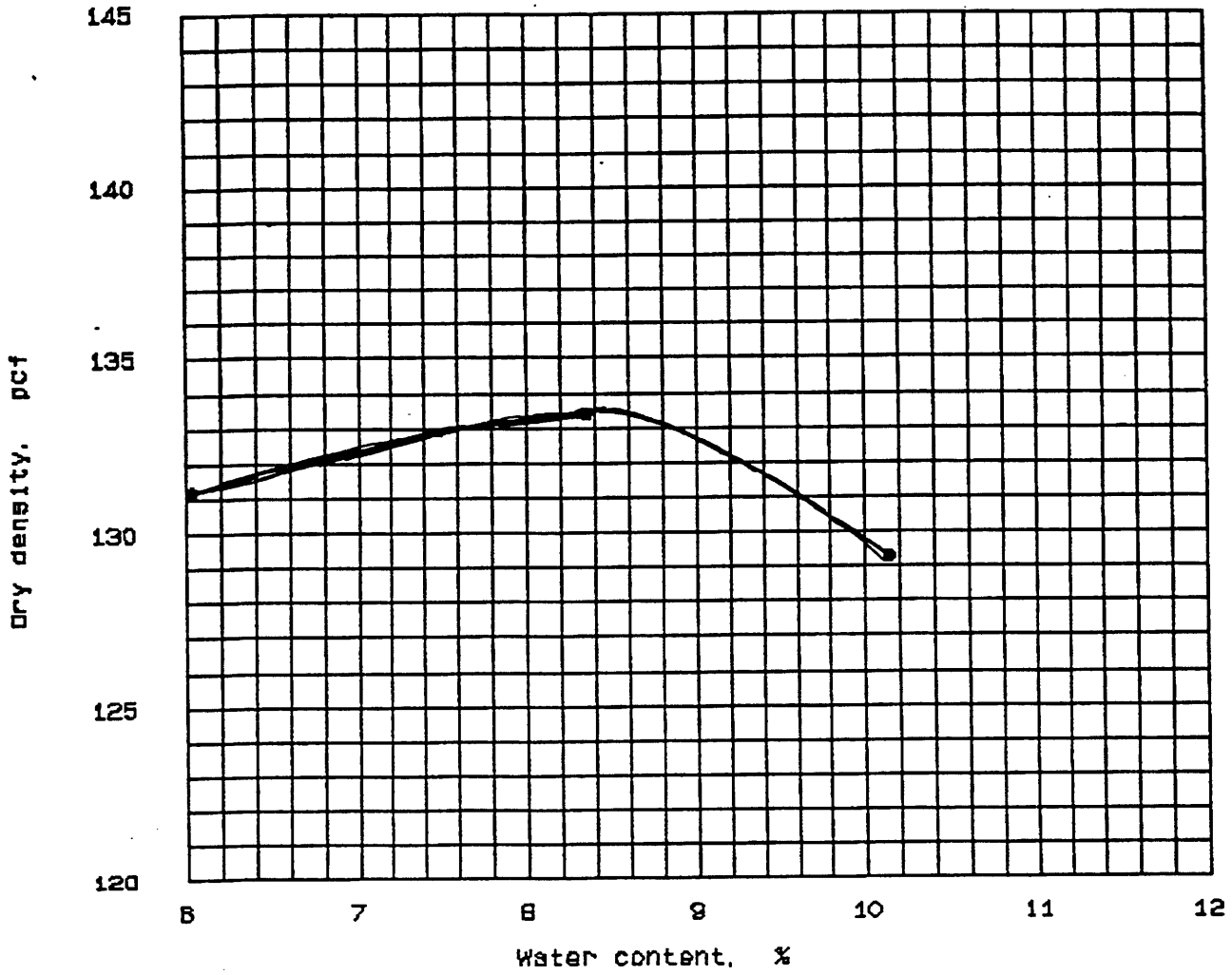
Specification : Not Specified
Material Type : 1 1/2" Drain Rock

Sieve Size Inches	Sieve Size Millimeters	Percent Passing
3	75.0	100%
2½	63.0	100%
2	50.0	100%
1½	37.5	91%
1	25.0	64%
3/4	19.0	38%
1/2	12.5	26%
3/8	9.5	22%
#4	4.75	20%
#8	2.36	17%
#16	1.18	15%
#30	0.60	12%
#50	0.30	8%
#100	0.15	6%
#200	0.075	3.3%

1cc: West Coast Aggregates

Warren Benson
Reviewed by, Warren Benson
Soils/Asphalt Lab Supervisor

Compaction Characteristics of Soils



"Modified" Proctor, ASTM D 1557, Method A

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 8.3 Maximum dry density = 133.3	Grey Brown Sand with Gravel
Job No.: 92581 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-(Site B-1) Date: 3-17-99	Tested by: M.Smith Date: 3-17-99 Sampled by: RK Date: 3-15-99 Remarks: Sample # 24
Smith-Emery Company	Plate No. _____

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 17

Date: 3-17-99 Plate No.:
Job No.: 92561
Job Name: Hunter's Pt. Shipyard-Parcel B

Sample Data

Sample Location: On site
Sample Description: Grey Brown SAND with Gravel
USCS Class: SM
AASHTO Class:
Liquid limit: N/A
Plasticity index: NP

Notes

Tested by: M.Smith Date: 3-17-99
Sampled by: R.K Date: 3-15-99
Remarks: Sample # 24

Mechanical Analysis Data

	Initial
Dry sample and tare=	2176.44
Tare =	0.00
Dry sample weight =	2176.44

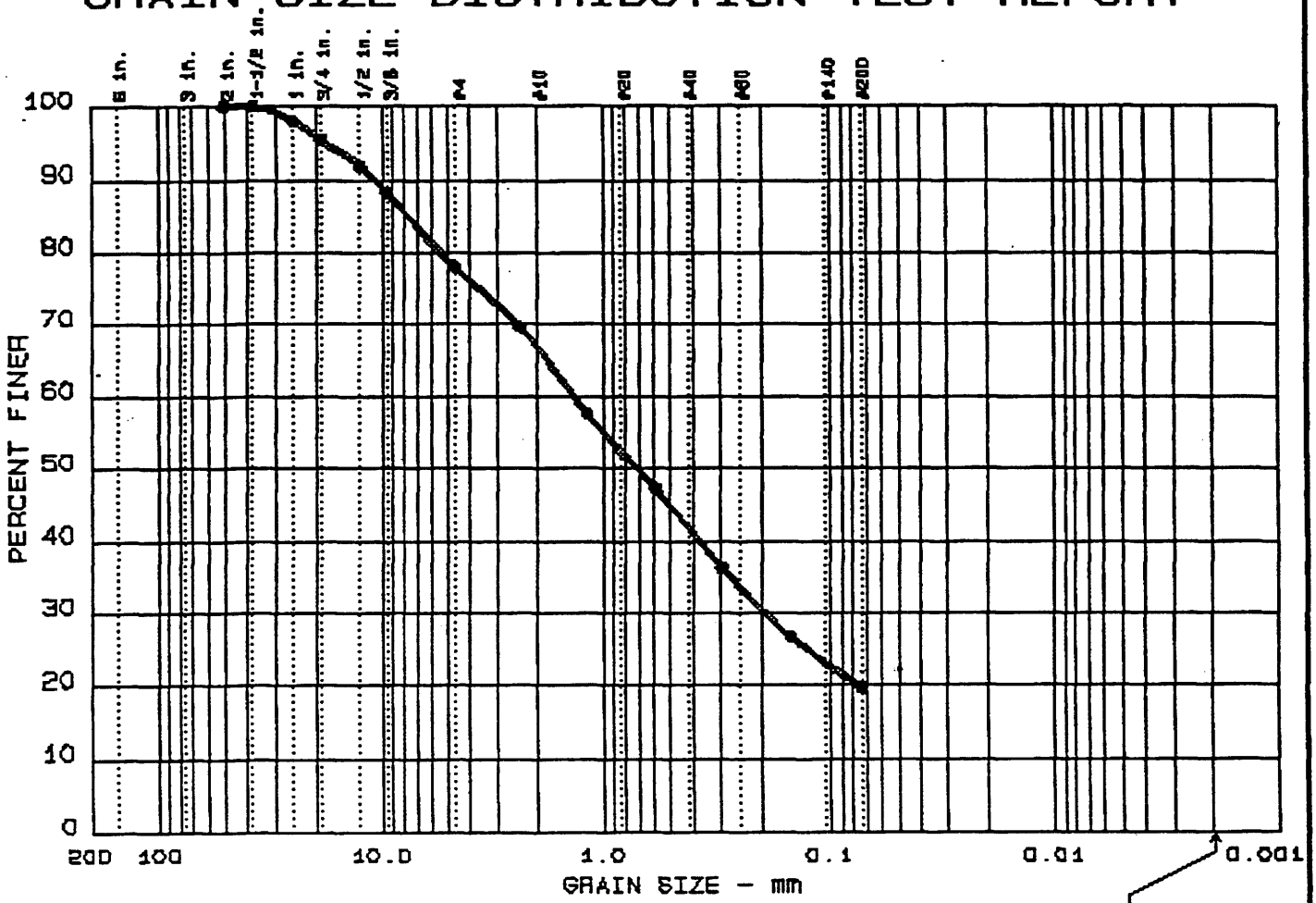
Sample split on number 4 sieve
Split sample data:
Sample and tare = 495.18 Tare = 0 Sample weight = 495.18
Cumulative weight retained tare= 0
Tare for cumulative weight retained= 0

Sieve		Cumul. Wt. retained	Percent finer
2	inches	0.00	100.0
1.5	inches	0.00	100.0
1	inches	40.86	98.1
0.75	inches	96.25	95.6
0.5	inches	175.95	91.9
0.378	inches	253.19	88.4
# 4		474.63	78.2
# 8		53.64	69.7
# 16		129.73	57.7
# 30		195.67	47.3
# 50		265.83	36.2
# 100		325.93	26.7
# 200		368.96	19.9

Fractional Components

% + 3 in. = 0.0 % GRAVEL = 21.8 % SAND = 58.3
% FINES = 19.9

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	17	0.0	21.8	58.3	19.9	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	N/A	NP	7.59	1.35	0.71	0.193				

MATERIAL DESCRIPTION	USCS	AASHTO
● Grey Brown SAND with Gravel	SM	

Job No.: 92561
Job Name: Hunter's Pt. Shipyard-Parcel B
● Sample Location: On site

Date: 3-17-99

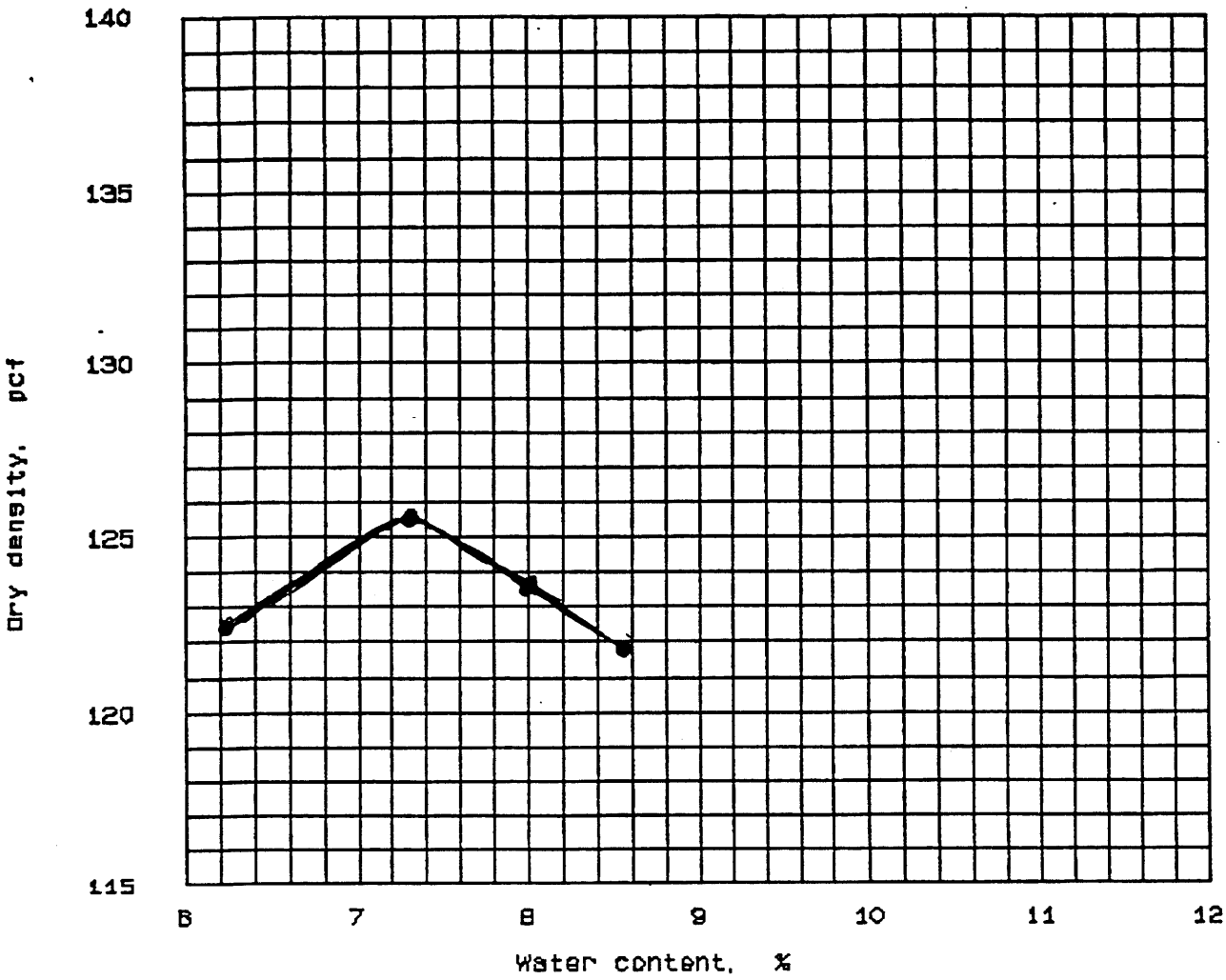
Tested by: M.Smith
Date: 3-17-99
Sampled by: R.K
Date: 3-15-99
Remarks: Sample # 24

GRAIN SIZE DISTRIBUTION TEST REPORT

Smith-Emery Company

Plate No. _____

Compaction Characteristics of Soils

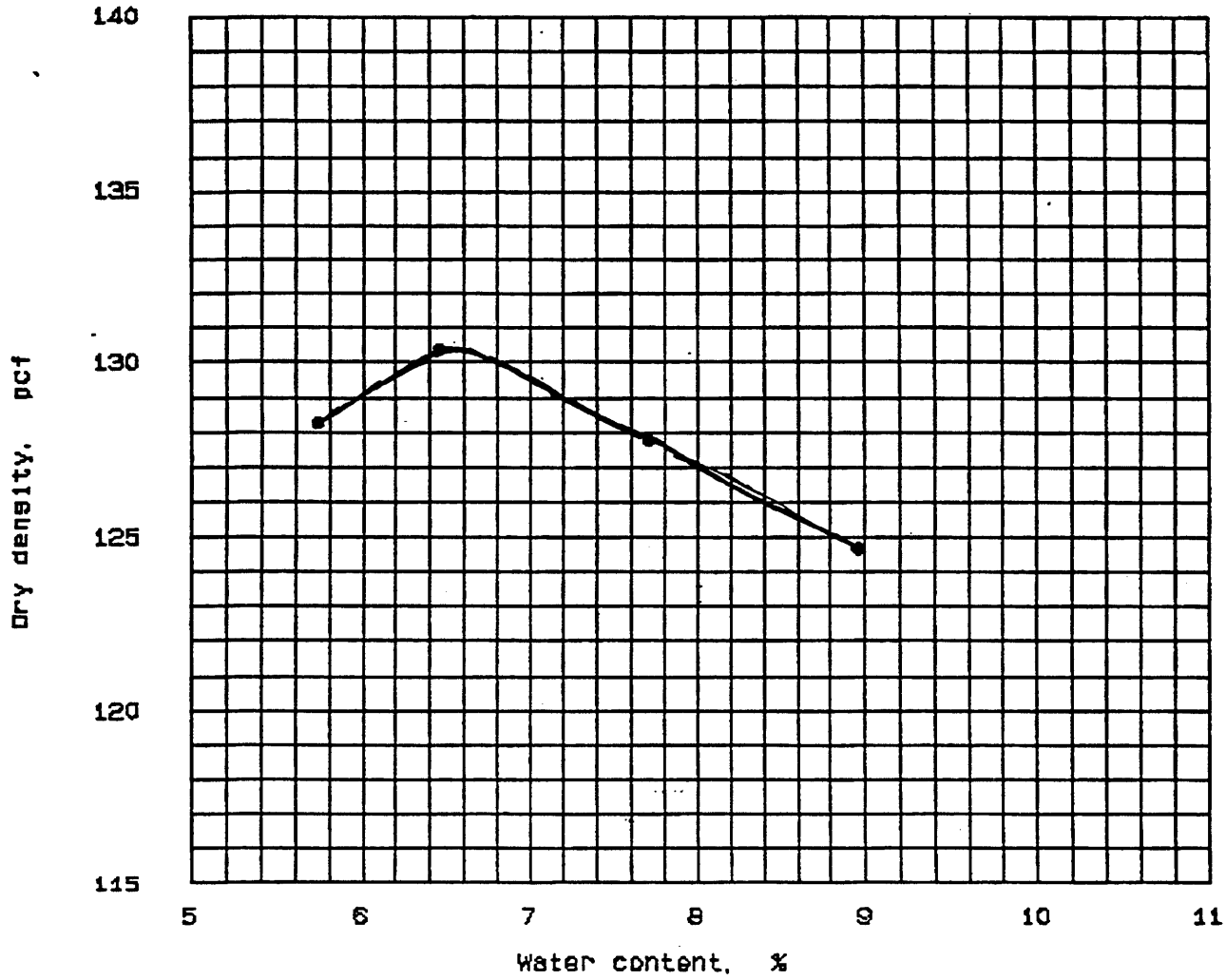


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 7.3 Maximum dry density = 125.7	Brown Sandy Gravel with Fines ~clay #13
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra) Date: 3-19-99	Tested by: M.S Date: 3-19-99 Sampled by: R.K Date: 3-18-99 Remarks: Sample # 26
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

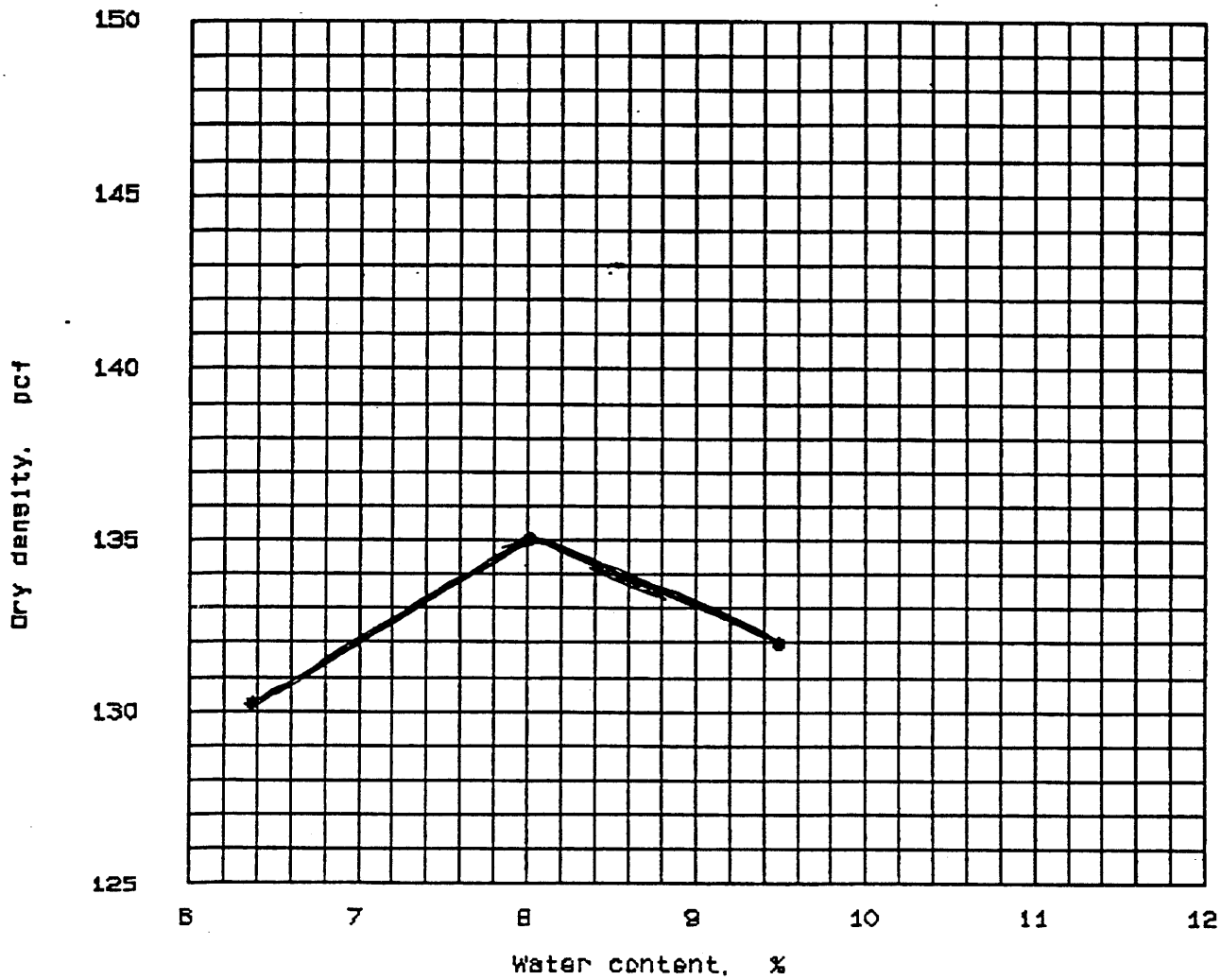


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = .6.4 Maximum dry density = 130.3	Brown Sandy Gravel with Fines
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra) Date: 3-19-99	Tested by: M.S Date: 3-19-99 Sampled by: R.K Date: 3-18-99 Remarks: Sample # 25
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

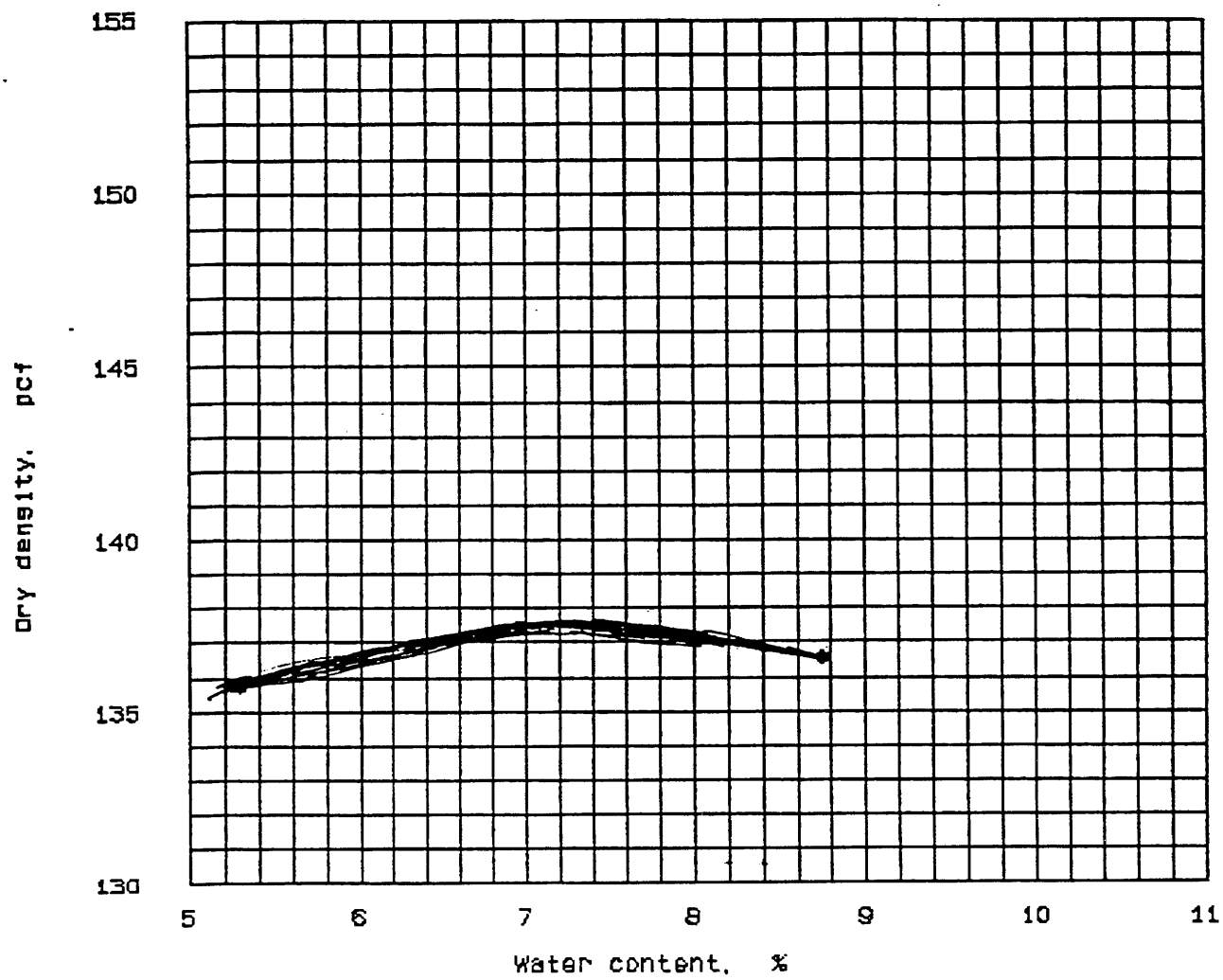


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 8.0 Maximum dry density = 135.0	Brown Sandy Clayey GRAVEL #16 clay w/gravel
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 4-5-99	Tested by: M.Smith Date: 4-5-99 Sampled by: Matt Ryan Date: 4-5-99 Remarks: Sample # 27
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

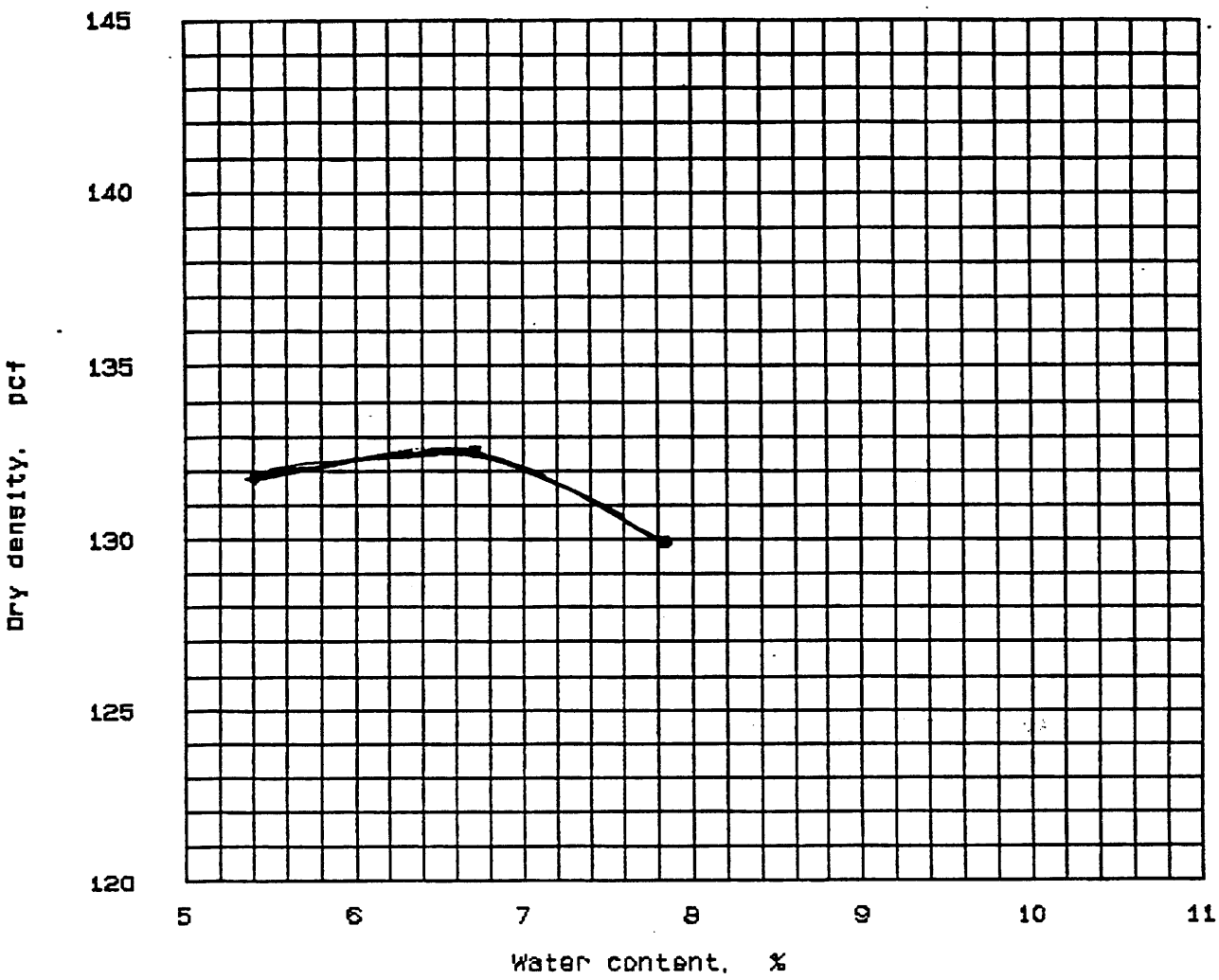


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.9 Maximum dry density = 137.4	Brown Sandy Clayey GRAVEL
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 4-5-99	Tested by: M.Smith Date: 4-5-99 Sampled by: Matt Ryan Date: 4-5-99 Remarks: Sample # 28
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

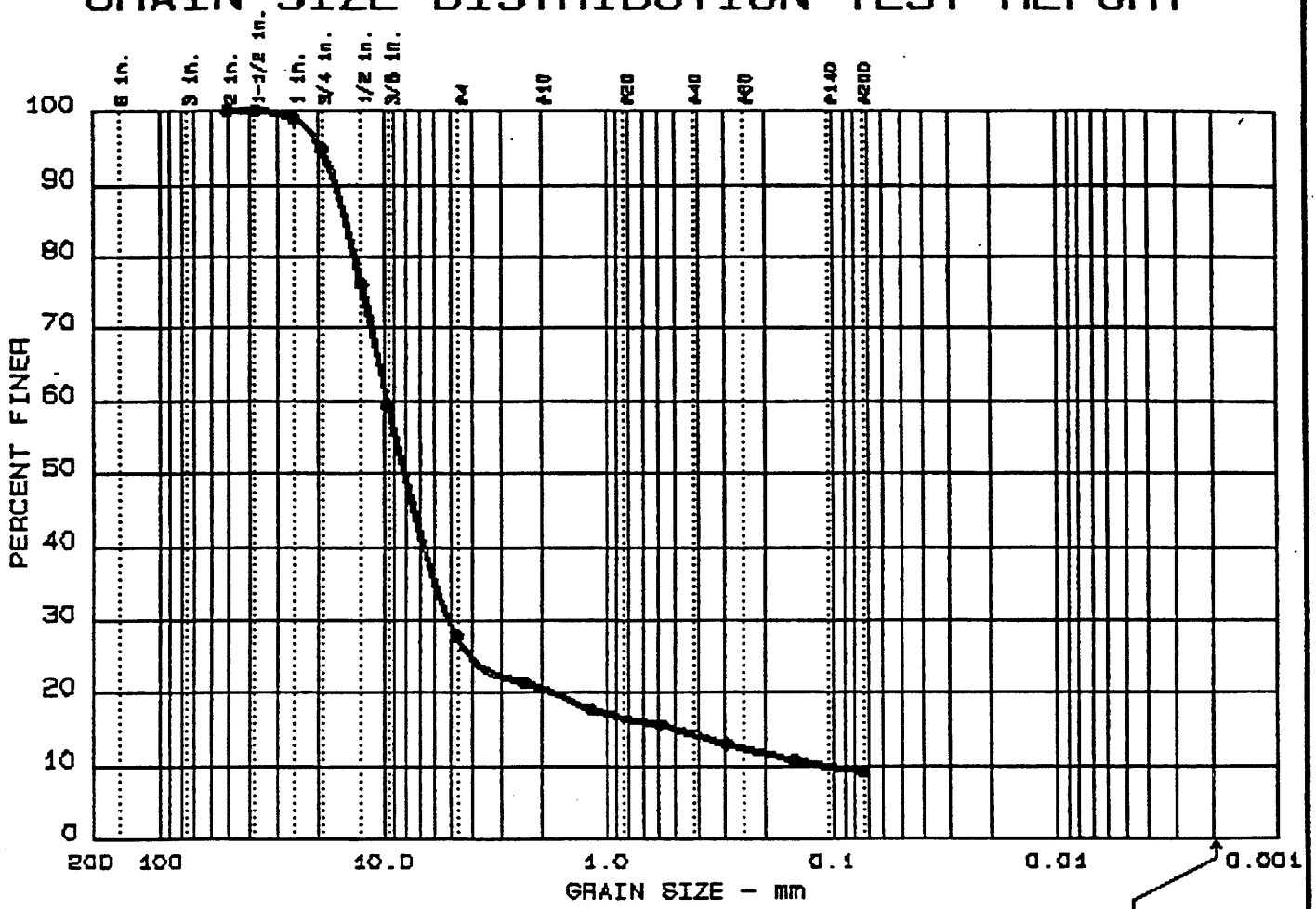


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.7 Maximum dry density = 132.5	Brown Sandy Gravel with Fines w/clay #13
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra) Date: 4-26-99	Tested by: M.S Date: 4-26-99 Sampled by: Matt Ryan Date: 4-26-99 Remarks: Sample # 29
Smith-Emery Company	Plate No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	18	0.0	72.3	18.4	9.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			14.89	9.69	8.15	5.140	0.4634	0.0935	29.14	103.6

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown Sandy GRAVEL with Fines	GP-GM	

Job No.: 92561
Job Name: Hunter's Pt. Shipyard-Parcel B
● Sample Location: On site-Import (Dutra)

Date: 4-26-99

GRAIN SIZE DISTRIBUTION TEST REPORT

Smith-Emery Company

Tested by: M.Smith
Date: 4-26-99
Sampled by: Matt Ryan
Date: 4-26-99
Remarks: Sample # 29
Sand Equivalent=24
Plate No. _____

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 18

Date: 4-26-99 Plate No.:
Job No.: 92561
Job Name: Hunter's Pt. Shipyard-Parcel B

Sample Data

Sample Location: On site-Import (Dutra)
Sample Description: Brown Sandy GRAVEL with Fines
USCS Class: GP-GM Liquid limit:
AASHTO Class: Plasticity index:

Notes

Tested by: M.Smith Date: 4-26-99
Sampled by: Matt Ryan Date: 4-26-99
Remarks: Sample # 29 Sand Equivalent=24

Mechanical Analysis Data

	Initial
Dry sample and tare=	2493.39
Tare =	0.00
Dry sample weight =	2493.39

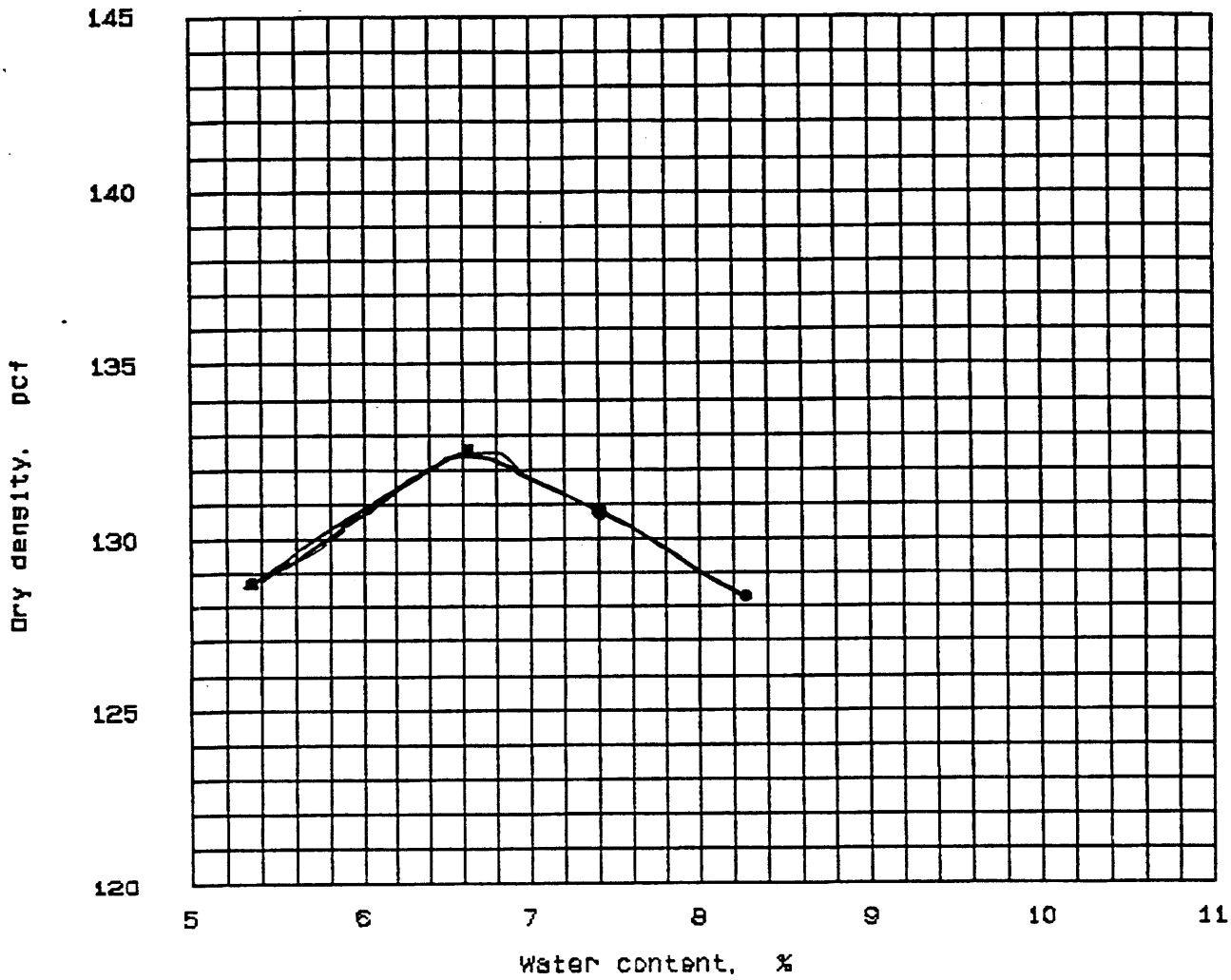
Sample split on number 4 sieve
Split sample data:
Sample and tare = 495.3 Tare = 0 Sample weight = 495.3
Cumulative weight retained tare= 0
Tare for cumulative weight retained= 0

Sieve		Cumul. Wt. retained	Percent finer
2	inches	0.00	100.0
1.5	inches	0.00	100.0
1	inches	24.66	99.0
0.75	inches	130.60	94.8
0.5	inches	592.56	76.2
0.378	inches	1013.37	59.4
# 4		1803.12	27.7
# 8		110.43	21.5
# 16		174.54	17.9
# 30		215.23	15.7
# 50		261.12	13.1
# 100		300.25	10.9
# 200		328.91	9.3

Fractional Components

% + 3 in. = 0.0 % GRAVEL = 72.3 % SAND = 18.4
% FINES = 9.3

Compaction Characteristics of Soils

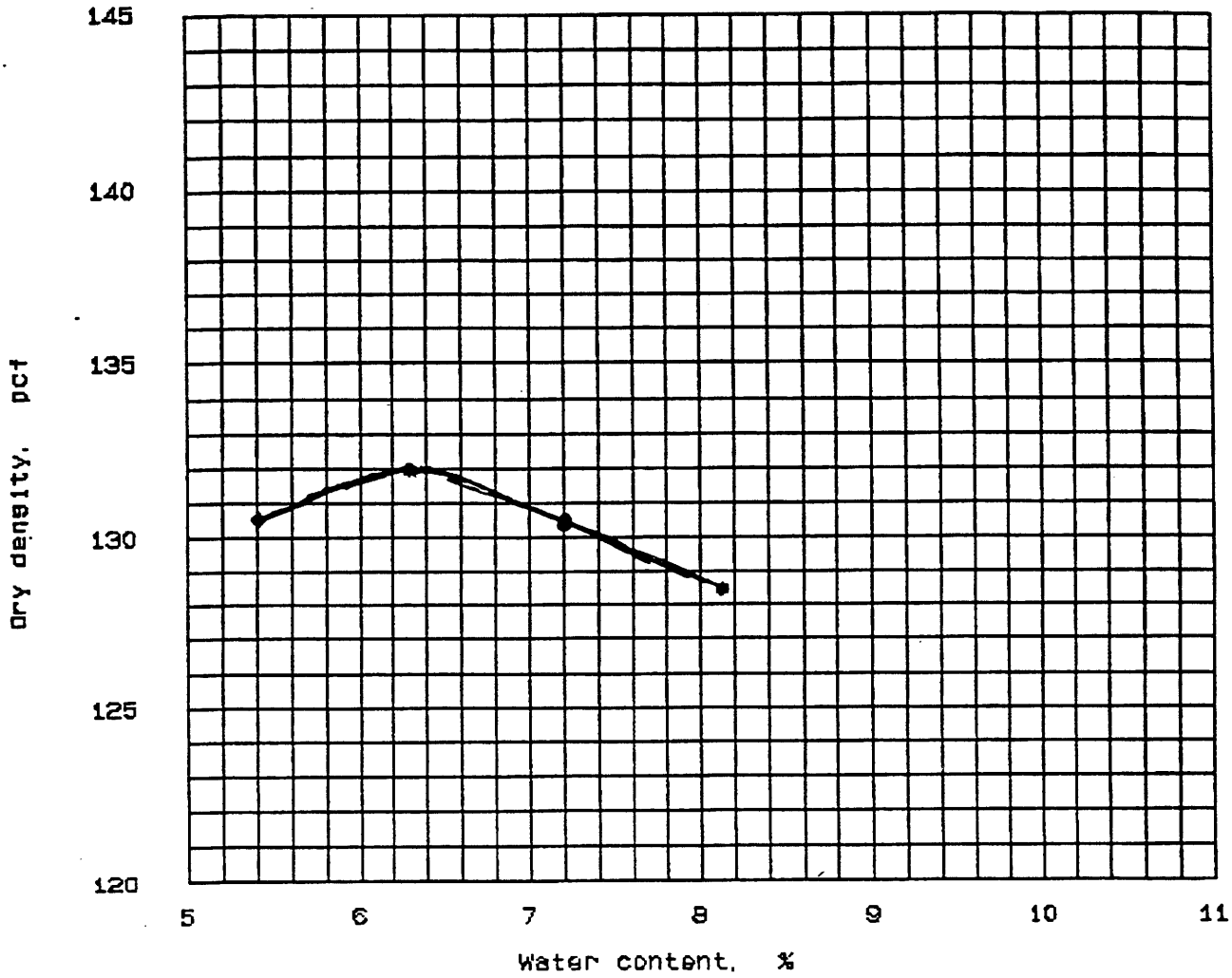


"Modified" Proctor, ASTM D 1557, Method D

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.6 Maximum dry density = 132.6	Grey Brown Silty SAND with Gravel #1
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra) Date: 5-17-99	Tested by: M.S Date: 5-17-99 Sampled by: Matt Ryan Date: 5-17-99 Remarks: Sample # 30
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

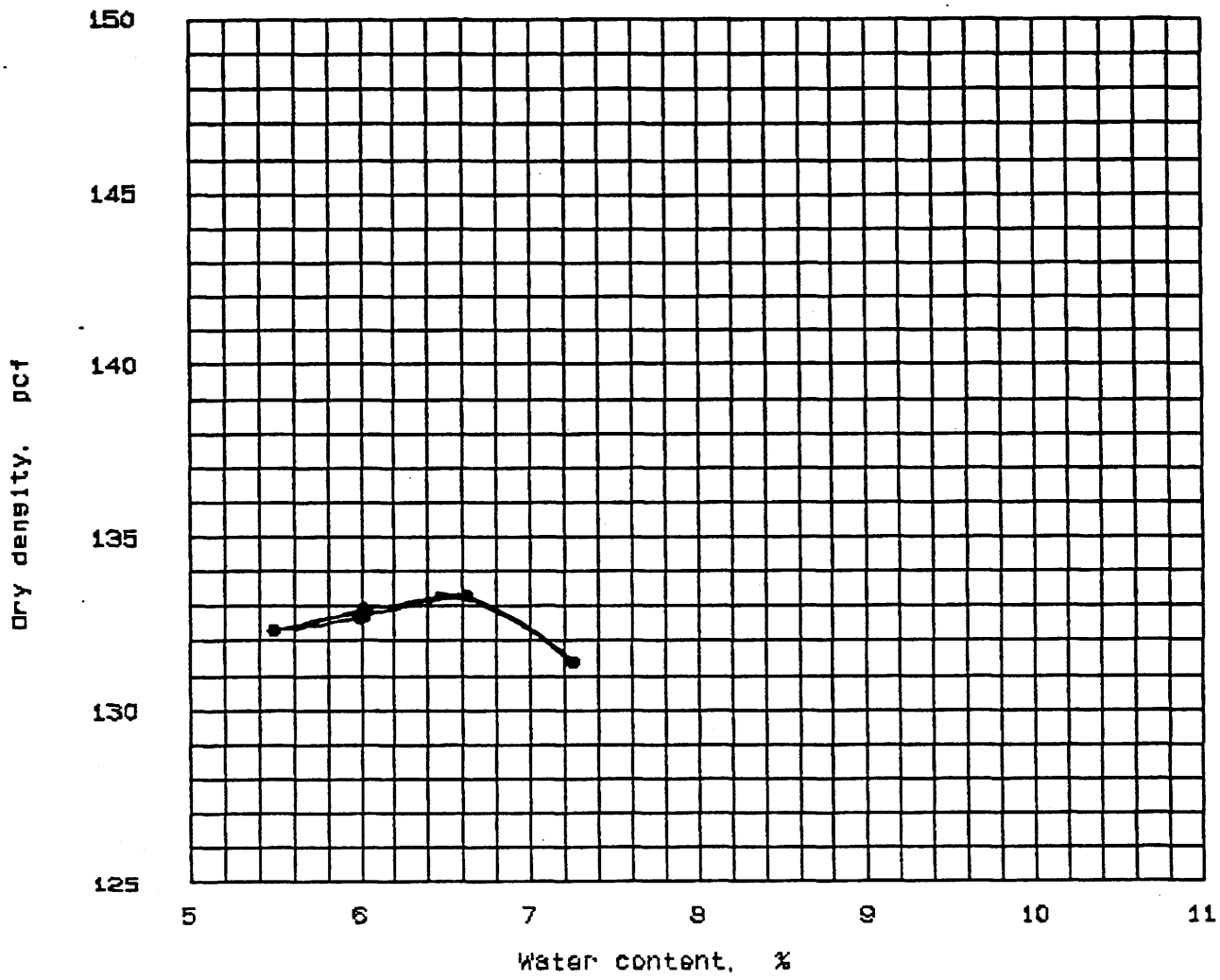


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.2 Maximum dry density = 132.0	Grey Class II AB #5 Soil Type
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD-PARCEL B Sample Location: On Site-Import (Dutra) Date: 5-18-99	Tested by: M.S Date: 5-18-99 Sampled by: Matt Ryan Date: 5-17-99 Remarks: Sample # 31
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

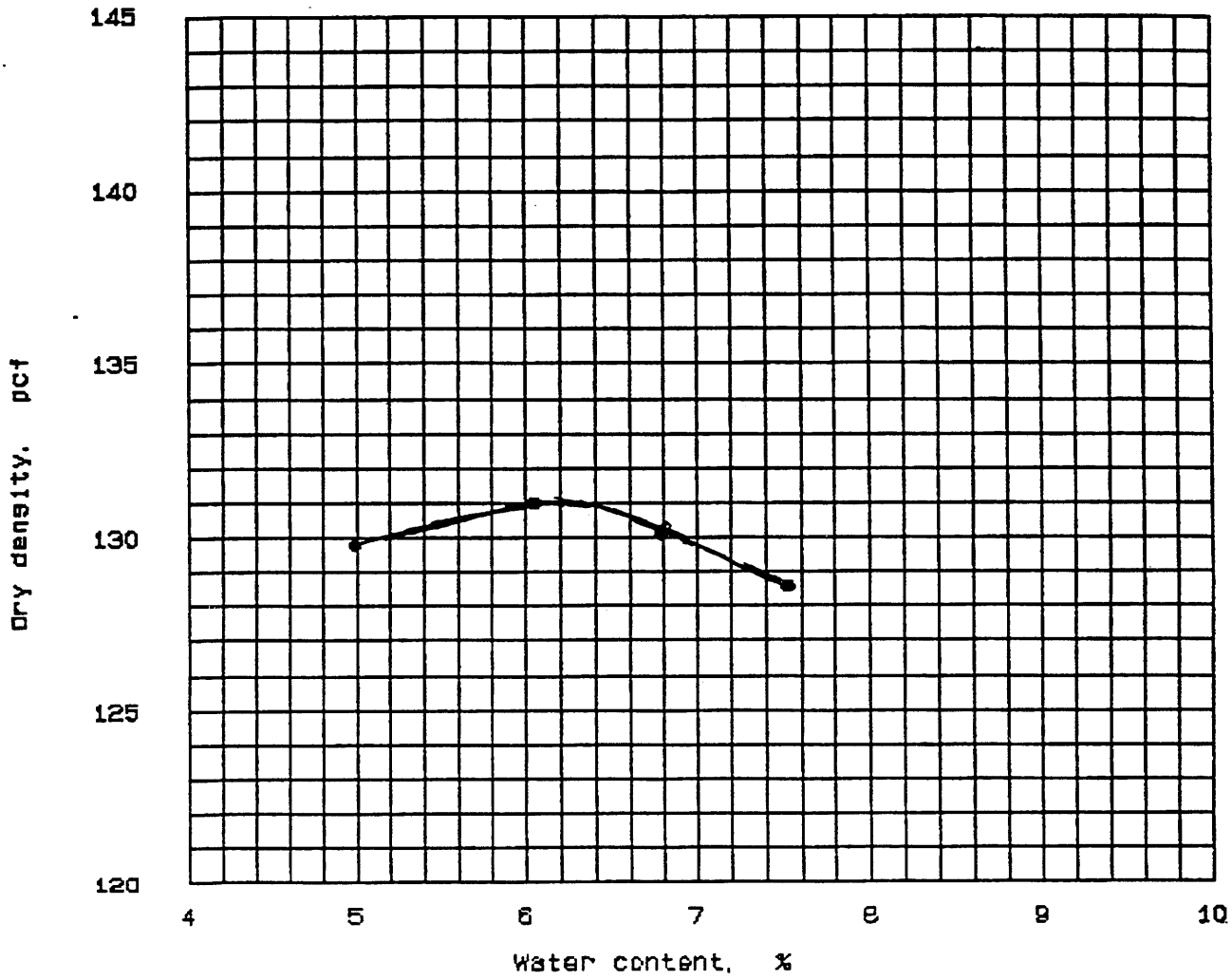


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.6 Maximum dry density = 133.2	Brown Silty SAND with GRAVEL
Job No.: 92581 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-18-99	Tested by: M.Smith Date: 5-18-99 Sampled by: Matt Ryan Date: 5-18-99 Remarks: Sample # 32
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

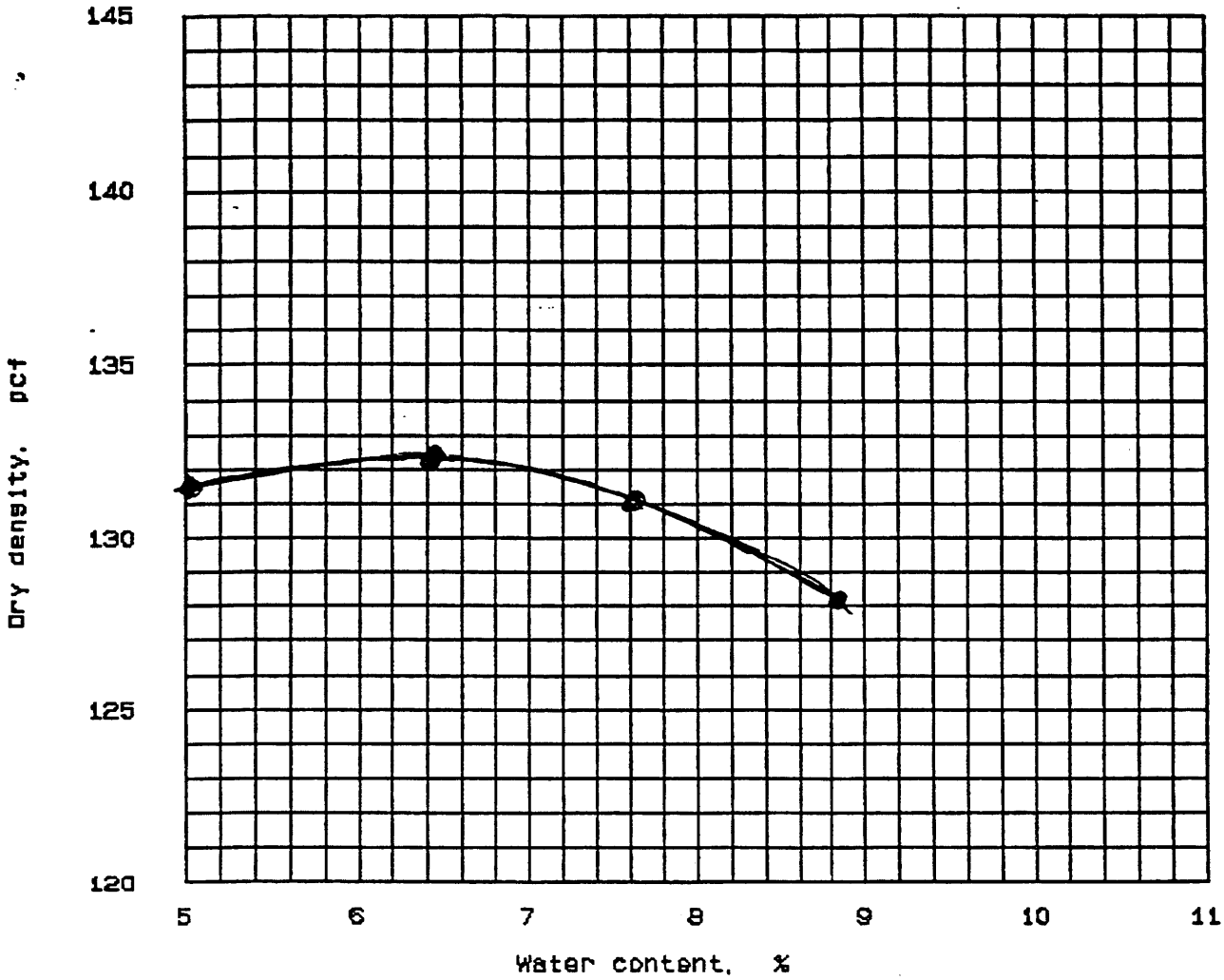


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.0 Maximum dry density = 131.0	Brown Silty SAND with GRAVEL #32
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-20-99	Tested by: M.Smith Date: 5-20-99 Sampled by: Matt Ryan Date: 5-19-99 Remarks: Sample # 33
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

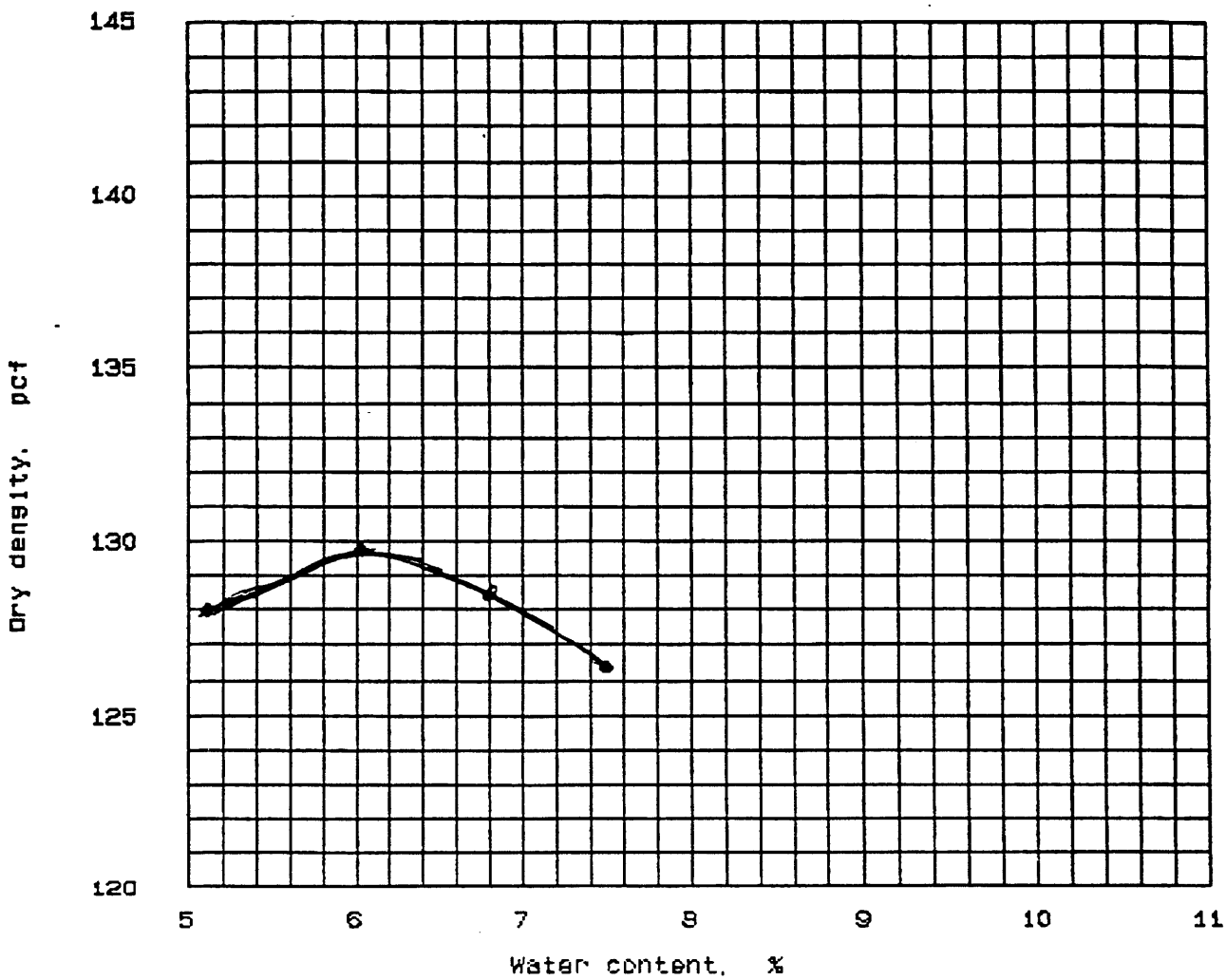


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.4 Maximum dry density = 132.3	Brown Silty SAND with Gravel #34
Job No.: 92561 Job Name: Hunter's Pt. Shipyard-Parcel B Sample Location: On site-Import (Dutra) Date: 5-20-99	Tested by: M.Smith Date: 5-20-99 Sampled by: M.Ryan Date: 5-19-99 Remarks: Sample # 34
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

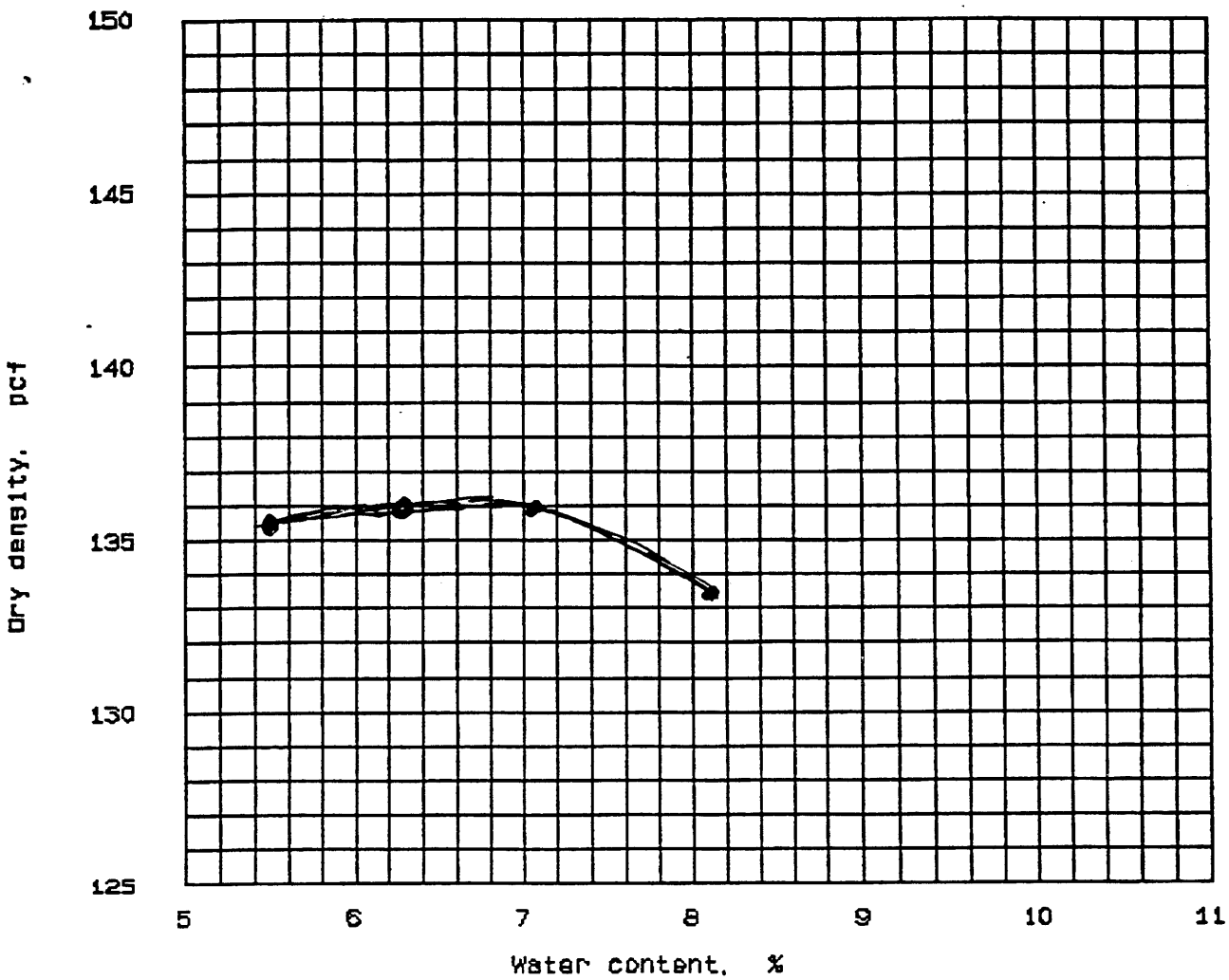


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.0 Maximum dry density = 129.8	Brown Silty SAND with Gravel #32
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-20-99	Tested by: M.Smith Date: 5-21-99 Sampled by: Matt Ryan Date: 5-20-99 Remarks: Sample # 35
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

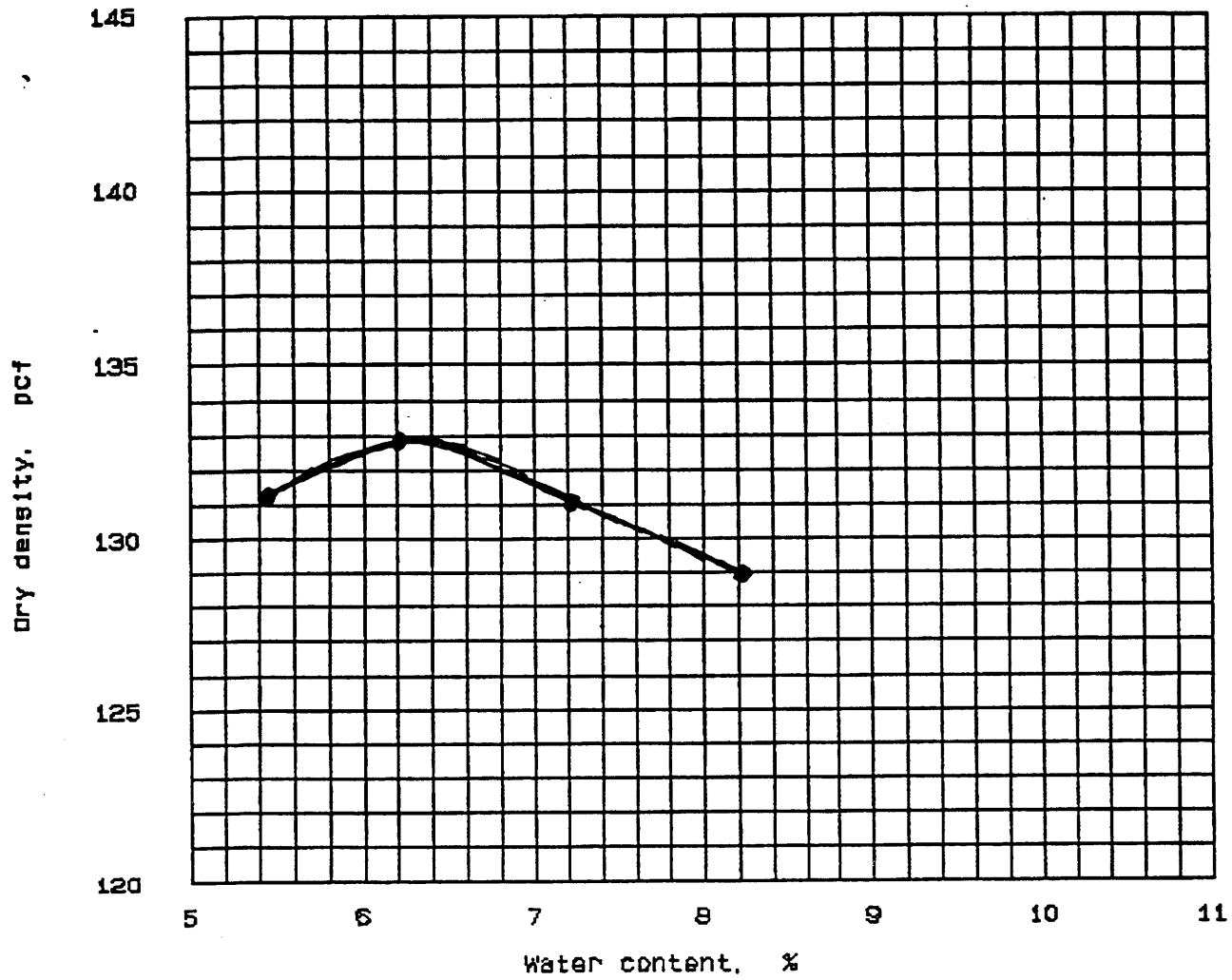


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.7 Maximum dry density = 136.3	Brown Silty SAND with Gravel #32
Job No.: 92561 Job Name: Hunter's Pt. Shipyard-Parcel B Sample Location: On Site-Import (Dutra) Date: 5-25-99	Tested by: M.Smith Date: 5-25-99 Sampled by: M.Ryan Date: 5-25-99 Remarks: Sample 36
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

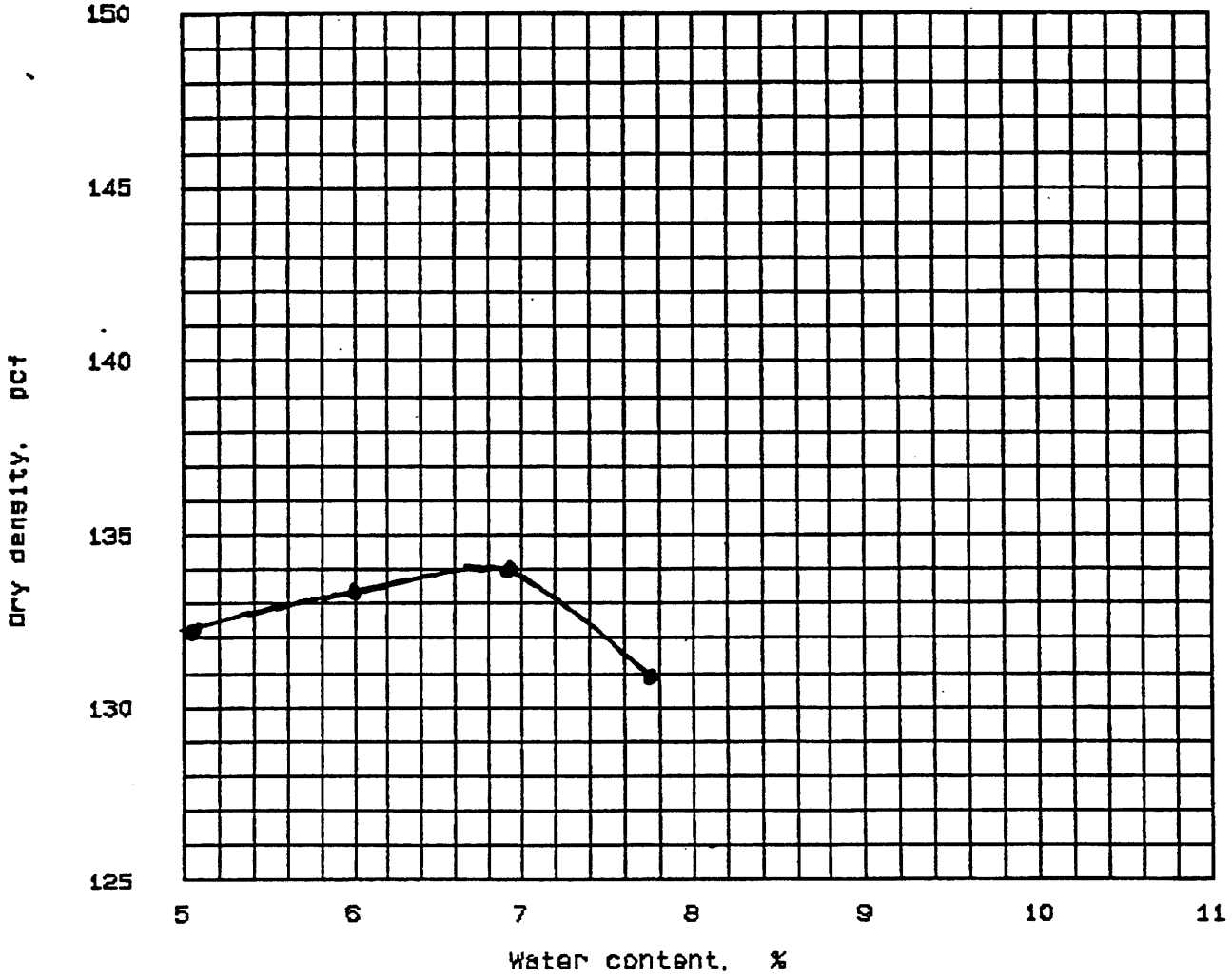


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.2 Maximum dry density = 132.7	Brown Class II AB #5 - Gray sand
Job No.: 92561 Job Name: Hunter's Pt. Shipyard-Parcel B Sample Location: On site-Import (Dutra) Date: 5-25-99	Tested by: M.Smith Date: 5-25-99 Sampled by: M.Ryan Date: 5-25-99 Remarks: Sample # 40
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

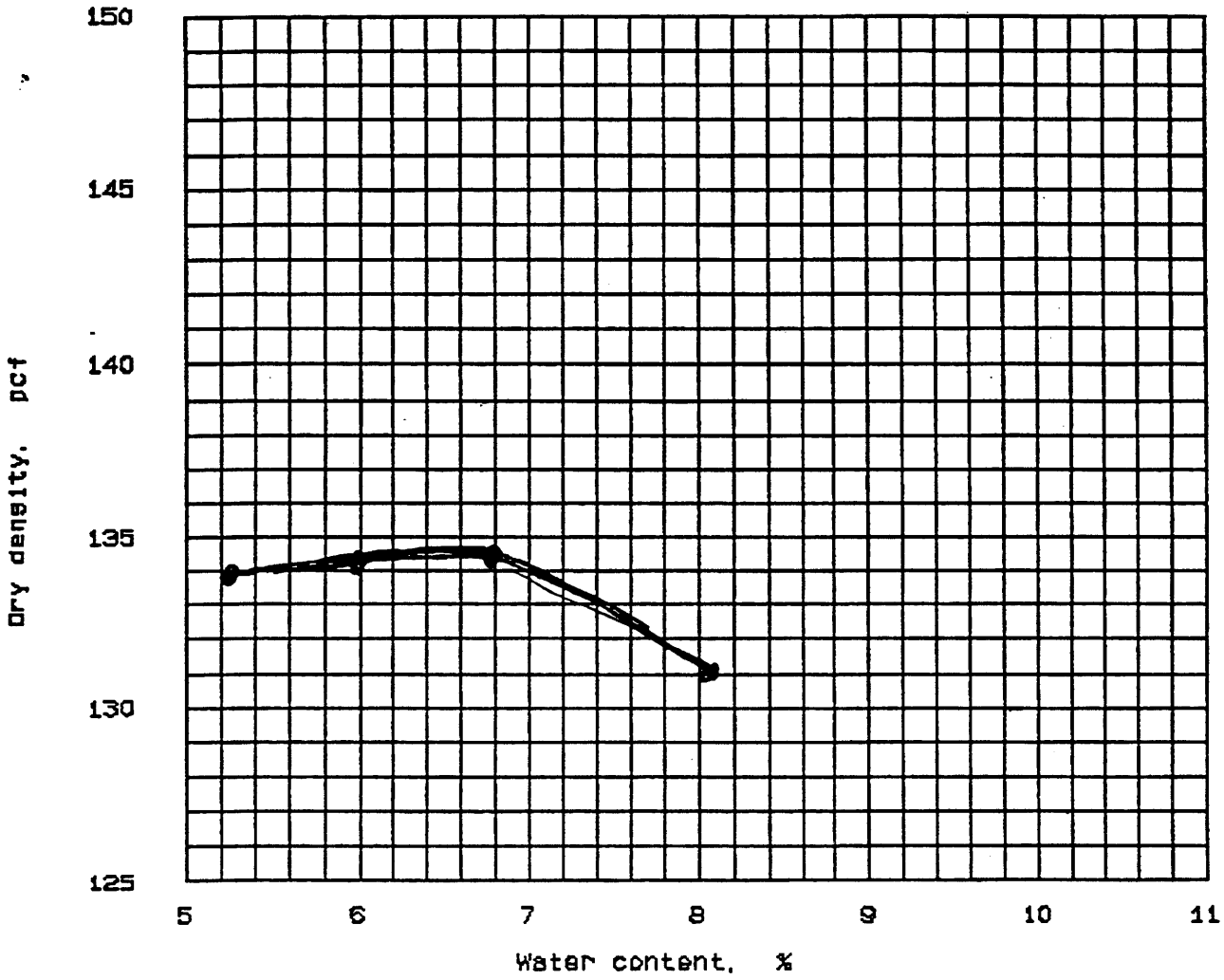


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.9 Maximum dry density = 134.0	Brown Silty SAND with Gravel #34
Job No.: 92561 Job Name: Hunter's Pt. Shipyard-Parcel B Sample Location: On Site-Import (Dutra) Date: 5-25-99	Tested by: M.Smith Date: 5-26-99 Sampled by: M.Ryan Date: 5-25-99 Remarks: Sample 37
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

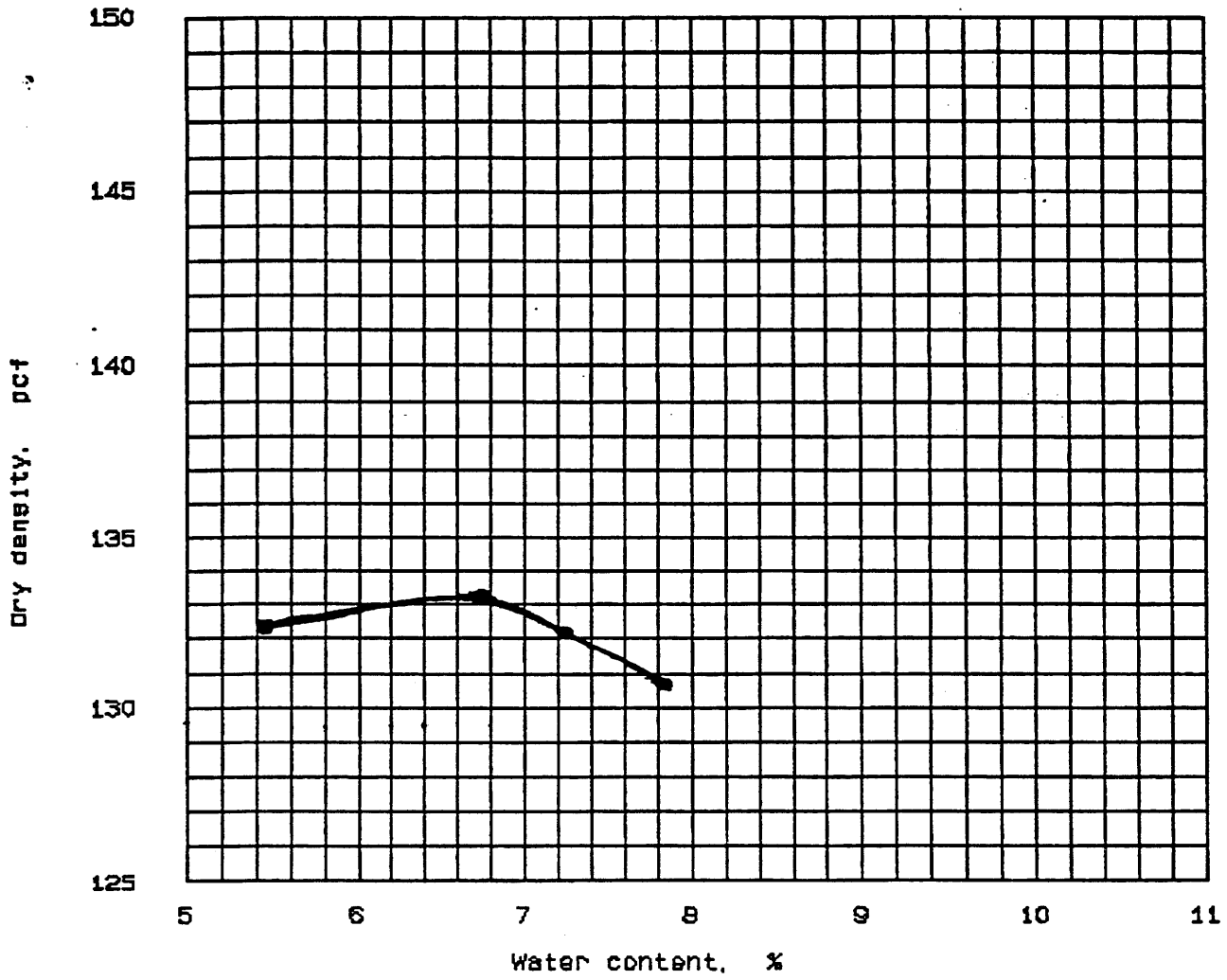


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.8 Maximum dry density = 134.6	Brown Silty SAND with GRAVEL #32
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-25-99	Tested by: M.Smith Date: 5-25-99 Sampled by: Matt Ryan Date: 5-25-99 Remarks: Sample # 38
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

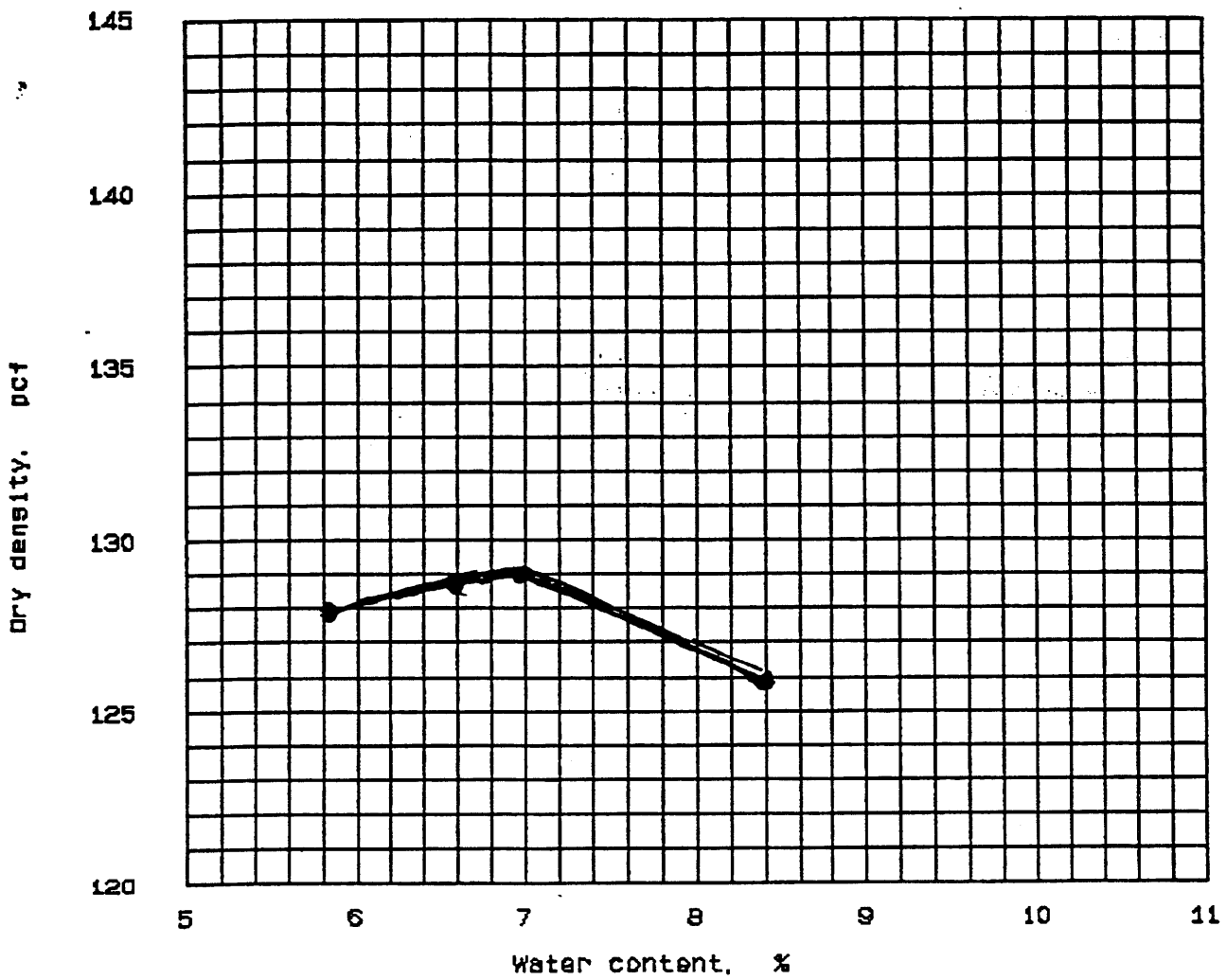


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.7 Maximum dry density = 133.2	Brown Class II AB Gray #5
Job No.: 92561 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-26-99	Tested by: M.Smith Date: 5-26-99 Sampled by: Matt Ryan Date: 5-25-99 Remarks: Sample # 39
Smith-Emery Company	Plate No. _____

Compaction Characteristics of Soils

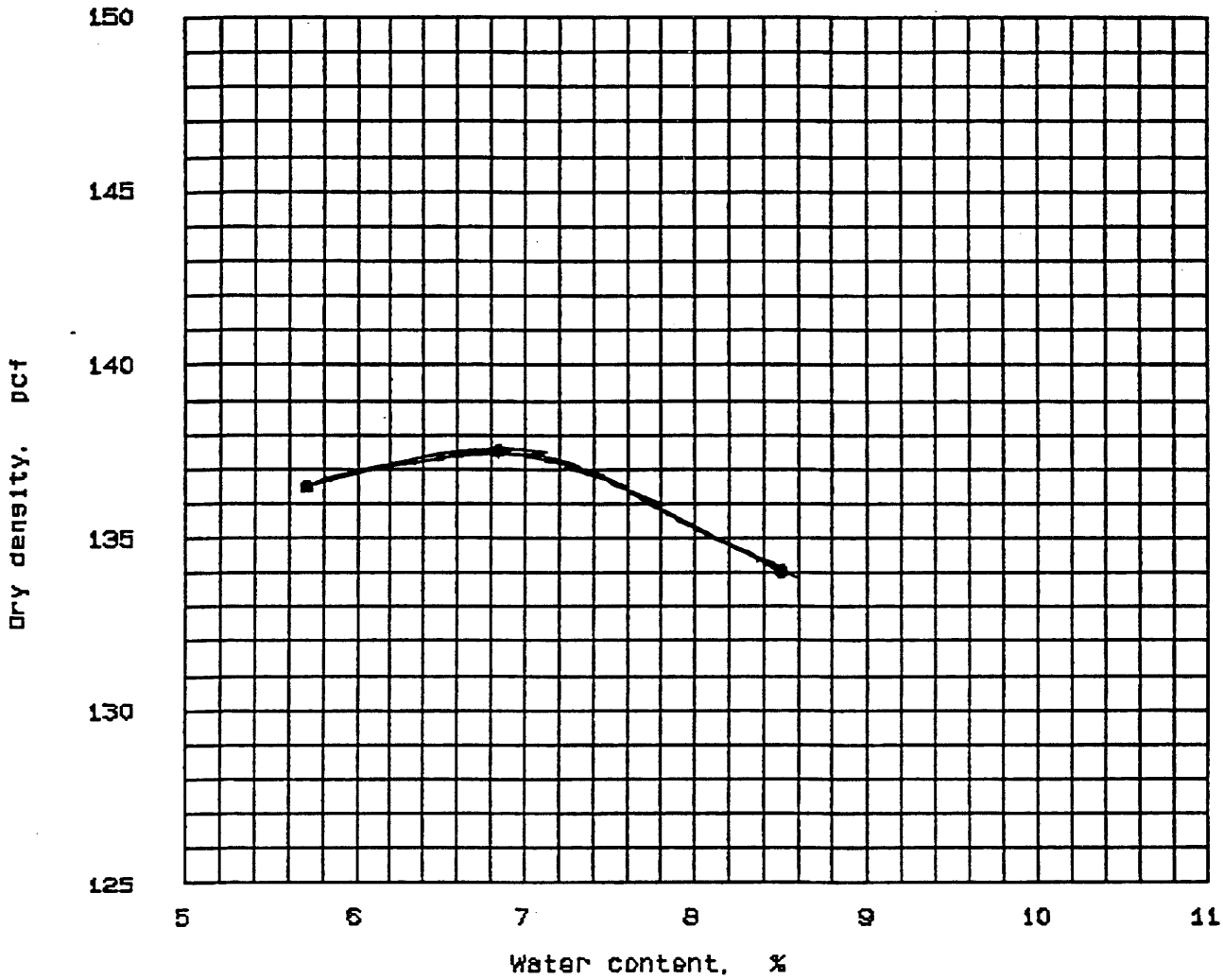


"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.3 Maximum dry density = 129.4	Brown Silty SAND with Gravel #34
Job No.: 92581 Job Name: HUNTERS POINT SHIPYARD PARCEL B Sample Location: On site-Import (Dutra) Date: 5-25-99	Tested by: M.Smith Date: 5-25-99 Sampled by: Matt Ryan Date: 5-25-99 Remarks: Sample # 41
Smith-Emery Company	Plate No. ____

Compaction Characteristics of Soils



"Modified" Proctor, ASTM D 1557, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 6.8 Maximum dry density = 137.5	Grey Brown Silty SAND w/ Gravel and trace Clay
Job No.: 92561 Job Name: Hunter's Point Shipyard-Parcel B Sample Location: On Site-Import (Dutra) Date: 6-24-99	Tested by: D.Abeel Date: 6-24-99 Sampled by: P.Morrison Date: 6-23-99 Remarks: Sample 42
Smith-Emery Company	Plate No. _____

Memorandum

To: Hunters Point Shipyard, Parcel B Project Files

CC: Bill Breedlove, IT Irvine, Chris Corey, IT Irvine, Wayne Akiyama, IT Concord

From: Barbara Marks

Date: March 11, 2002

Re: Imported Soil from Bay Area Rapid Transit (BART) Construction Site

---

I have reviewed the sampling results for the BART soil being imported to Hunters Point Shipyard, San Francisco, California. The sampling and analysis were conducted under the Work Plans for Parcels B, C, and D (Delivery Order 109, CTO 29). Based on the frequency the soil was sampled and the analytical results, I found that the samples and results met industry standards for environmental characterization of soil. The analytical results from the sampling have been compared to the goals listed in the Record of Decision, Explanation of Significant Differences (ESD) for Parcel B, Hunters Point Shipyard (April 2000). For each chemical, the ESD goal is the maximum allowable concentration that does not pose unacceptable health hazard for the anticipated future land users (i.e., residential children and adults) or is consistent with ambient concentration of the chemical in local soils (this later criterion is used only for inorganic chemicals). The analytical results show chemical concentrations within the BART soil are either at or below ESD goals. Consequently, I concluded that the levels of chemicals in the imported soil are consistent with anticipated future land uses at Hunters Point Shipyard and suitable for use as backfill from a perspective of environmental risks.

Barbara J. Marks, CIH #5776

IT Corporation
4005 Port Chicago Highway
Concord, CA 94520-1120
Tel. 925.288.9898

A Member of The IT Group

May 22, 2002

Mr. Dave DeMars, Code 06CH.DD, Lead RPM
BRAC Operations, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, 8th Floor, Room 103
San Diego, CA 92101-8517

Attention: Mr. Pat Brooks, Code 06CH.PB, RPM

Contract: N62474-98-D-2076, Environmental Remedial Action Contract II

Contract Task Order No.: CTO 0029

Subject: **Letter Report, Summary of BART Import Soil Chemical and Geotechnical Analysis, Hunters Point Shipyard, San Francisco California**

The purpose of this letter report is to summarize the import history and chemical/physical properties of approximately 130,000 cubic yards of clean fill imported to Hunters Point Shipyard.

BACKGROUND

Between January 2001 and November 2001 approximately 130,000 cubic yards of clean fill was imported to Hunters Point Shipyard (HPS) for use as backfill at environmental restoration sites within HPS. The soil was provided by Tudor-Saliba, the general contractor for a Bay Area Rapid Transit authority (BART) extension project near San Francisco International Airport in San Mateo County. S&S trucking through a contract with Tudor-Saliba transported the soil to HPS. All imported soil was excavated from the same BART extension construction site in San Mateo County.

During import operations, IT visually inspected the material. Soil with excessive moisture, excessive organic debris, or other characteristics that would limit the usability of the soil for backfill, was rejected. Additionally, soil samples were collected by IT from the imported material for chemical analysis and geotechnical testing. These soil samples were analyzed/tested in accordance with the CTO 0029 work plan, *Excavation of Impacted Soil and Closure of Abandoned Steam and Fuel Pipelines, Hunters Point Shipyard, November 30, 2001 (IT 2001)*. Soil sample analysis and testing are described below.

CHEMICAL ANALYSIS

As soil was brought on site, 4-point composite soil samples were collected for approximately every 10,000 cubic yards. A total of thirteen, 4-point composite soil samples of the imported soil were collected and analyzed for semivolatile organic compounds (SVOCs) by EPA Method 8270, pesticides and polychlorinated biphenyls (PCBs) by EPA Method 8081/8082, total petroleum hydrocarbons (TPH)-gasoline,-diesel and motor oil by EPA Method 8015M, and CAM 17 metals by EPA Method 6010/7000. Additionally, during each sampling event, a fifth discrete soil sample was collected and analyzed for volatile organic compounds (VOCs) by EPA Method 8260. Analytical data were compared to the cleanup goals provided in *Parcel B Record of Decision, Hunters Point Shipyard (1999)*.

Data Review

A review of the initial data indicated that all the BART soil was usable and acceptable for backfill with the exception of one stockpile that had a 4-point composite sample containing arsenic at a concentration of 15

milligrams per kilogram (mg/kg), which is above the cleanup goal of 11.1 mg/kg. Additional sampling was conducted to further characterize this stockpile, and all sample results were below the cleanup level for arsenic. A letter report was prepared to summarize the additional soil sampling, analytical results, and excavation history. After further characterization, the Navy concluded that the elevated arsenic concentration was an anomaly and that the soil was acceptable for use as backfill (IT 2002). This letter report was presented to the BCT and is included as Attachment 1. The following discussion provides a review of the data quality.

Laboratory data were subjected to a four-stage process of evaluation that included completeness checks, verification of hard copy and electronic results, validation of data, and a final evaluation based on the best judgment of the project chemist.

During the review process, the data were qualified by the project chemist to indicate whether they were affected by the analytical protocols set forth in the CTO 0029 work plan (*IT 2001)*. Unusable data are qualified as rejected ("R" flag). All other results are either reported as detected (no flag) or are qualified as nondetected ('U" flag), or detected with uncertainty at the concentration reported ("J" flag or organic and "B" flag for inorganic analytes). All samples were extracted and analyzed within the method-recommended holding time. Duplicate samples were collected at the proper frequency. The precision from field duplicates was used qualitatively to assess the heterogeneity of the soil. The percent analytical and field duplicate completeness goals were met.

To ensure comparability, laboratory procedures follow EPA analytical methods, and all soil samples were reported on a dry weight basis. The data were then evaluated for comparability of reporting detection limits (RDLs) and associated dilution factors to the agency acceptable level for backfilling the excavated area. RDLs were elevated when samples required dilution to quantify target compounds within the linear range of the instrument or when sample matrix interference occurred. The following RDLs exceeded the target cleanup level: heptachlor epoxide, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, n-nitroso-di-n-propylamine, n-nitrosodiphenylamine, and pentachlorophenol; however, the method detection limit (MDL) for these analytes was below the cleanup level. If the RDL exceeded the target cleanup level, the MDL, rather than the RDL, was used to assess the data. If the concentrations exceeded the MDLs, but below the RDLs, the laboratories flagged the results with qualifiers "J" for organic and "B" for inorganic analytes. If the concentrations were below the MDLs, the results were reported as nondetected at the RDLs and flagged with the qualifier 'U".

GEOTECHNICAL TESTING

In accordance with the CTO 0029 work plan, geotechnical testing was performed on the BART soil. Geotechnical testing included compactability (ASTM D1557) and grain size analysis (ASTM D422). Compactability tests indicate that the maximum dry density ranges from 120.1 pounds per cubic foot (pcf) to 123.5 pcf with optimum moisture ranging from 9 percent to 11 percent. Grain size analyses characterize the BART soil as a fine to silty sand. Laboratory test reports are included in Attachment 2.

Sincerely,
IT CORPORATION

William Breedlove
IT Project Manager

Yvonne Yang
IT Project Chemist

Attachments

cc: Project File

TABLE 1

ANALYTICAL RESULTS
IMPORTED BART SOIL (JANUARY 2001 TO NOVEMBER 2001)

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-01	109-TUDOR-02	109-TUDOR-02ABCD	109-TUDOR-03	109-TUDOR-03ABCD	109-TUDOR-04	109-TUDOR-04ABCD	109-TUDOR-05	109-TUDOR-05ABCD	109-TUDOR-06 1
Location Code					TUDOR-1	TUDOR-2	TUDOR-2	TUDOR-3	TUDOR-3	TUDOR-4	TUDOR-4	TUDOR-5	TUDOR-5	TUDOR-6
Date Sampled					02/15/01	03/20/01	03/20/01	04/04/01	04/04/01	04/17/01	04/17/01	05/07/01	05/07/01	06/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
GENERAL CHEMICAL														
pH	pH units	NE	NE	.	NA	NA	8.87	NA	9.33	NA	8.91	NA	10.4	NA
METALS														
Antimony	mg/kg	31.29	817.60	10.00	NA	NA	6.0 U	NA	5.9 U	NA	5.9 U	NA	5.4 U	NA
Arsenic	mg/kg	0.39	2.73	11.00	NA	NA	2.4	NA	2.3	NA	2.4	NA	2.2	NA
Barium	mg/kg	5374.91	100000.00	NE	NA	NA	67	NA	79	NA	56	NA	34	NA
Beryllium	mg/kg	154.37	2241.59	140.00	NA	NA	0.24 U	NA	0.23 U	NA	0.24 U	NA	0.22 U	NA
Cadmium	mg/kg	37.03 <9>	808.54	3.50	NA	NA	0.24 U	NA	0.23 U	NA	0.24 U	NA	0.77	NA
Chromium	mg/kg	210.00	450.00	NE	NA	NA	50	NA	48	NA	70	NA	55	NA
Cobalt	mg/kg	4692.81	100000.00	NE	NA	NA	9.7	NA	9.5	NA	11	NA	9.4	NA
Copper	mg/kg	2905.09	75908.47	160.00	NA	NA	11	NA	11	NA	14	NA	41	NA
Lead	mg/kg	400.00	750.00	220.00	NA	NA	3.4	NA	3.9	NA	3.5	NA	14	NA
Mercury	mg/kg	23.46	613.20	2.30	NA	NA	0.18 B	NA	0.12 B	NA	0.15 B	NA	0.16 B	NA
Molybdenum	mg/kg	391.07	10219.79	79.00	NA	NA	0.24 U	NA	0.23 U	NA	0.24 U	NA	0.22 U	NA
Nickel	mg/kg	1564.28 <150>	40876.66	NE	NA	NA	70	NA	70	NA	63	NA	43	NA
Selenium	mg/kg	391.07	10219.79	140.00	NA	NA	0.60 U	NA	0.59 U	NA	0.17 J	NA	0.54 U	NA
Silver	mg/kg	391.07	10219.79	51.00	NA	NA	0.60 U	NA	0.59 U	NA	0.59 U	NA	0.54 U	NA
Thallium	mg/kg	5.16	134.90	6.10	NA	NA	0.60 U	NA	0.59 U	NA	0.59 U	NA	0.54 U	NA
Vanadium	mg/kg	547.50	14307.59	450.00	NA	NA	31	NA	30	NA	39	NA	40	NA
Zinc	mg/kg	23463.18	100000.00	370.00	NA	NA	22	NA	25	NA	31	NA	59	NA
POLYCHLORINATED BIPHENYLS														
Aroclor-1016	mg/kg	3.93	28.70	0.21	NA	NA	.04 U	NA	.039 U	NA	.039 U	NA	.036 U	NA
Aroclor-1221	mg/kg	0.22	1.00	0.21	NA	NA	.079 U	NA	.078 U	NA	.078 U	NA	.072 U	NA
Aroclor-1232	mg/kg	0.22	1.00	0.21	NA	NA	.04 U	NA	.039 U	NA	.039 U	NA	.036 U	NA
Aroclor-1242	mg/kg	0.22	1.00	0.21	NA	NA	.04 U	NA	.039 U	NA	.039 U	NA	.036 U	NA
Aroclor-1248	mg/kg	0.22	1.00	0.21	NA	NA	.04 U	NA	.039 U	NA	.039 U	NA	.036 U	NA
Aroclor-1254	mg/kg	0.22	1.00	0.21	NA	NA	.04 U	NA	.039 U	NA	.039 U	NA	.036 U	NA
Aroclor-1260	mg/kg	0.22	1.00	0.21	NA	NA	.04 U	NA	.023 J	NA	.009 J	NA	.0047 J	NA
PESTICIDES														
4,4-DDD	mg/kg	2.44	17.08	2.10	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
4,4-DDE	mg/kg	1.72	12.06	1.60	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
4,4-DDT	mg/kg	1.72	12.06	1.20	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
Aldrin	mg/kg	0.03	0.15	0.02	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Alpha-BHC	mg/kg	0.09	0.59	NE	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Alpha-Chlordane	mg/kg	1.62	10.70	0.32	NA	NA	.0012 U	NA	.0012 U	NA	NA	NA	.0011 U	NA
Beta-BHC	mg/kg	0.32	2.08	NE	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Chlordane	mg/kg	1.62	10.70	NE	NA	NA	NA	NA	NA	NA	.059 U	NA	NA	NA
Delta-BHC	mg/kg	NE	NE	NE	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Dieldrin	mg/kg	0.03	0.15	NE	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
Endosulfan I	mg/kg	366.62	5285.51	17.00	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Endosulfan II	mg/kg	366.62	5285.51	15.00	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
Endosulfan Sulfate	mg/kg	366.62	5285.51	16.00	NA	NA	.006 U	NA	.0059 U	NA	.0059 U	NA	.0054 U	NA
Endrin	mg/kg	18.33	264.28	NE	NA	NA	.0036 U	NA	.00062 J	NA	.0036 U	NA	.0033 U	NA
Endrin Aldehyde	mg/kg	18.33	264.28	17.00	NA	NA	.0036 U	NA	.0035 U	NA	.0036 U	NA	.0033 U	NA
Endrin Ketone	mg/kg	18.33	264.28	17.00	NA	NA	.0024 U	NA	.0023 U	NA	.0024 U	NA	.0022 U	NA
Gamma-BHC	mg/kg	0.44	2.88	NE	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Gamma-Chlordane	mg/kg	1.62	10.70	0.29	NA	NA	.0012 U	NA	.0012 U	NA	NA	NA	.0011 U	NA
Heptachlor	mg/kg	0.11	0.55	0.07	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Heptachlor Expoxide	mg/kg	0.05	0.27	0.0017	NA	NA	.002 U	NA	.002 U	NA	.002 U	NA	.0018 U	NA
Methoxychlor	mg/kg	305.52	4404.60	280.00	NA	NA	.012 U	NA	.012 U	NA	.012 U	NA	.011 U	NA
Toxaphene	mg/kg	0.44	2.24	NE	NA	NA	.12 U	NA	.12 U	NA	.12 U	NA	.11 U	NA
SEMIVOLATILE ORGANIC COMPOUNDS														

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-01	109-TUDOR-02	109-TUDOR-02ABCD	109-TUDOR-03	109-TUDOR-03ABCD	109-TUDOR-04	109-TUDOR-04ABCD	109-TUDOR-05	109-TUDOR-05ABCD	109-TUDOR-06 1
Location Code					TUDOR-1	TUDOR-2	TUDOR-2	TUDOR-3	TUDOR-3	TUDOR-4	TUDOR-4	TUDOR-5	TUDOR-5	TUDOR-6
Date Sampled					02/15/01	03/20/01	03/20/01	04/04/01	04/04/01	04/17/01	04/17/01	05/07/01	05/07/01	06/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
1,2-Dichlorobenzene	mg/kg	370.00	370.00	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
1,4-Dichlorobenzene	mg/kg	3.44	8.13	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,4,5-Trichlorophenol	mg/kg	6110.31	88091.91	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,4,6-Trichlorophenol	mg/kg	44.22	224.23	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,4-Dichlorophenol	mg/kg	183.31	2642.76	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,4-Dimethylphenol	mg/kg	1222.06	17618.38	29.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,4-Dinitrophenol	mg/kg	122.21	1761.84	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
2,4-Dinitrotoluene	mg/kg	122.21	1761.84	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2,6-Dinitrotoluene	mg/kg	61.10	880.92	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2-Chloronaphthalene	mg/kg	3852.60	27284.28	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2-Chlorophenol	mg/kg	63.40	241.34	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2-Methyl-4,6-Dinitrophenol	mg/kg	NE	NE	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
2-Methylnaphthalene	mg/kg	NE	NE	56.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2-Methylphenol	mg/kg	3055.15	44045.95	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
2-Nitroaniline	mg/kg	3.49	50.34	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
2-Nitrophenol	mg/kg	NE	NE	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
3,3-Dichlorobenzidine	mg/kg	1.08	5.48	NE	NA	NA	1.2 U	NA	1.2 U	NA	1.2 U	NA	1.1 U	NA
3-Nitroaniline	mg/kg	NE	NE	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
4-Bromophenyl phenyl ether	mg/kg	NE	NE	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
4-Chloro-3-Methylphenol	mg/kg	NE	NE	NE	NA	NA	1.2 U	NA	1.2 U	NA	1.2 U	NA	1.1 U	NA
4-Chloroaniline	mg/kg	244.41	3523.68	NE	NA	NA	1.2 U	NA	1.2 U	NA	1.2 U	NA	1.1 U	NA
4-Chlorophenyl phenyl ether	mg/kg	NE	NE	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
4-Methylphenol	mg/kg	305.52	4404.60	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
4-Nitroaniline	mg/kg	NE	NE	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
4-Nitrophenol	mg/kg	488.82	7047.35	NE	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
Acenaphthene	mg/kg	3681.71	38358.30	3700.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Anthracene	mg/kg	21896.12	100000.00	22000.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzo(a)anthracene	mg/kg	0.62	2.89	0.37	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzo(a)pyrene	mg/kg	0.06	0.29	0.33	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzo(b)fluoranthene	mg/kg	0.62	2.89	0.34	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzo(g,h,i)perylene	mg/kg	NE	NE	1600.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzo(k)fluoranthene	mg/kg	6.21 <0.61>	28.86	0.34	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Benzoic Acid	mg/kg	100000.00	100000.00	2200.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl butyl phthalate	mg/kg	12220.62	100000.00	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Bis(2-Chloroethoxy) methane	mg/kg	NE	NE	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
bis(2-chloroethyl) ether	mg/kg	0.21	0.62	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Bis(2-Chloroisopropyl) ether	mg/kg	2.88	8.08	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Bis(2-ethylhexyl) phthalate	mg/kg	34.74	176.18	27.00	NA	NA	.4 U	NA	.39 U	NA	.39 U	NA	.36 U	NA
Carbazole	mg/kg	24.32	123.33	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	mg/kg	62 <6.1>	288.65	3.30	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Di-n-butyl phthalate	mg/kg	6110.31	88091.91	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Di-N-Octylphthalate	mg/kg	1222.06	10000.00	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Dibenz(a,h)anthracene	mg/kg	0.06	0.29	0.33	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Dibenzofuran	mg/kg	290.53	5062.81	290.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Diethyl Phthalate	mg/kg	48882.48	100000.00	660.00	NA	NA	.6 U	NA	.36 J	NA	.59 U	NA	.54 U	NA
Dimethyl Phthalate	mg/kg	100000.00	100000.00	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Fluoranthene	mg/kg	2293.61	30099.72	2000.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Fluorene	mg/kg	2643.61	33133.18	2600.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Hexachlorobenzene	mg/kg	0.30	1.54	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-01	109-TUDOR-02	109-TUDOR-02ABCD	109-TUDOR-03	109-TUDOR-03ABCD	109-TUDOR-04	109-TUDOR-04ABCD	109-TUDOR-05	109-TUDOR-05ABCD	109-TUDOR-06 1
Location Code					TUDOR-1	TUDOR-2	TUDOR-2	TUDOR-3	TUDOR-3	TUDOR-4	TUDOR-4	TUDOR-5	TUDOR-5	TUDOR-6
Date Sampled					02/15/01	03/20/01	03/20/01	04/04/01	04/04/01	04/17/01	04/17/01	05/07/01	05/07/01	06/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
Hexachlorocyclopentadiene	mg/kg	423.34	5896.84	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Hexachloroethane	mg/kg	34.74	176.18	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Indeno(1,2,3-c,d)Pyrene	mg/kg	0.62	2.89	0.35	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Isophorone	mg/kg	511.98	2596.39	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
n-Nitrosodi-n-propylamine	mg/kg	0.07	0.35	0.33	NA	NA	.4 U	NA	.39 U	NA	.39 U	NA	.36 U	NA
n-Nitrosodiphenylamine	mg/kg	99.26	503.38	1.10	NA	NA	3 U	NA	.72 U	NA	.72 U	NA	.66 U	NA
Naphthalene	mg/kg	55.92	188.56	56.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Nitrobenzene	mg/kg	19.64	114.46	NE	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Pentachlorophenol	mg/kg	2.98	11.09	2.60	NA	NA	3 U	NA	2.9 U	NA	3 U	NA	2.7 U	NA
Phenanthrene	mg/kg	NE	NE	15000.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Phenol	mg/kg	36661.86	100000.00	140.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
Pyrene	mg/kg	2308.68	54224.14	2300.00	NA	NA	.6 U	NA	.59 U	NA	.59 U	NA	.54 U	NA
TOTAL PETROLEUM HYDROCARBONS														
TPH As Diesel Fuel	mg/kg	100.00	100.00	100.00	NA	NA	3.2 J	NA	6.9 J	NA	2.8 J	NA	3.8 J	NA
TPH As Gasoline	mg/kg	10.00	10.00	10.00	NA	NA	0.021 J	NA	0.015 J	NA	0.044 J	NA	0.54 U	NA
TPH As Motor Oil	mg/kg	1000.00	1000.00	1000.00	NA	NA	8.8 J	NA	21	NA	16	NA	25	NA
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-Tetrachloroethane	mg/kg	3.00	7.04	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1,1-Trichloroethane	mg/kg	634.84	1400.00	770.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1,2,2-Tetrachloroethane	mg/kg	0.38	0.90	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1,2-Trichloroethane	mg/kg	0.84	1.90	0.84	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1-Dichloroethane	mg/kg	589.41	2061.34	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1-Dichloroethene	mg/kg	0.05	0.12	0.05	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,1-Dichloropropene	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2,3-Trichlorobenzene	mg/kg	NE	NE	NE	.00068 J	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2,3-Trichloropropane	mg/kg	0.0014	0.0031	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	650.00	.00045 J	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2,4-Trimethylbenzene	mg/kg	52.00	170.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2-Dibromo-3-chloropropane	mg/kg	0.45	3.98	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2-Dibromoethane	mg/kg	0.01	0.05	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2-Dichlorobenzene	mg/kg	370.00	370.00	370.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2-Dichloroethane	mg/kg	0.35	0.76	0.35	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,2-Dichloropropane	mg/kg	0.35	0.77	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,3,5-Trimethylbenzene	mg/kg	21.25	69.76	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,3-Dichloropropane	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
1,4-Dichlorobenzene	mg/kg	3.44	8.13	1.90	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
2,2-Dichloropropane	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
2-Butanone	mg/kg	7325.38	27714.47	7300.00	.0088 J	.11 U	NA	.59 U	NA	.07 U	NA	.092 U	NA	.098 U
2-Chlorotoluene	mg/kg	158.41	567.79	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
2-Hexanone	mg/kg	NE	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
4-Methyl-2-pentanone	mg/kg	786.53	2886.85	790.00	.042 U	.053 U	NA	.29 U	NA	.035 U	NA	.046 U	NA	.049 U
Acetone	mg/kg	1569.64	6219.62	NE	.018 J	.11 U	NA	.59 U	NA	.02 J	NA	.092 U	NA	.098 U
Benzene	mg/kg	0.65	1.45	0.18	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Bromobenzene	mg/kg	28.34	92.36	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Bromochloromethane	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Bromodichloromethane	mg/kg	1.02	2.36	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Bromoform	mg/kg	61.57	312.25	0.49	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Bromomethane	mg/kg	3.90	13.14	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Carbon Disulfide	mg/kg	355.34	720.00	360.00	.0023 J	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Carbon Tetrachloride	mg/kg	0.24	0.53	0.09	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-01	109-TUDOR-02	109-TUDOR-02ABCD	109-TUDOR-03	109-TUDOR-03ABCD	109-TUDOR-04	109-TUDOR-04ABCD	109-TUDOR-05	109-TUDOR-05ABCD	109-TUDOR-06 1
Location Code					TUDOR-1	TUDOR-2	TUDOR-2	TUDOR-3	TUDOR-3	TUDOR-4	TUDOR-4	TUDOR-5	TUDOR-5	TUDOR-6
Date Sampled					02/15/01	03/20/01	03/20/01	04/04/01	04/04/01	04/17/01	04/17/01	05/07/01	05/07/01	06/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
Chlorobenzene	mg/kg	152.07	542.93	150.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Chloroethane	mg/kg	3.03	6.51	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Chloroform	mg/kg	0.24	0.52	0.24	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Chloromethane	mg/kg	1.23	2.66	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
cis-1,2-Dichloroethene	mg/kg	42.94	147.36	43.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
cis-1,3-Dichloropropene	mg/kg	0.70	1.60	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Dibromochloromethane	mg/kg	1.11	2.65	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Dibromomethane	mg/kg	66.91	236.25	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Dichlorodifluoromethane	mg/kg	93.88	308.29	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Ethylbenzene	mg/kg	230.00	230.00	230.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Isopropylbenzene	mg/kg	157.03	522.13	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Methylene chloride	mg/kg	8.88	20.53	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
N-Butylbenzene	mg/kg	144.65	240.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
N-Propylbenzene	mg/kg	144.65	240.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Naphthalene	mg/kg	55.92	188.56	NE	.00065 J	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
P-Cymene (P-Isopropyltoluene)	mg/kg	NE	NE	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Sec-Butylbenzene	mg/kg	111.41	220.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Styrene	mg/kg	1700.00	1700.00	1700.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
T-Butylbenzene	mg/kg	131.44	390.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Tert-butyl methyl ether	mg/kg	<17>	<37>	NE	.0084 U	.011 U	NA	.059 U	NA	.007 U	NA	.0092 U	NA	.0098 U
Tetrachloroethene	mg/kg	5.69	18.67	0.94	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Toluene	mg/kg	520.00	520.00	520.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Trans-1,2-dichloroethene	mg/kg	63.24	214.15	63.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
trans-1,3-dichloropropene	mg/kg	0.70	1.60	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Trichloroethene	mg/kg	2.77	6.12	1.70	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Trichlorofluoromethane	mg/kg	385.82	2000.00	NE	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Vinyl Chloride	mg/kg	0.15	0.83	0.02	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U
Xylenes, Total	mg/kg	210.00	210.00	210.00	.0042 U	.0053 U	NA	.029 U	NA	.0035 U	NA	.0046 U	NA	.0049 U

* Soil cleanup standard from Hunters Point Shipyard Parcel B Final Record of Decision (1999)
** This sample is validated and both the lab and validation qualifiers are present in this table
<> California Preliminary Remedial Goal (EPA PRG,11/2000)
( ) Analytical reporting limit. Compounds for which the reported concentration corresponding to a risk level of 10-6 is below the reporting limit, the reporting limit is the cleanup goal
B- The inorganic analyte was positively identified but the associate numerical value is below the reporting limit
J - The organic analyte was positively identified but the associate numerical value is below the reporting limit
NA - Not analyzed
NE - Not established
U - The analyte was analyzed for, but not detected. The numerical value is at or below the method detection limit.

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-06ABCD	109-TUDOR-07	109-TUDOR-07ABCD	109-TUDOR-08	109-TUDOR-08ABCD	109-TUDOR-09	109-TUDOR-09A	109-TUDOR-09B	109-TUDOR-09C	109-TUDOR-09D
Location Code					TUDOR-6	TUDOR-7	TUDOR-7	TUDOR-8	TUDOR-8	TUDOR-9	TUDOR-9A	TUDOR-9B	TUDOR-9C	TUDOR-9D
Date Sampled					06/14/01	07/23/01	07/23/01	08/07/01	08/07/01	08/14/01	08/14/01	08/14/01	08/14/01	08/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
GENERAL CHEMICAL														
pH	pH units	NE	NE	.	7.93	NA	7.51	NA	6.43	NA	NA	NA	NA	NA
METALS														
Antimony	mg/kg	31.29	817.60	10.00	5.3 U	NA	5.3 U	NA	6.0 U	NA	NA	NA	NA	NA
Arsenic	mg/kg	0.39	2.73	11.00	4.7	NA	4.5	NA	2.7	NA	8.0	5.6	7.7	5.7
Barium	mg/kg	5374.91	100000.00	NE	100	NA	130	NA	150	NA	NA	NA	NA	NA
Beryllium	mg/kg	154.37	2241.59	140.00	0.21 U	NA	0.21 U	NA	0.24 U	NA	NA	NA	NA	NA
Cadmium	mg/kg	37.03 <9>	808.54	3.50	0.021 J	NA	0.21 U	NA	0.24 U	NA	NA	NA	NA	NA
Chromium	mg/kg	210.00	450.00	NE	40	NA	60	NA	91	NA	NA	NA	NA	NA
Cobalt	mg/kg	4692.81	100000.00	NE	9.9	NA	12	NA	16	NA	NA	NA	NA	NA
Copper	mg/kg	2905.09	75908.47	160.00	19	NA	18	NA	13	NA	NA	NA	NA	NA
Lead	mg/kg	400.00	750.00	220.00	15	NA	12	NA	4.0	NA	NA	NA	NA	NA
Mercury	mg/kg	23.46	613.20	2.30	0.21 U	NA	0.23	NA	0.14 B	NA	NA	NA	NA	NA
Molybdenum	mg/kg	391.07	10219.79	79.00	0.21 U	NA	0.21 U	NA	0.24 U	NA	NA	NA	NA	NA
Nickel	mg/kg	1564.28 <150>	40876.66	NE	40	NA	81	NA	150	NA	NA	NA	NA	NA
Selenium	mg/kg	391.07	10219.79	140.00	0.68	NA	0.53 U	NA	0.98	NA	NA	NA	NA	NA
Silver	mg/kg	391.07	10219.79	51.00	0.53 U	NA	0.53 U	NA	0.60 U	NA	NA	NA	NA	NA
Thallium	mg/kg	5.16	134.90	6.10	0.53 U	NA	0.53 U	NA	0.60 U	NA	NA	NA	NA	NA
Vanadium	mg/kg	547.50	14307.59	450.00	32	NA	37	NA	37	NA	NA	NA	NA	NA
Zinc	mg/kg	23463.18	100000.00	370.00	38	NA	34	NA	31	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS														
Aroclor-1016	mg/kg	3.93	28.70	0.21	.035 U	NA	.035 U	NA	.04 U	NA	NA	NA	NA	NA
Aroclor-1221	mg/kg	0.22	1.00	0.21	.07 U	NA	.07 U	NA	.079 U	NA	NA	NA	NA	NA
Aroclor-1232	mg/kg	0.22	1.00	0.21	.035 U	NA	.035 U	NA	.04 U	NA	NA	NA	NA	NA
Aroclor-1242	mg/kg	0.22	1.00	0.21	.035 U	NA	.035 U	NA	.04 U	NA	NA	NA	NA	NA
Aroclor-1248	mg/kg	0.22	1.00	0.21	.035 U	NA	.035 U	NA	.04 U	NA	NA	NA	NA	NA
Aroclor-1254	mg/kg	0.22	1.00	0.21	.035 U	NA	.035 U	NA	.04 U	NA	NA	NA	NA	NA
Aroclor-1260	mg/kg	0.22	1.00	0.21	.0045 J	NA	.004 J	NA	.04 U	NA	NA	NA	NA	NA
PESTICIDES														
4,4-DDD	mg/kg	2.44	17.08	2.10	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
4,4-DDE	mg/kg	1.72	12.06	1.60	.0032 U	NA	.00036 J	NA	.0036 U	NA	NA	NA	NA	NA
4,4-DDT	mg/kg	1.72	12.06	1.20	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
Aldrin	mg/kg	0.03	0.15	0.02	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Alpha-BHC	mg/kg	0.09	0.59	NE	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Alpha-Chlordane	mg/kg	1.62	10.70	0.32	.0011 U	NA	.0011 U	NA	.0012 U	NA	NA	NA	NA	NA
Beta-BHC	mg/kg	0.32	2.08	NE	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Chlordane	mg/kg	1.62	10.70	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	mg/kg	NE	NE	NE	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Dieldrin	mg/kg	0.03	0.15	NE	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
Endosulfan I	mg/kg	366.62	5285.51	17.00	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Endosulfan II	mg/kg	366.62	5285.51	15.00	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
Endosulfan Sulfate	mg/kg	366.62	5285.51	16.00	.0053 U	NA	.0053 U	NA	.006 U	NA	NA	NA	NA	NA
Endrin	mg/kg	18.33	264.28	NE	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
Endrin Aldehyde	mg/kg	18.33	264.28	17.00	.0032 U	NA	.0032 U	NA	.0036 U	NA	NA	NA	NA	NA
Endrin Ketone	mg/kg	18.33	264.28	17.00	.0021 U	NA	.0021 U	NA	.0024 U	NA	NA	NA	NA	NA
Gamma-BHC	mg/kg	0.44	2.88	NE	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Gamma-Chlordane	mg/kg	1.62	10.70	0.29	.0011 U	NA	.0011 U	NA	.0012 U	NA	NA	NA	NA	NA
Heptachlor	mg/kg	0.11	0.55	0.07	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Heptachlor Expoxide	mg/kg	0.05	0.27	0.0017	.0018 U	NA	.0018 U	NA	.002 U	NA	NA	NA	NA	NA
Methoxychlor	mg/kg	305.52	4404.60	280.00	.011 U	NA	.011 U	NA	.012 U	NA	NA	NA	NA	NA
Toxaphene	mg/kg	0.44	2.24	NE	.11 U	NA	.11 U	NA	.12 U	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS														

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-06ABCD	109-TUDOR-07	109-TUDOR-07ABCD	109-TUDOR-08	109-TUDOR-08ABCD	109-TUDOR-09	109-TUDOR-09A	109-TUDOR-09B	109-TUDOR-09C	109-TUDOR-09D
Location Code					TUDOR-6	TUDOR-7	TUDOR-7	TUDOR-8	TUDOR-8	TUDOR-9	TUDOR-9A	TUDOR-9B	TUDOR-9C	TUDOR-9D
Date Sampled					06/14/01	07/23/01	07/23/01	08/07/01	08/07/01	08/14/01	08/14/01	08/14/01	08/14/01	08/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	mg/kg	370.00	370.00	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	mg/kg	3.44	8.13	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	mg/kg	6110.31	88091.91	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	mg/kg	44.22	224.23	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,4-Dichlorophenol	mg/kg	183.31	2642.76	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,4-Dimethylphenol	mg/kg	1222.06	17618.38	29.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,4-Dinitrophenol	mg/kg	122.21	1761.84	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/kg	122.21	1761.84	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	mg/kg	61.10	880.92	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2-Chloronaphthalene	mg/kg	3852.60	27284.28	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2-Chlorophenol	mg/kg	63.40	241.34	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2-Methyl-4,6-Dinitrophenol	mg/kg	NE	NE	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
2-Methylnaphthalene	mg/kg	NE	NE	56.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2-Methylphenol	mg/kg	3055.15	44045.95	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
2-Nitroaniline	mg/kg	3.49	50.34	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
2-Nitrophenol	mg/kg	NE	NE	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	mg/kg	1.08	5.48	NE	1.1 U	NA	1.1 U	NA	1.2 U	NA	NA	NA	NA	NA
3-Nitroaniline	mg/kg	NE	NE	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	mg/kg	NE	NE	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	mg/kg	NE	NE	NE	1.1 U	NA	1.1 U	NA	1.2 U	NA	NA	NA	NA	NA
4-Chloroaniline	mg/kg	244.41	3523.68	NE	1.1 U	NA	1.1 U	NA	1.2 U	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	mg/kg	NE	NE	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
4-Methylphenol	mg/kg	305.52	4404.60	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
4-Nitroaniline	mg/kg	NE	NE	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
4-Nitrophenol	mg/kg	488.82	7047.35	NE	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
Acenaphthene	mg/kg	3681.71	38358.30	3700.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Anthracene	mg/kg	21896.12	100000.00	22000.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/kg	0.62	2.89	0.37	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzo(a)pyrene	mg/kg	0.06	0.29	0.33	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	mg/kg	0.62	2.89	0.34	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	mg/kg	NE	NE	1600.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	mg/kg	6.21 <0.61>	28.86	0.34	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Benzoic Acid	mg/kg	100000.00	100000.00	2200.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl butyl phthalate	mg/kg	12220.62	100000.00	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy) methane	mg/kg	NE	NE	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
bis(2-chloroethyl) ether	mg/kg	0.21	0.62	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl) ether	mg/kg	2.88	8.08	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	mg/kg	34.74	176.18	27.00	.35 U	NA	.35 U	NA	.4 U	NA	NA	NA	NA	NA
Carbazole	mg/kg	24.32	123.33	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	mg/kg	62 <6.1>	288.65	3.30	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Di-n-butyl phthalate	mg/kg	6110.31	88091.91	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Di-N-Octylphthalate	mg/kg	1222.06	10000.00	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	mg/kg	0.06	0.29	0.33	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Dibenzofuran	mg/kg	290.53	5062.81	290.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Diethyl Phthalate	mg/kg	48882.48	100000.00	660.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Dimethyl Phthalate	mg/kg	100000.00	100000.00	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Fluoranthene	mg/kg	2293.61	30099.72	2000.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Fluorene	mg/kg	2643.61	33133.18	2600.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Hexachlorobenzene	mg/kg	0.30	1.54	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-06ABCD	109-TUDOR-07	109-TUDOR-07ABCD	109-TUDOR-08	109-TUDOR-08ABCD	109-TUDOR-09	109-TUDOR-09A	109-TUDOR-09B	109-TUDOR-09C	109-TUDOR-09D
Location Code					TUDOR-6	TUDOR-7	TUDOR-7	TUDOR-8	TUDOR-8	TUDOR-9	TUDOR-9A	TUDOR-9B	TUDOR-9C	TUDOR-9D
Date Sampled					06/14/01	07/23/01	07/23/01	08/07/01	08/07/01	08/14/01	08/14/01	08/14/01	08/14/01	08/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
Hexachlorocyclopentadiene	mg/kg	423.34	5896.84	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Hexachloroethane	mg/kg	34.74	176.18	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Indeno(1,2,3-c,d)Pyrene	mg/kg	0.62	2.89	0.35	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Isophorone	mg/kg	511.98	2596.39	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
n-Nitrosodi-n-propylamine	mg/kg	0.07	0.35	0.33	.35 U	NA	.35 U	NA	.4 U	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	mg/kg	99.26	503.38	1.10	.53 U	NA	.65 U	NA	.6 U	NA	NA	NA	NA	NA
Naphthalene	mg/kg	55.92	188.56	56.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Nitrobenzene	mg/kg	19.64	114.46	NE	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Pentachlorophenol	mg/kg	2.98	11.09	2.60	2.7 U	NA	2.7 U	NA	3 U	NA	NA	NA	NA	NA
Phenanthrene	mg/kg	NE	NE	15000.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Phenol	mg/kg	36661.86	100000.00	140.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
Pyrene	mg/kg	2308.68	54224.14	2300.00	.53 U	NA	.53 U	NA	.6 U	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS														
TPH As Diesel Fuel	mg/kg	100.00	100.00	100.00	24	NA	10 J	NA	4.1 J	NA	NA	NA	NA	NA
TPH As Gasoline	mg/kg	10.00	10.00	10.00	0.53 U	NA	0.018 J	NA	0.019 J	NA	NA	NA	NA	NA
TPH As Motor Oil	mg/kg	1000.00	1000.00	1000.00	95	NA	45	NA	18	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-Tetrachloroethane	mg/kg	3.00	7.04	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1,1-Trichloroethane	mg/kg	634.84	1400.00	770.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	mg/kg	0.38	0.90	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1,2-Trichloroethane	mg/kg	0.84	1.90	0.84	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1-Dichloroethane	mg/kg	589.41	2061.34	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1-Dichloroethene	mg/kg	0.05	0.12	0.05	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,1-Dichloropropene	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2,3-Trichlorobenzene	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2,3-Trichloropropane	mg/kg	0.0014	0.0031	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	650.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2,4-Trimethylbenzene	mg/kg	52.00	170.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	mg/kg	0.45	3.98	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2-Dibromoethane	mg/kg	0.01	0.05	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2-Dichlorobenzene	mg/kg	370.00	370.00	370.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2-Dichloroethane	mg/kg	0.35	0.76	0.35	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,2-Dichloropropane	mg/kg	0.35	0.77	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,3,5-Trimethylbenzene	mg/kg	21.25	69.76	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,3-Dichloropropane	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
1,4-Dichlorobenzene	mg/kg	3.44	8.13	1.90	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
2,2-Dichloropropane	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
2-Butanone	mg/kg	7325.38	27714.47	7300.00	NA	.068 U	NA	.091 U	NA	.088 U	NA	NA	NA	NA
2-Chlorotoluene	mg/kg	158.41	567.79	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
2-Hexanone	mg/kg	NE	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
4-Methyl-2-pentanone	mg/kg	786.53	2886.85	790.00	NA	.034 U	NA	.046 U	NA	.044 U	NA	NA	NA	NA
Acetone	mg/kg	1569.64	6219.62	NE	NA	.011 J	NA	.014 J	NA	.088 U	NA	NA	NA	NA
Benzene	mg/kg	0.65	1.45	0.18	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Bromobenzene	mg/kg	28.34	92.36	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Bromochloromethane	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Bromodichloromethane	mg/kg	1.02	2.36	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Bromoform	mg/kg	61.57	312.25	0.49	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Bromomethane	mg/kg	3.90	13.14	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Carbon Disulfide	mg/kg	355.34	720.00	360.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Carbon Tetrachloride	mg/kg	0.24	0.53	0.09	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-06ABCD	109-TUDOR-07	109-TUDOR-07ABCD	109-TUDOR-08	109-TUDOR-08ABCD	109-TUDOR-09	109-TUDOR-09A	109-TUDOR-09B	109-TUDOR-09C	109-TUDOR-09D
Location Code					TUDOR-6	TUDOR-7	TUDOR-7	TUDOR-8	TUDOR-8	TUDOR-9	TUDOR-9A	TUDOR-9B	TUDOR-9C	TUDOR-9D
Date Sampled					06/14/01	07/23/01	07/23/01	08/07/01	08/07/01	08/14/01	08/14/01	08/14/01	08/14/01	08/14/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
Chlorobenzene	mg/kg	152.07	542.93	150.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Chloroethane	mg/kg	3.03	6.51	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Chloroform	mg/kg	0.24	0.52	0.24	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Chloromethane	mg/kg	1.23	2.66	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	mg/kg	42.94	147.36	43.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	mg/kg	0.70	1.60	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Dibromochloromethane	mg/kg	1.11	2.65	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Dibromomethane	mg/kg	66.91	236.25	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Dichlorodifluoromethane	mg/kg	93.88	308.29	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Ethylbenzene	mg/kg	230.00	230.00	230.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Isopropylbenzene	mg/kg	157.03	522.13	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Methylene chloride	mg/kg	8.88	20.53	NE	NA	.0034 U	NA	.0012 J	NA	.0034 J	NA	NA	NA	NA
N-Butylbenzene	mg/kg	144.65	240.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
N-Propylbenzene	mg/kg	144.65	240.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Naphthalene	mg/kg	55.92	188.56	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
P-Cymene (P-Isopropyltoluene)	mg/kg	NE	NE	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Sec-Butylbenzene	mg/kg	111.41	220.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Styrene	mg/kg	1700.00	1700.00	1700.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
T-Butylbenzene	mg/kg	131.44	390.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Tert-butyl methyl ether	mg/kg	<17>	<37>	NE	NA	.0068 U	NA	.0091 U	NA	.0088 U	NA	NA	NA	NA
Tetrachloroethene	mg/kg	5.69	18.67	0.94	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Toluene	mg/kg	520.00	520.00	520.00	NA	.0034 U	NA	.0005 J	NA	.0044 U	NA	NA	NA	NA
Trans-1,2-dichloroethene	mg/kg	63.24	214.15	63.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
trans-1,3-dichloropropene	mg/kg	0.70	1.60	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Trichloroethene	mg/kg	2.77	6.12	1.70	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Trichlorofluoromethane	mg/kg	385.82	2000.00	NE	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Vinyl Chloride	mg/kg	0.15	0.83	0.02	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA
Xylenes, Total	mg/kg	210.00	210.00	210.00	NA	.0034 U	NA	.0046 U	NA	.0044 U	NA	NA	NA	NA

* Soil cleanup standard from Hunters Point Shipyard Parcel B Final Record of Decision (1999)
** This sample is validated and both the lab and validation qualifiers are present in this table
<> California Preliminary Remedial Goal (EPA PRG,11/2000)
( ) Analytical reporting limit. Compounds for which the reported concentration corresponding to a risk level of 10
B- The inorganic analyte was positively identified but the associate numerical value is below the reporting limit
J - The organic analyte was positively identified but the associate numerical value is below the reporting limit
NA - Not analyzed
NE - Not established
U - The analyte was analyzed for, but not detected. The numerical value is at or below the method detection limit.

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-09ABCD	109-TUDOR-10	109-TUDOR-10ABCD	109-TUDOR-11ABCD	29-TUDOR-12	29-TUDOR-13	29-TUDOR-13ABCD	29-TUDOR-14	29-TUDOR-14A,B,C,D**
Location Code					TUDOR-9	TUDOR-10	TUDOR-10	TUDOR-11	TUDOR-12	TUDOR-13	TUDOR-13	TUDOR-14	TUDOR-14
Date Sampled					08/14/01	08/28/01	08/28/01	08/28/01	10/03/01	11/13/01	11/13/01	11/26/01	11/26/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***									
GENERAL CHEMICAL													
pH	pH units	NE	NE	.	8.84	NA	8.89	NA	NA	NA	NA	NA	8.36
METALS													
Antimony	mg/kg	31.29	817.60	10.00	5.8 U	NA	5.7 U	5.9 U	4.5 U	NA	6.3 U	NA	1.1 J J
Arsenic	mg/kg	0.39	2.73	11.00	15	NA	3.5	3.1	3.89 J	NA	3.3	NA	1.6
Barium	mg/kg	5374.91	100000.00	NE	110	NA	88	83	164	NA	124	NA	94.4
Beryllium	mg/kg	154.37	2241.59	140.00	0.23 U	NA	0.011 J	0.23 U	0.63	NA	0.16 J	NA	0.11 J J
Cadmium	mg/kg	37.03 <9>	808.54	3.50	0.23 U	NA	0.080 J	0.054 J	0.26 J	NA	0.25 U	NA	0.047 J U
Chromium	mg/kg	210.00	450.00	NE	61	NA	64	62	120	NA	50.2	NA	53.0
Cobalt	mg/kg	4692.81	100000.00	NE	11	NA	11	11	24.3	NA	11.8	NA	11.1
Copper	mg/kg	2905.09	75908.47	160.00	12	NA	11	10	23.5	NA	12.1	NA	10.8
Lead	mg/kg	400.00	750.00	220.00	6.1	NA	4.1	4.4	6.78	NA	4.8	NA	4.4
Mercury	mg/kg	23.46	613.20	2.30	0.078 B	NA	0.079 B	0.081 B	0.04	NA	0.084 B	NA	0.052 B J
Molybdenum	mg/kg	391.07	10219.79	79.00	0.23 U	NA	0.23 U	0.23 U	0.32 J	NA	0.25 U	NA	0.24 U U
Nickel	mg/kg	1564.28 <150>	40876.66	NE	79	NA	96	92	118	NA	59.5	NA	101
Selenium	mg/kg	391.07	10219.79	140.00	0.63	NA	0.47 J	0.59 U	4.5 U	NA	0.31 J	NA	0.60 U U
Silver	mg/kg	391.07	10219.79	51.00	0.58 U	NA	0.57 U	0.59 U	0.68 U	NA	0.097 J	NA	0.60 U U
Thallium	mg/kg	5.16	134.90	6.10	0.58 U	NA	0.57 U	0.59 U	6.75 U	NA	0.63 U	NA	0.60 U U
Vanadium	mg/kg	547.50	14307.59	450.00	35	NA	33	32	68.1	NA	30.8	NA	20.8
Zinc	mg/kg	23463.18	100000.00	370.00	29	NA	31	27	44.6	NA	25.7	NA	28.1
POLYCHLORINATED BIPHENYLS													
Aroclor-1016	mg/kg	3.93	28.70	0.21	.038 U	NA	.038 U	NA	.0389 U	NA	.041 U	NA	.04 U U
Aroclor-1221	mg/kg	0.22	1.00	0.21	.076 U	NA	.076 U	NA	.0389 U	NA	.083 U	NA	.08 U U
Aroclor-1232	mg/kg	0.22	1.00	0.21	.038 U	NA	.038 U	NA	.0389 U	NA	.041 U	NA	.04 U U
Aroclor-1242	mg/kg	0.22	1.00	0.21	.038 U	NA	.038 U	NA	.0389 U	NA	.041 U	NA	.04 U U
Aroclor-1248	mg/kg	0.22	1.00	0.21	.038 U	NA	.038 U	NA	.0389 U	NA	.041 U	NA	.04 U U
Aroclor-1254	mg/kg	0.22	1.00	0.21	.038 U	NA	.038 U	NA	.0389 U	NA	.041 U	NA	.04 U U
Aroclor-1260	mg/kg	0.22	1.00	0.21	.038 U	NA	.038 U	NA	.0779 U	NA	.041 U	NA	.012 J J
PESTICIDES													
4,4-DDD	mg/kg	2.44	17.08	2.10	.0035 U	NA	.0034 U	NA	.00195 U	NA	.0004 J	NA	.0009 J J
4,4-DDE	mg/kg	1.72	12.06	1.60	.0035 U	NA	.0034 U	NA	.00195 U	NA	.001 J	NA	.0005 J J
4,4-DDT	mg/kg	1.72	12.06	1.20	.0035 U	NA	.0034 U	NA	.00195 U	NA	.002 J	NA	.003 J J
Aldrin	mg/kg	0.03	0.15	0.02	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Alpha-BHC	mg/kg	0.09	0.59	NE	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Alpha-Chlordane	mg/kg	1.62	10.70	0.32	.0012 U	NA	.0011 U	NA	.00195 U	NA	.0013 U	NA	.0007 J J
Beta-BHC	mg/kg	0.32	2.08	NE	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Chlordane	mg/kg	1.62	10.70	NE	NA	NA	NA	NA	.0389 U	NA	.13 U	NA	NA
Delta-BHC	mg/kg	NE	NE	NE	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Dieldrin	mg/kg	0.03	0.15	NE	.0035 U	NA	.0034 U	NA	.00195 U	NA	.0038 U	NA	.0036 U U
Endosulfan I	mg/kg	366.62	5285.51	17.00	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Endosulfan II	mg/kg	366.62	5285.51	15.00	.0035 U	NA	.0034 U	NA	.00195 U	NA	.0038 U	NA	.0036 U U
Endosulfan Sulfate	mg/kg	366.62	5285.51	16.00	.0058 U	NA	.0057 U	NA	.00195 U	NA	.0041 U	NA	.004 U U
Endrin	mg/kg	18.33	264.28	NE	.0035 U	NA	.0034 U	NA	.00195 U	NA	.0038 U	NA	.0036 U U
Endrin Aldehyde	mg/kg	18.33	264.28	17.00	.0035 U	NA	.0034 U	NA	.00195 U	NA	.0038 U	NA	.0036 U U
Endrin Ketone	mg/kg	18.33	264.28	17.00	.0023 U	NA	.0023 U	NA	.00195 U	NA	.0025 U	NA	.0024 U U
Gamma-BHC	mg/kg	0.44	2.88	NE	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Gamma-Chlordane	mg/kg	1.62	10.70	0.29	.0012 U	NA	.0011 U	NA	.00195 U	NA	.0013 U	NA	.001
Heptachlor	mg/kg	0.11	0.55	0.07	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Heptachlor Expoxide	mg/kg	0.05	0.27	0.0017	.002 U	NA	.0019 U	NA	.00195 U	NA	.0021 U	NA	.002 U U
Methoxychlor	mg/kg	305.52	4404.60	280.00	.012 U	NA	.011 U	NA	.00195 U	NA	.013 U	NA	.012 U U
Toxaphene	mg/kg	0.44	2.24	NE	.12 U	NA	.11 U	NA	.0389 U	NA	.13 U	NA	.12 U U
SEMIVOLATILE ORGANIC COMPOUNDS													

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-09ABCD	109-TUDOR-10	109-TUDOR-10ABCD	109-TUDOR-11ABCD	29-TUDOR-12	29-TUDOR-13	29-TUDOR-13ABCD	29-TUDOR-14	29-TUDOR-14A,B,C,D**	
Location Code					TUDOR-9	TUDOR-10	TUDOR-10	TUDOR-11	TUDOR-12	TUDOR-13	TUDOR-13	TUDOR-14	TUDOR-14	
Date Sampled					08/14/01	08/28/01	08/28/01	08/28/01	10/03/01	11/13/01	11/13/01	11/26/01	11/26/01	
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***										
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
1,2-Dichlorobenzene	mg/kg	370.00	370.00	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
1,4-Dichlorobenzene	mg/kg	3.44	8.13	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,4,5-Trichlorophenol	mg/kg	6110.31	88091.91	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,4,6-Trichlorophenol	mg/kg	44.22	224.23	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,4-Dichlorophenol	mg/kg	183.31	2642.76	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,4-Dimethylphenol	mg/kg	1222.06	17618.38	29.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,4-Dinitrophenol	mg/kg	122.21	1761.84	NE	2.9 U	NA	2.9 U	NA	.779 U	NA	2.1 U	NA	2 U	UJ
2,4-Dinitrotoluene	mg/kg	122.21	1761.84	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2,6-Dinitrotoluene	mg/kg	61.10	880.92	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2-Chloronaphthalene	mg/kg	3852.60	27284.28	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2-Chlorophenol	mg/kg	63.40	241.34	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2-Methyl-4,6-Dinitrophenol	mg/kg	NE	NE	NE	2.9 U	NA	2.9 U	NA	.779 U	NA	2.1 U	NA	2 U	UJ
2-Methylnaphthalene	mg/kg	NE	NE	56.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2-Methylphenol	mg/kg	3055.15	44045.95	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
2-Nitroaniline	mg/kg	3.49	50.34	NE	2.9 U	NA	2.9 U	NA	.389 U	NA	2.1 U	NA	2 U	U
2-Nitrophenol	mg/kg	NE	NE	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
3,3-Dichlorobenzidine	mg/kg	1.08	5.48	NE	1.2 U	NA	1.1 U	NA	.779 U	NA	.83 U	NA	.8 U	U
3-Nitroaniline	mg/kg	NE	NE	NE	2.9 U	NA	2.9 U	NA	.389 U	NA	2.1 U	NA	2 U	U
4-Bromophenyl phenyl ether	mg/kg	NE	NE	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
4-Chloro-3-Methylphenol	mg/kg	NE	NE	NE	1.2 U	NA	1.1 U	NA	.389 U	NA	.41 U	NA	.4 U	U
4-Chloroaniline	mg/kg	244.41	3523.68	NE	1.2 U	NA	1.1 U	NA	.389 U	NA	1.3 U	NA	1.2 U	U
4-Chlorophenyl phenyl ether	mg/kg	NE	NE	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
4-Methylphenol	mg/kg	305.52	4404.60	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
4-Nitroaniline	mg/kg	NE	NE	NE	2.9 U	NA	2.9 U	NA	.389 U	NA	2.1 U	NA	2 U	U
4-Nitrophenol	mg/kg	488.82	7047.35	NE	2.9 U	NA	2.9 U	NA	.779 U	NA	2.1 U	NA	2 U	UJ
Acenaphthene	mg/kg	3681.71	38358.30	3700.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Anthracene	mg/kg	21896.12	100000.00	22000.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzo(a)anthracene	mg/kg	0.62	2.89	0.37	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzo(a)pyrene	mg/kg	0.06	0.29	0.33	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzo(b)fluoranthene	mg/kg	0.62	2.89	0.34	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzo(g,h,i)perylene	mg/kg	NE	NE	1600.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzo(k)fluoranthene	mg/kg	6.21 <0.61>	28.86	0.34	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Benzoic Acid	mg/kg	100000.00	100000.00	2200.00	NA	NA	NA	NA	NA	NA	2.1 U	NA	2 U	UJ
Benzyl butyl phthalate	mg/kg	12220.62	100000.00	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Bis(2-Chloroethoxy) methane	mg/kg	NE	NE	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
bis(2-chloroethyl) ether	mg/kg	0.21	0.62	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Bis(2-Chloroisopropyl) ether	mg/kg	2.88	8.08	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Bis(2-ethylhexyl) phthalate	mg/kg	34.74	176.18	27.00	.38 U	NA	.38 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Carbazole	mg/kg	24.32	123.33	0.64	NA	NA	NA	NA	.389 U	NA	.41 U	NA	.53 U	U
Chrysene	mg/kg	62 <6.1>	288.65	3.30	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Di-n-butyl phthalate	mg/kg	6110.31	88091.91	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Di-N-Octylphthalate	mg/kg	1222.06	10000.00	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Dibenz(a,h)anthracene	mg/kg	0.06	0.29	0.33	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Dibenzofuran	mg/kg	290.53	5062.81	290.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Diethyl Phthalate	mg/kg	48882.48	100000.00	660.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Dimethyl Phthalate	mg/kg	100000.00	100000.00	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Fluoranthene	mg/kg	2293.61	30099.72	2000.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Fluorene	mg/kg	2643.61	33133.18	2600.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Hexachlorobenzene	mg/kg	0.30	1.54	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U	U

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-09ABCD	109-TUDOR-10	109-TUDOR-10ABCD	109-TUDOR-11ABCD	29-TUDOR-12	29-TUDOR-13	29-TUDOR-13ABCD	29-TUDOR-14	29-TUDOR-14A,B,C,D**
Location Code					TUDOR-9	TUDOR-10	TUDOR-10	TUDOR-11	TUDOR-12	TUDOR-13	TUDOR-13	TUDOR-14	TUDOR-14
Date Sampled					08/14/01	08/28/01	08/28/01	08/28/01	10/03/01	11/13/01	11/13/01	11/26/01	11/26/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***									
Hexachlorocyclopentadiene	mg/kg	423.34	5896.84	NE	.58 U	NA	.57 U	NA	.389 U	NA	3.1 U	NA	3 U UJ
Hexachloroethane	mg/kg	34.74	176.18	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Indeno(1,2,3-c,d)Pyrene	mg/kg	0.62	2.89	0.35	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Isophorone	mg/kg	511.98	2596.39	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
n-Nitrosodi-n-propylamine	mg/kg	0.07	0.35	0.33	.38 U	NA	.38 U	NA	.389 U	NA	.41 U	NA	.4 U UJ
n-Nitrosodiphenylamine	mg/kg	99.26	503.38	1.10	.58 U	NA	.57 U	NA	.389 U	NA	3.1 U	NA	3 U U
Naphthalene	mg/kg	55.92	188.56	56.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Nitrobenzene	mg/kg	19.64	114.46	NE	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Pentachlorophenol	mg/kg	2.98	11.09	2.60	2.9 U	NA	2.9 U	NA	.779 U	NA	2.1 U	NA	2 U U
Phenanthrene	mg/kg	NE	NE	15000.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Phenol	mg/kg	36661.86	100000.00	140.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
Pyrene	mg/kg	2308.68	54224.14	2300.00	.58 U	NA	.57 U	NA	.389 U	NA	.41 U	NA	.4 U U
TOTAL PETROLEUM HYDROCARBONS													
TPH As Diesel Fuel	mg/kg	100.00	100.00	100.00	8.0 J	NA	3.3 J	NA	1.95 U	NA	13 U	NA	5 J J
TPH As Gasoline	mg/kg	10.00	10.00	10.00	0.026 J	NA	0.012 J	NA	.117 U	NA	1.3 U	NA	1.2 J U
TPH As Motor Oil	mg/kg	1000.00	1000.00	1000.00	63	NA	31	NA	56.6	NA	23	NA	26
VOLATILE ORGANIC COMPOUNDS													
1,1,1,2-Tetrachloroethane	mg/kg	3.00	7.04	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,1,1-Trichloroethane	mg/kg	634.84	1400.00	770.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,1,2,2-Tetrachloroethane	mg/kg	0.38	0.90	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,1,2-Trichloroethane	mg/kg	0.84	1.90	0.84	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,1-Dichloroethane	mg/kg	589.41	2061.34	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,1-Dichloroethene	mg/kg	0.05	0.12	0.05	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,1-Dichloropropene	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,2,3-Trichlorobenzene	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,2,3-Trichloropropane	mg/kg	0.0014	0.0031	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,2,4-Trichlorobenzene	mg/kg	646.18	3000.00	650.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,2,4-Trimethylbenzene	mg/kg	52.00	170.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,2-Dibromo-3-chloropropane	mg/kg	0.45	3.98	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,2-Dibromoethane	mg/kg	0.01	0.05	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,2-Dichlorobenzene	mg/kg	370.00	370.00	370.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,2-Dichloroethane	mg/kg	0.35	0.76	0.35	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,2-Dichloropropane	mg/kg	0.35	0.77	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,3,5-Trimethylbenzene	mg/kg	21.25	69.76	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,3-Dichlorobenzene	mg/kg	13.24	51.76	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
1,3-Dichloropropane	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
1,4-Dichlorobenzene	mg/kg	3.44	8.13	1.90	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
2,2-Dichloropropane	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
2-Butanone	mg/kg	7325.38	27714.47	7300.00	NA	.071 U	NA	NA	.00546 U	.15 U	NA	.078 U	NA
2-Chlorotoluene	mg/kg	158.41	567.79	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
2-Hexanone	mg/kg	NE	NE	NE	NA	NA	NA	NA	.00546 U	NA	NA	NA	NA
4-Chlorotoluene	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
4-Methyl-2-pentanone	mg/kg	786.53	2886.85	790.00	NA	.036 U	NA	NA	.00546 U	.076 U	NA	.039 U	NA
Acetone	mg/kg	1569.64	6219.62	NE	NA	.071 U	NA	NA	.00546 U	.15 U	NA	.078 U	NA
Benzene	mg/kg	0.65	1.45	0.18	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Bromobenzene	mg/kg	28.34	92.36	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Bromochloromethane	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Bromodichloromethane	mg/kg	1.02	2.36	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Bromoform	mg/kg	61.57	312.25	0.49	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Bromomethane	mg/kg	3.90	13.14	NE	NA	.0036 U	NA	NA	.00546 U	.0076 U	NA	.0039 U	NA
Carbon Disulfide	mg/kg	355.34	720.00	360.00	NA	.0068	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Carbon Tetrachloride	mg/kg	0.24	0.53	0.09	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA

TABLE 1
Analytical Results
Imported BART Soil
Hunters Point Shipyard
San Francisco California

Sample Identification					109-TUDOR-09ABCD	109-TUDOR-10	109-TUDOR-10ABCD	109-TUDOR-11ABCD	29-TUDOR-12	29-TUDOR-13	29-TUDOR-13ABCD	29-TUDOR-14	29-TUDOR-14A,B,C,D**
Location Code					TUDOR-9	TUDOR-10	TUDOR-10	TUDOR-11	TUDOR-12	TUDOR-13	TUDOR-13	TUDOR-14	TUDOR-14
Date Sampled					08/14/01	08/28/01	08/28/01	08/28/01	10/03/01	11/13/01	11/13/01	11/26/01	11/26/01
	Unit	**Residential PRG 2000**	**Industrial PRG 2000**	**ROD***									
Chlorobenzene	mg/kg	152.07	542.93	150.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Chloroethane	mg/kg	3.03	6.51	NE	NA	.0036 U	NA	NA	.00546 U	.0076 U	NA	.0039 U	NA
Chloroform	mg/kg	0.24	0.52	0.24	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Chloromethane	mg/kg	1.23	2.66	NE	NA	.0036 U	NA	NA	.00546 U	.0076 U	NA	.0039 U	NA
cis-1,2-Dichloroethene	mg/kg	42.94	147.36	43.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
cis-1,3-Dichloropropene	mg/kg	0.70	1.60	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Dibromochloromethane	mg/kg	1.11	2.65	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Dibromomethane	mg/kg	66.91	236.25	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Dichlorodifluoromethane	mg/kg	93.88	308.29	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Ethylbenzene	mg/kg	230.00	230.00	230.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Hexachlorobutadiene	mg/kg	6.24	31.62	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Isopropylbenzene	mg/kg	157.03	522.13	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Methylene chloride	mg/kg	8.88	20.53	NE	NA	.0021 J	NA	NA	.00124 J	.004 J	NA	.0039 J	NA
N-Butylbenzene	mg/kg	144.65	240.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
N-Propylbenzene	mg/kg	144.65	240.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Naphthalene	mg/kg	55.92	188.56	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
P-Cymene (P-Isopropyltoluene)	mg/kg	NE	NE	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Sec-Butylbenzene	mg/kg	111.41	220.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Styrene	mg/kg	1700.00	1700.00	1700.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
T-Butylbenzene	mg/kg	131.44	390.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Tert-butyl methyl ether	mg/kg	<17>	<37>	NE	NA	.0071 U	NA	NA	NA	.015 U	NA	.0078 U	NA
Tetrachloroethene	mg/kg	5.69	18.67	0.94	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Toluene	mg/kg	520.00	520.00	520.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Trans-1,2-dichloroethene	mg/kg	63.24	214.15	63.00	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
trans-1,3-dichloropropene	mg/kg	0.70	1.60	NE	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Trichloroethene	mg/kg	2.77	6.12	1.70	NA	.0036 U	NA	NA	.00273 U	.0076 U	NA	.0039 U	NA
Trichlorofluoromethane	mg/kg	385.82	2000.00	NE	NA	.0036 U	NA	NA	NA	.0076 U	NA	.0039 U	NA
Vinyl Chloride	mg/kg	0.15	0.83	0.02	NA	.0036 U	NA	NA	.00546 U	.0076 U	NA	.0039 U	NA
Xylenes, Total	mg/kg	210.00	210.00	210.00	NA	.0036 U	NA	NA	NA	NA	NA	NA	NA

* Soil cleanup standard from Hunters Point Shipyard Parcel B Final Record of Decision (1999)
** This sample is validated and both the lab and validation qualifiers are present in this table
<> California Preliminary Remedial Goal (EPA PRG,11/2000)
( ) Analytical reporting limit. Compounds for which the reported concentration corresponding to a risk level of 10
B- The inorganic analyte was positively identified but the associate numerical value is below the reporting limit
J - The organic analyte was positively identified but the associate numerical value is below the reporting limit
NA - Not analyzed
NE - Not established
U - The analyte was analyzed for, but not detected. The numerical value is at or below the method detection limit.

ATTACHMENT 1

LETTER REPORT
SUMMARY OF ARSENIC ANALYSIS
IMPORTED BART SOIL, STOCKPILE SECTION 9, APRIL 11, 2002

IT Corporation
4005 Port Chicago Highway
Concord, CA 94520-1120
Tel. 925.288.9898

A Member of The IT Group

the IT group

April 11, 2002

Mr. Dave DeMars, Lead RPM, Code 06CH.DD
BRAC Operations, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, 8th Floor, Room 103
San Diego, CA 92132-5190

Attention: Pat Brooks, RPM, Code 06CH.PB

Contract: N62474-98-D-2076, Environmental Remedial Action Contract

Contract Task Order: 0029

Subject: **Letter Report, Summary of Arsenic Analysis, BART Import Soil Stockpile Section 9, Hunters Point Shipyard, San Francisco, California**

Dear Mr. Brooks:

The purpose of this letter report is to present an evaluation of the arsenic data used to characterize stockpile Section 9, a 10,000 cubic yard portion of the 130,000 cubic yards of the imported Bay Area Rapid Transit (BART) soil fill material.

BACKGROUND

Between January 2001 and November 2001 approximately 130,000 cubic yards of clean fill was imported to Hunters Point Shipyard (HPS) for use as backfill at current and future environmental restoration sites within HPS. The soil was provided by Tudor-Saliba, a general contractor for BART. The soil was excavated from a BART train extension project near San Francisco International Airport in San Mateo County. The soil was delivered to HPS by S&S trucking through a contract with Tudor-Saliba. All imported soil was excavated from the same BART extension construction site in San Mateo County. During import activities, 4-point composite soil samples were collected by IT from the imported material at approximately 10,000 cubic yard intervals. A total of thirteen 4-point composite soil samples were analyzed in accordance with the CTO-029 work plan, *Excavation of Impacted Soil and Closure of Abandoned Steam and Fuel Pipelines, Hunters Point Shipyard, November 30, 2001.* Laboratory analytical data were subjected to a four-stage process of evaluation that included completeness checks, verification of hard copy and electronic results, validation of data, and final evaluation based on the best judgment of the project chemist. During the review process, the data were qualified by the chemist to indicate whether they were affected by deviations from the analytical protocols set forth in the CTO-029 work plan (IT, 2001). Unusable data are qualified as rejected ("R" flag). All other results are either reported as detected (no flag) or are qualified as nondetected ("U" flag), nondetected with uncertainty at the detection limit reported ("UJ") flag, or detected with uncertainty at the concentration reported ("J" flag). The analytical results are usable and acceptable with no exceptions. The analytical data were compared to cleanup goals listed in the *Parcel B Record of Decision, Hunters Point Shipyard (1999)* for acceptability. All thirteen 4-point composite samples were reported with COCs within the HPS acceptance levels, with the exception of one composite sample (Tudor-9) collected from stockpile Section 9.

IT Corporation
A Member of The IT Group

Mr. Dave DeMars

April 5, 2002

DATA SUMMARY AND ANALYSIS

Based on the Parcel B ROD, the cleanup goal for arsenic in soil at HPS is the ambient concentration of 11.1 milligrams per kilogram (mg/kg). With the exception of Tudor-9, arsenic in composite samples Tudor-2 through Tudor-14 ranged from 1.6 mg/kg to 4.7 mg/kg. The four-point composite sample Tudor-9 was reported to contain arsenic at 15 mg/kg. In an attempt to confirm the elevated arsenic within stockpile Section 9 (since no other sample exceeded the criteria) aliquots from the four discrete samples of Tudor-9 (Tudor-9A, 9B, 9C, and 9D) were each analyzed for arsenic. Additionally, three more 4-point composite soil samples (Tudor-15, 16, and 17) were collected from Section 9 and analyzed for arsenic. Discrete samples Tudor-9A, 9B, 9C, and 9D were reported to contain arsenic at concentrations ranging from 5.6 mg/kg to 8.0 mg/kg. Composite samples Tudor-15, 16, and 17 were reported to contain arsenic at 2.7 mg/kg, 2.3 mg/kg, and 2.7 mg/kg, respectively. Attached Table 1 summarizes arsenic data associated with stockpile Section 9 and Table 2 summarizes arsenic data from all other BART soil stockpile sections.

CONCLUSIONS

A review of the arsenic analytical results from stockpile Section 9 soil samples indicate that the slightly elevated arsenic concentration in the Tudor-9 soil sample was an anomaly, and the arsenic concentrations that characterize stockpile Section 9 are consistent with all the other imported BART soil. Generally consistent arsenic concentrations are expected because the imported BART soil all originated from the same source. The arsenic concentrations that characterize the BART soil (including Section 9) are less than the ambient levels of arsenic in soil at HPS. Therefore, the soil may be considered suitable for use as backfill at HPS.

Should you have any questions regarding this notification, please contact the Project Manager, Bill Breedlove, at (949) 660-7541, or the undersigned at (925) 288-2003.

Sincerely,
IT CORPORATION

Yvonne Yang
IT Project Chemist

Wayne Akiyama, RG
IT Project Technical Lead

Attachment

TABLE 1
SUMMARY OF ARSENIC ANALYSIS
BART SOIL STOCKPILE SECTION 9

Hunters Point Shipyard
San Francisco CA

Sample Identification			109-TUDOR-09ABCD	109-TUDOR-9A	109-TUDOR-9B	109-TUDOR-9C	109-TUDOR-9D	29-TUDOR-15	29-TUDOR-16	29-TUDOR-17
Location Code			TUDOR-9	TUDOR-9A	TUDOR-9B	TUDOR-9C	TUDOR-9D	TUDOR-15	TUDOR-16	TUDOR-17
Date Sampled			08/14/01	08/14/01	08/14/01	08/14/01	08/14/01	02/13/02	02/13/02	02/13/02
	Unit	**ROD***								
METALS										
Arsenic	mg/kg	11.1	**15**	3.5	3.1	3.89 J	3.3	2.7	2.3	2.7

1) **Bold** indicates the result is above the ROD cleanup level
2) * Cleanup level is based on the Parcel B Record of Decision, Hunters Point Shipyard (1999)
3) ROD - Record of Decision
4) mg/kg - milligram per killogram
5) J - value is between reporting limit (RL) and the method detection limit (MDL).

TABLE 2
SUMMARY OF ARSENIC ANALYSIS
BART SOIL STOCKPILE

Hunters Point Shipyard
San Francisco CA

Sample Identification Location Code Date Sampled			109-TUDOR-02ABCD TUDOR-2 03/20/01	109-TUDOR-03ABCD TUDOR-3 04/04/01	109-TUDOR-04ABCD TUDOR-4 04/17/01	109-TUDOR-05ABCD TUDOR-5 05/07/01	109-TUDOR-06ABCD TUDOR-6 06/14/01	109-TUDOR-07ABCD TUDOR-7 07/23/01
	Unit	ROD*						
METALS								
Arsenic	mg/kg	11.1	2.4	2.3	2.4	2.2	4.7	4.5

Sample Identification Location Code Date Sampled			109-TUDOR-08ABCD TUDOR-8 08/07/01	109-TUDOR-09ABCD TUDOR-9 08/14/01	109-TUDOR-10ABCD TUDOR-10 08/28/01	109-TUDOR-11ABCD TUDOR-11 08/28/01	29-TUDOR-12ABCD TUDOR-12 10/03/01	29-TUDOR-13ABCD TUDOR-13 11/13/01	29-TUDOR-14A,B,C,D TUDOR-14 11/26/01
	Unit	ROD*							
METALS									
Arsenic	mg/kg	11.1	2.7	**15**	3.5	3.1	3.89 J	3.3	1.6

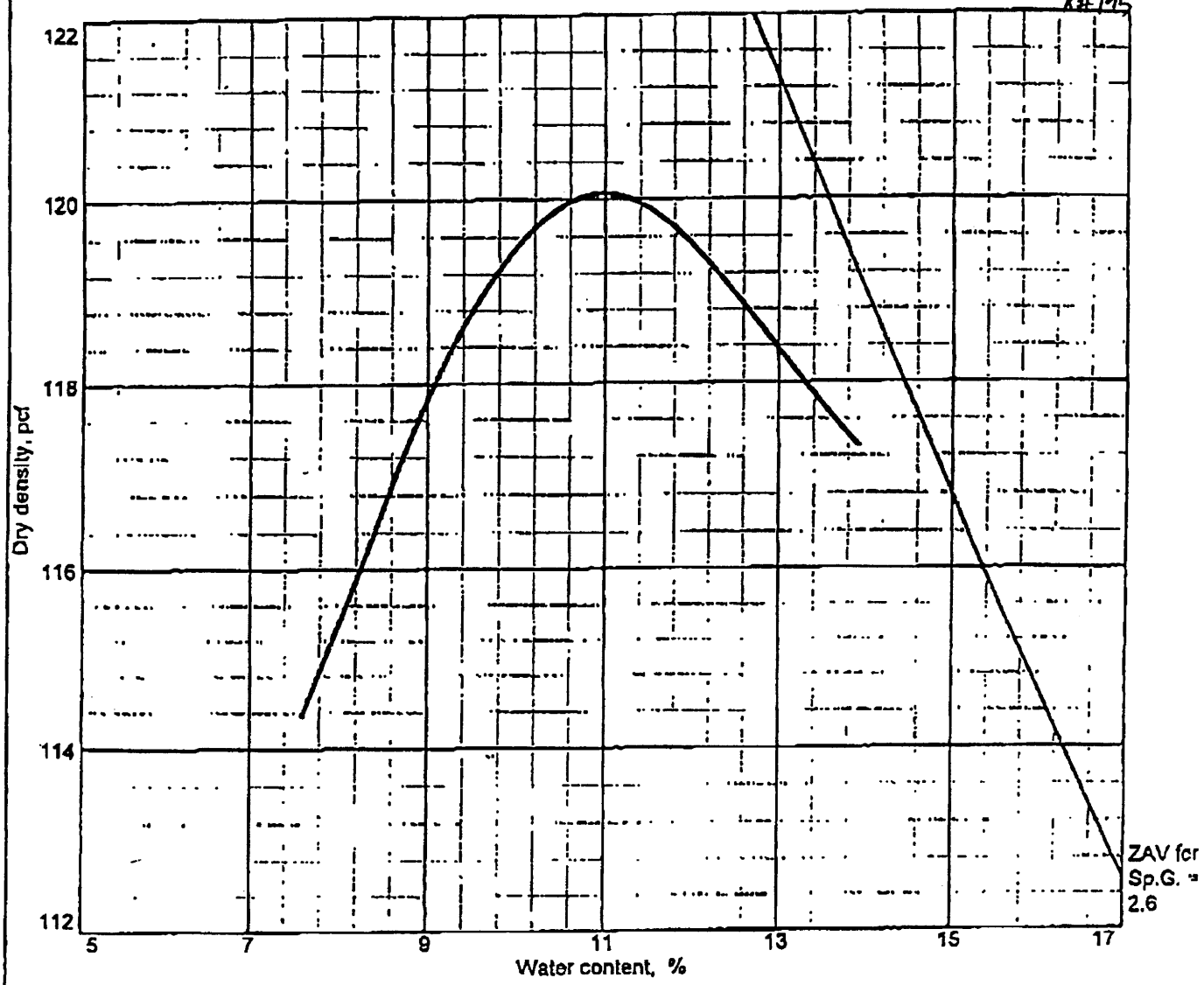
Notes:
1) **Bold** indicates the result is above the ROD cleanup level.
2) * cleanup level is based on Parcel B Record of Decision, Hunters Point Shipyard
3) ROD - Record of Decision
4) J - value is between reporting limit (RL) and the method detection limit (MDL).
5) mg/kg - milligram per killogram

ATTACHMENT 2

GEOTECHNICAL TEST REPORTS

COMPACTION TEST REPORT

K.3
Rt 195



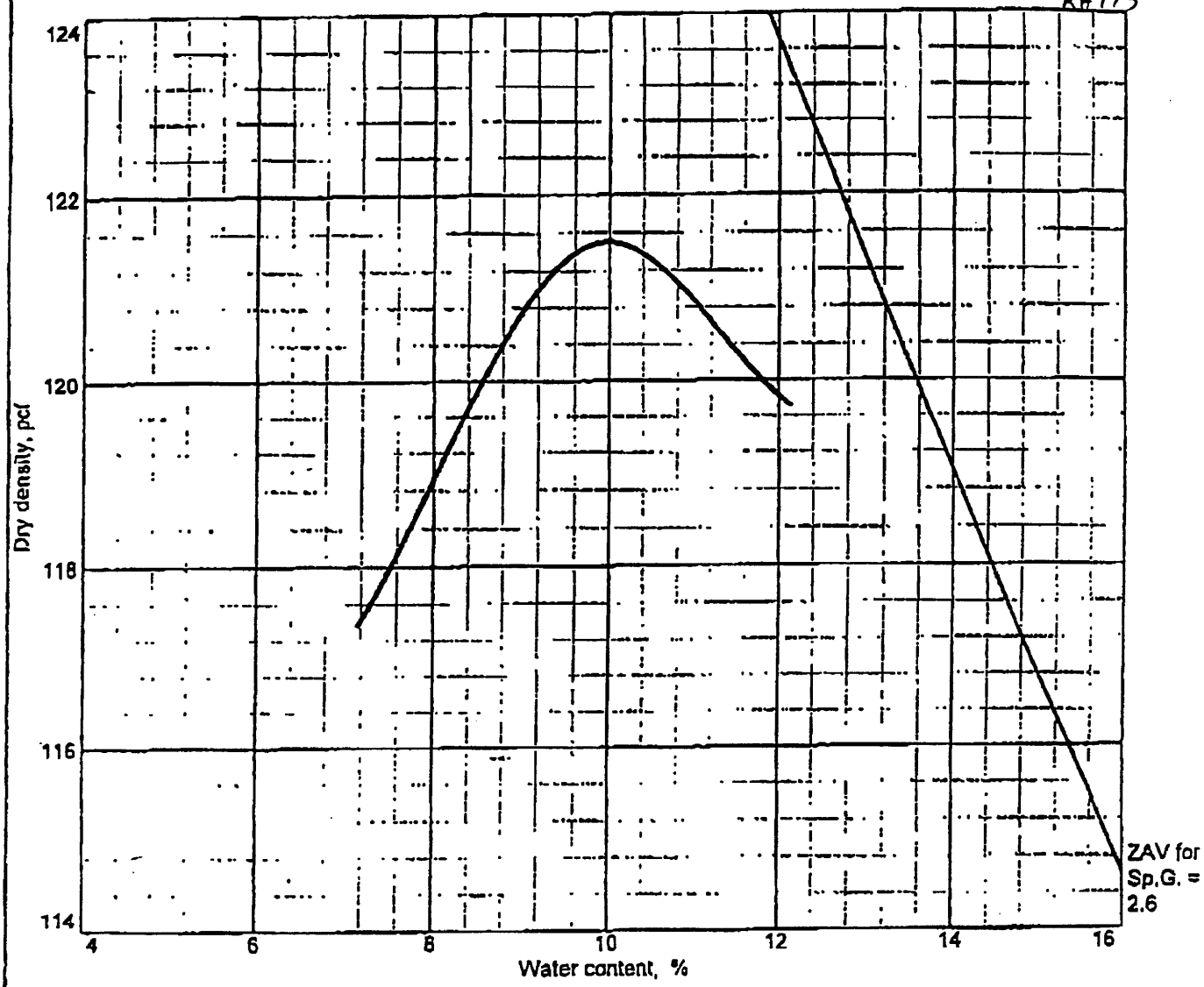
Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 120.1 pcf Optimum moisture = 11.0 %	109-TUTOR-GT-01 LT BROWN SILTY SAND
Project No. 2032 Client: ERRG Project: HPNS-ERRO Location: BART-WEST STOCKPILE	Remarks:
COMPACTION TEST REPORT **Smith-Emery Company**	Plate 1

COMPACTION TEST REPORT

K.3
RH195

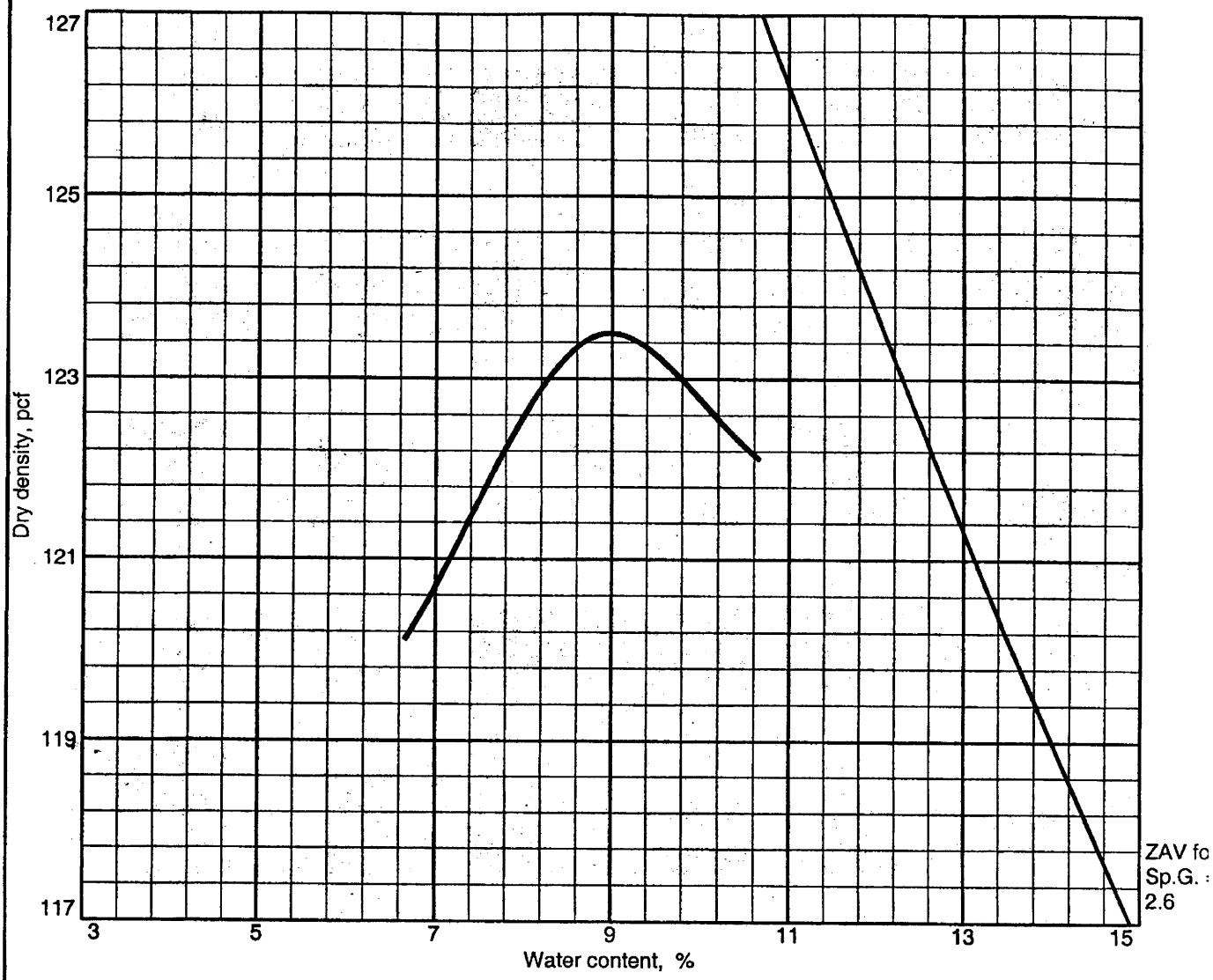


Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 121.5 pcf Optimum moisture = 10.0 %	109-TUTOR-GT-02 DARK BROWN SILTY SAND
Project No. 2032 Client: ERRG Project: HPNS-ERRG Location: BART-EAST STOCKPILE	Remarks:
COMPACTION TEST REPORT **Smith-Emery Company**	Plate 2

COMPACTION TEST REPORT



Test specification: ASTM D 1557-78 Method B Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 123.5 pcf Optimum moisture = 9.0 %	Gray Brown Sandy Silty Clay
Project No. 2032 **Client:** ERRG **Project:** HPNS-ERRG ● **Location:** Onsite Stockpile	**Remarks:**
COMPACTION TEST REPORT **Smith-Emery Company**	**Plate** 1

MAXIMUM DENSITY / OPTIMUM MOISTURE

PROJECT NAME IT Corp HP
PROJECT NUMBER [illegible] LAB NO. _____
SAMPLE LOCATION onsite BY _____ DATE [illegible]
MATERIAL DESCRIPTION [illegible]
SOURCE stockpile
TESTED BY [illegible] DATE TESTED 1-18-02

TEST METHOD: ☐ 3 LAYER SOIL TYPE NO. _____

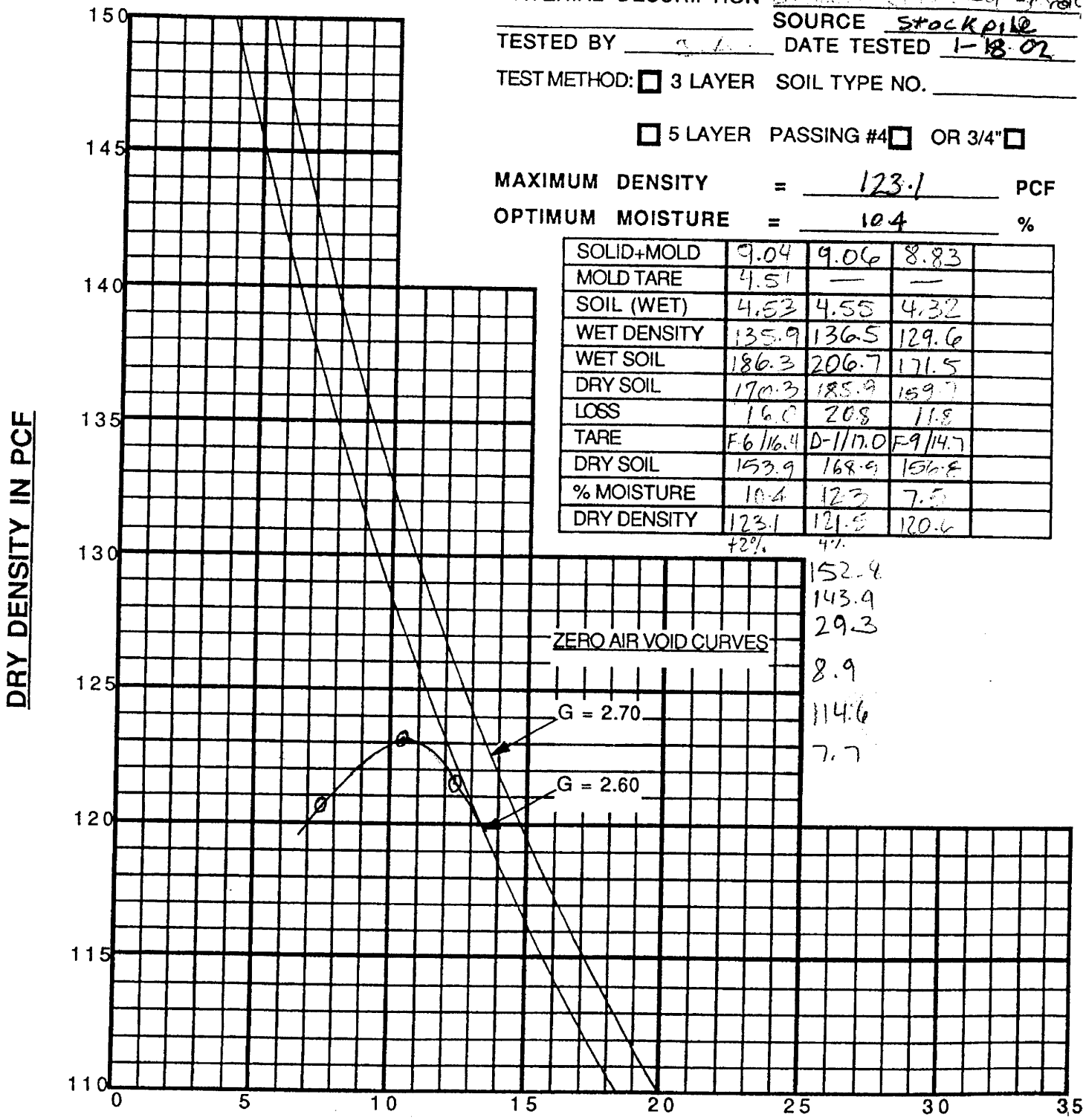
☐ 5 LAYER PASSING #4 ☐ OR 3/4" ☐

MAXIMUM DENSITY = 123.1 PCF

OPTIMUM MOISTURE = 10.4 %

SOLID+MOLD	9.04	9.06	8.83	
MOLD TARE	4.51	—	—	
SOIL (WET)	4.53	4.55	4.32	
WET DENSITY	135.9	136.5	129.6	
WET SOIL	186.3	206.7	171.5	
DRY SOIL	170.3	185.9	159.7	
LOSS	16.0	20.8	11.8	
TARE	F-6/16.4	D-1/17.0	F-9/14.7	
DRY SOIL	153.9	168.9	156.8	
% MOISTURE	10.4	12.3	7.5	
DRY DENSITY	123.1	121.5	120.6	
	+2%	4%		

152.8
143.9
29.3
8.9
114.6
7.7



OPTIMUM MOISTURE (% OF DRY WEIGHT)

SMITH-EMERY COMPANY

PTS Laboratories, Inc.

ERRG
PTS File No: 31200

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: HUNTER'S PT. SHIPYARD
PROJECT NO: 773247.3771110

Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
109-TUDOR-GT-01	N/A	Fine sand	0.165	3.22	2.67	20.01	49.90	24.19
109-TUDOR-GT-02	N/A	Fine sand	0.133	0.00	1.89	20.20	49.56	28.34

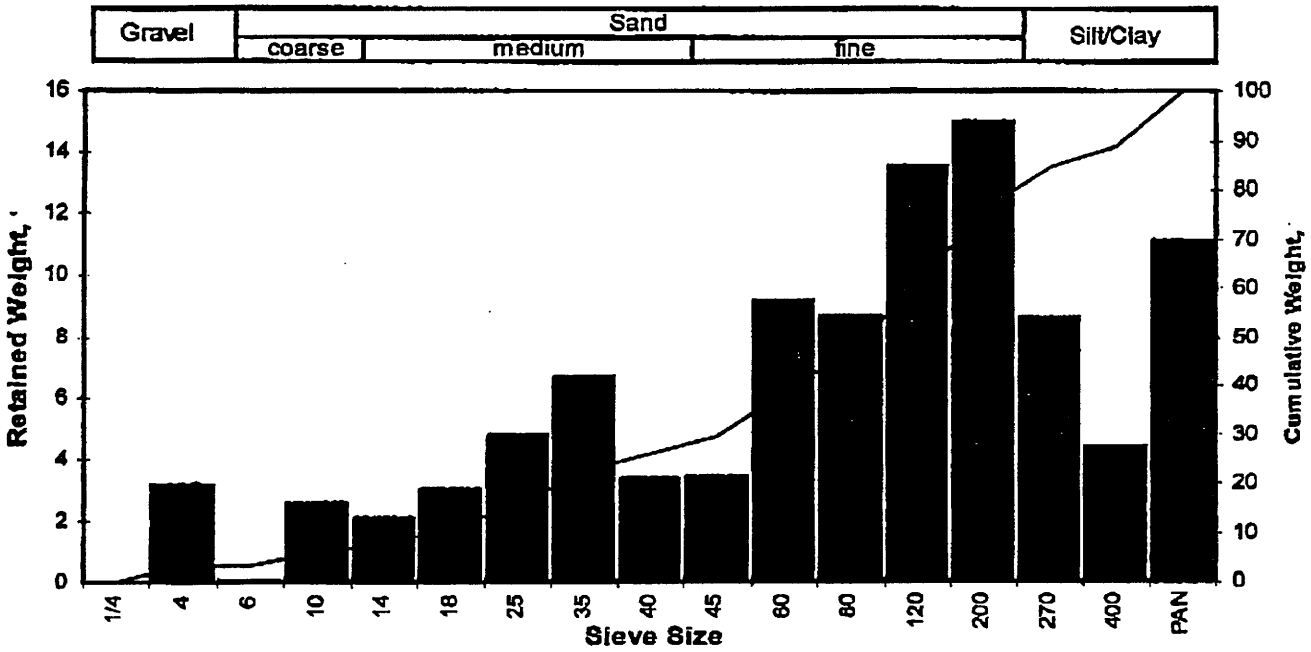
(1) based on Mean fromTrask

K.3
RA#195

PTS Laboratories, Inc. — **Particle Size Analysis - ASTM D422**

K3
RMG

Client:	ERRG	**PTS File No:**	31200
Project:	HUNTER'S PT. SHIPYARD	**Sample ID:**	109-TUDOR-GT-01
Project No:	773247.3771110	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.47	3.22	3.22
0.1324	3.364	-1.75	6	0.01	0.07	3.29
0.0787	2.000	-1.00	10	0.38	2.60	5.89
0.0468	1.189	-0.25	14	0.31	2.12	8.02
0.0331	0.841	0.25	18	0.44	3.02	11.03
0.0278	0.707	0.50	25	0.70	4.80	15.83
0.0234	0.595	0.75	35	0.98	6.72	22.55
0.0197	0.500	1.00	40	0.49	3.36	25.91
0.0165	0.420	1.25	45	0.50	3.43	29.34
0.0139	0.354	1.50	60	1.34	9.16	38.52
0.0117	0.297	1.75	80	1.27	8.70	47.22
0.0098	0.250	2.00	120	1.98	13.57	60.80
0.0083	0.210	2.25	200	2.19	15.01	75.81
0.0070	0.177	2.50	270	1.26	8.64	84.44
0.0059	0.149	2.75	400	0.64	4.39	88.83
			PAN	1.63	11.17	100.00
TOTALS				14.59	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.26	0.0941	2.391
10	-0.17	0.0443	1.126
16	0.51	0.0276	0.701
25	1.18	0.0173	0.441
40	2.09	0.0093	0.236
50	2.60	0.0065	0.165
60	2.97	0.0050	0.128
75	3.71	0.0030	0.076
84	4.22	0.0021	0.053
90	4.25	0.0021	0.052
95	2.13	0.0090	0.229

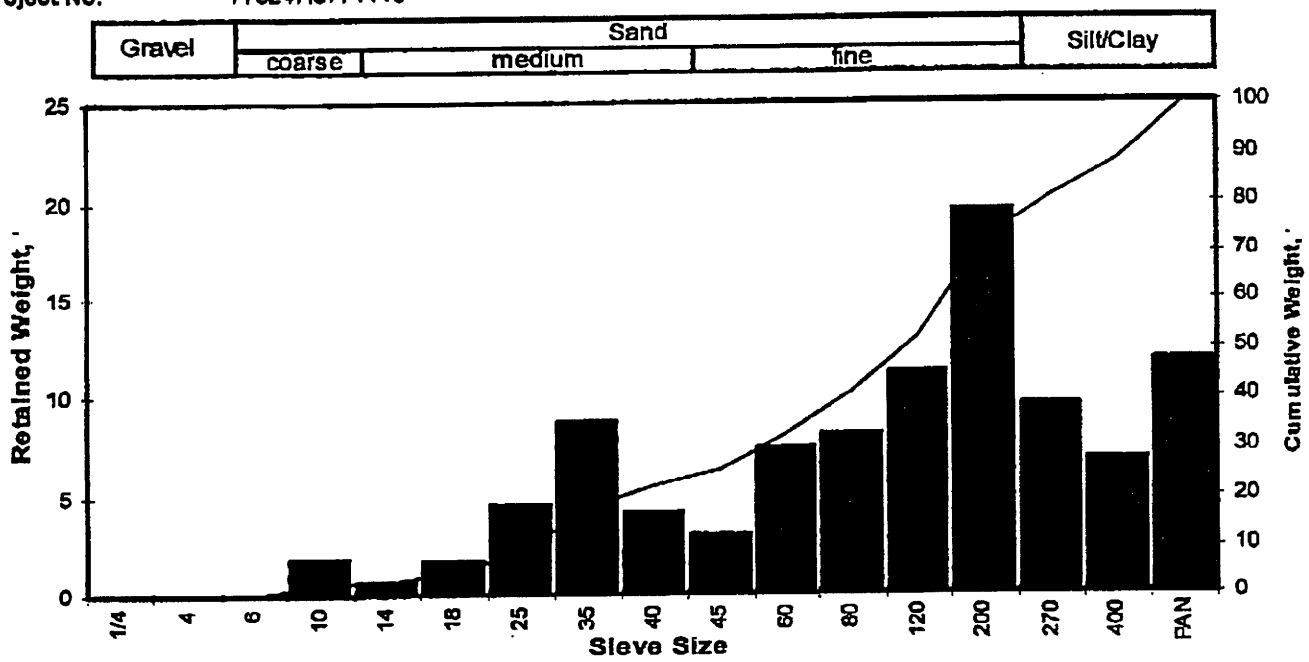
Measure	Trask	Inman	Folk-Ward
Median, phi	2.60	2.60	2.60
Median, in.	0.0065	0.0065	0.0065
Median, mm	0.165	0.165	0.165
Mean, phi	1.95	2.37	2.45
Mean, in.	0.0102	0.0076	0.0072
Mean, mm	0.259	0.194	0.183
Sorting	0.416	1.856	1.441
Skewness	1.114	-0.126	-0.704
Kurtosis	0.170	-0.089	0.549
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	3.22
Coarse Sand	10	2.67
Medium Sand	40	20.01
Fine Sand	200	49.90
Silt/Clay	<200	24.19
	Total	100

PTS Laboratories, Inc. — **Particle Size Analysis - ASTM D422**

K.3
RAM

Client:	ERRG	**PTS File No:**	31200
Project:	HUNTER'S PT. SHIPYARD	**Sample ID:**	109-TUDOR-GT-02
Project No:	773247.3771110	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.26	1.89	1.89
0.0468	1.189	-0.25	14	0.10	0.73	2.62
0.0331	0.841	0.25	18	0.25	1.82	4.43
0.0278	0.707	0.50	25	0.64	4.65	9.08
0.0234	0.595	0.75	35	1.21	8.79	17.88
0.0197	0.500	1.00	40	0.58	4.22	22.09
0.0166	0.420	1.25	45	0.43	3.13	25.22
0.0139	0.354	1.50	60	1.02	7.41	32.63
0.0117	0.297	1.75	80	1.12	8.14	40.77
0.0098	0.250	2.00	120	1.55	11.26	52.03
0.0083	0.210	2.25	200	2.70	19.62	71.66
0.0070	0.177	2.50	270	1.32	9.59	81.25
0.0059	0.149	2.75	400	0.95	6.90	88.15
			PAN	1.63	11.85	100.00
TOTALS				13.76	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.06	0.0377	0.959
10	0.55	0.0269	0.682
16	0.89	0.0212	0.538
25	1.48	0.0141	0.358
40	2.45	0.0072	0.183
50	2.91	0.0052	0.133
60	3.30	0.0040	0.101
75	3.92	0.0026	0.066
84	4.45	0.0018	0.046
90	4.01	0.0024	0.062
95	2.00	0.0098	0.249

Measure	Trask	Inman	Folk-Ward
Median, phi	2.91	2.91	2.91
Median, in.	0.0052	0.0052	0.0052
Median, mm	0.133	0.133	0.133
Mean, phi	2.24	2.67	2.75
Mean, in.	0.0083	0.0062	0.0058
Mean, mm	0.212	0.157	0.149
Sorting	0.429	1.778	1.184
Skewness	1.154	-0.134	-1.032
Kurtosis	0.235	-0.453	0.326
Grain Size Description (ASTM-USCS Scale)			Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	1.89
Medium Sand	40	20.20
Fine Sand	200	49.56
Silt/Clay	<200	28.34
	Total	100

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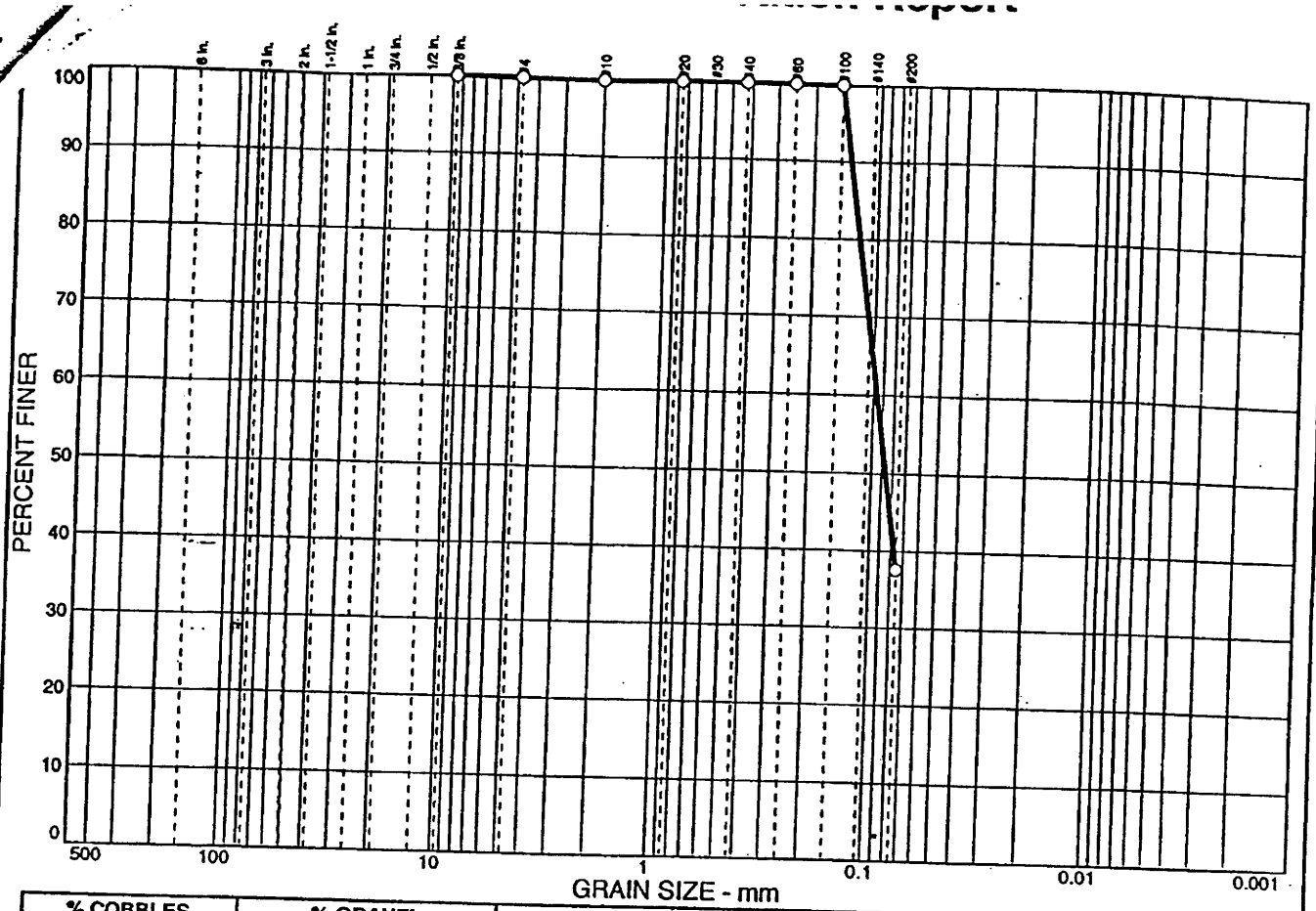
Phone: (562) 907-3607
Fax: (562) 907-3610

TOTAL P.04



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	62.4	37.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375 in.	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	100.0		
#60	100.0		
#100	100.0		
#200	37.6		

* (no specification provided)

Soil Description

Gray Brown Sandy Silty Clay

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.127 D_{60}= 0.0962 D_{50}= 0.0861
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Sample No.: Hunters Point Stock Pile Source of Sample: BART Date: 10/02/01
Location: Onsite Stockpile Elev./Depth:

Smith-Emery Company

Client: ERRG
Project: HPNS-ERRG
Project No: 2032 Plate 2

P S Laboratories, Inc.

ER...

PTS File No: 31200

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: HUNTER'S PT. SHIPYARD
PROJECT NO: 773247.3771110

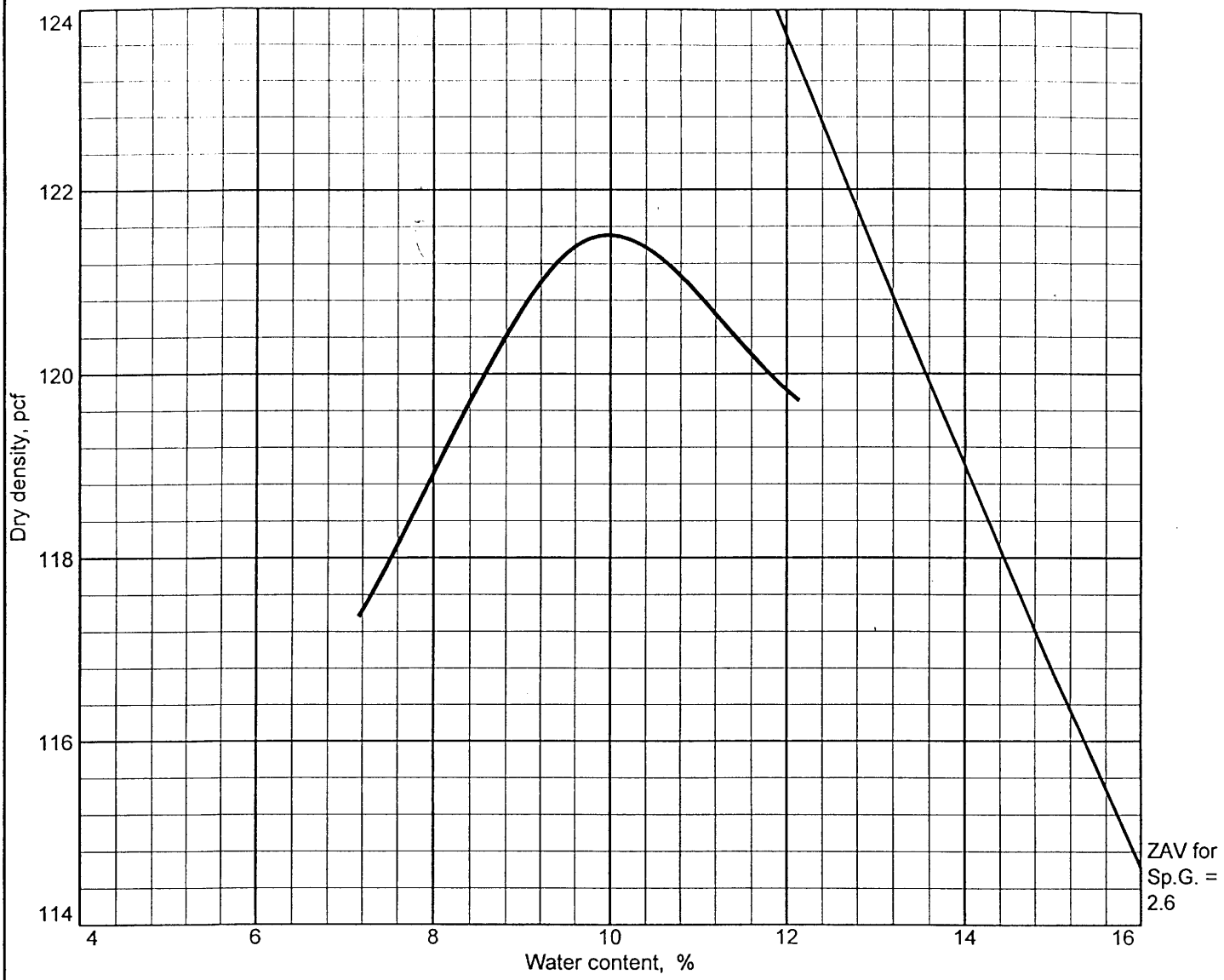
Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
109-TUDOR-GT-01 (BART-WEST)	N/A	Fine sand	0.165	3.22	2.67	20.01	49.90	24.19
109-TUDOR-GT-02 (BART-EAST)	N/A	Fine sand	0.133	0.00	1.89	20.20	49.56	28.34

COPY

(1) based on Mean fromTrask

Kevin #773247

COMPACTION TEST REPORT



Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 121.5 pcf Optimum moisture = 10.0 %	109-TUTOR-GT-02 DARK BROWN SILTY SAND

Project No. 2032 **Client:** ERRG
Project: HPNS-ERRG

• **Location:** BART-EAST STOCKPILE

Remarks:

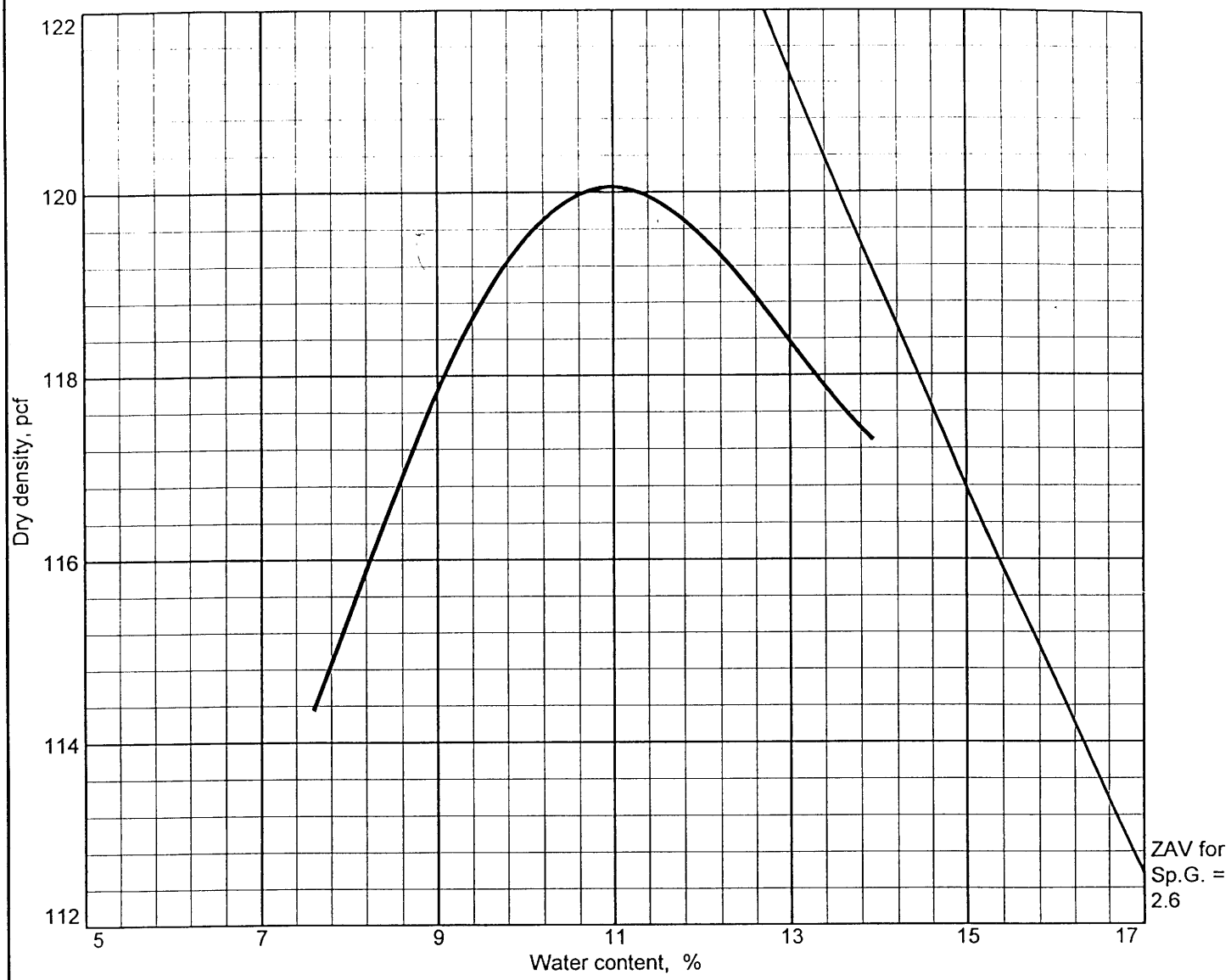
COMPACTION TEST REPORT

Smith-Emery Company

Plate 2

Kevin #773247

COMPACTION TEST REPORT



Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 120.1 pcf Optimum moisture = 11.0 %	109-TUTOR-GT-01 LT BROWN SILTY SAND

Project No. 2032 **Client:** ERRG
Project: HPNS-ERRG

- **Location:** BART-WEST STOCKPILE

Remarks:

COMPACTION TEST REPORT

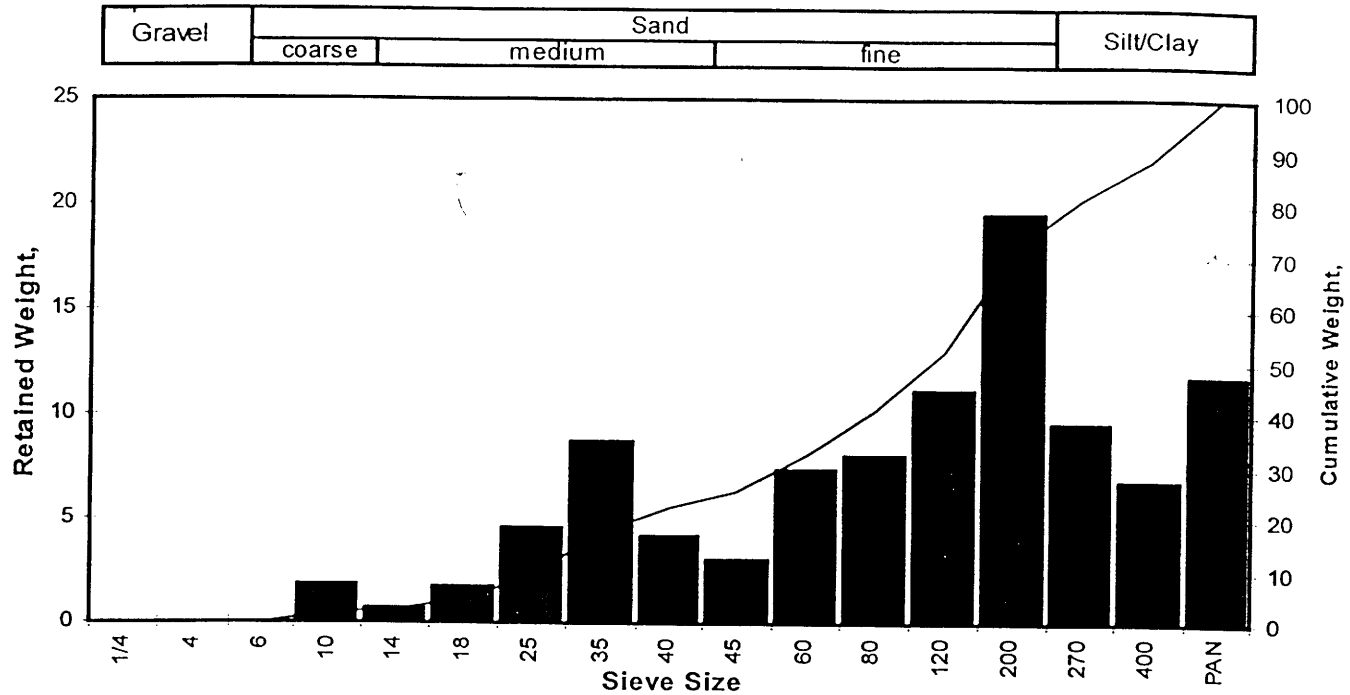
Smith-Emery Company

Plate 1

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422

Client:	ERRG	**PTS File No:**	31200
Project:	HUNTER'S PT. SHIPYARD	**Sample ID:**	109-TUDOR-GT-02
Project No:	773247.3771110	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.26	1.89	1.89
0.0468	1.189	-0.25	14	0.10	0.73	2.62
0.0331	0.841	0.25	18	0.25	1.82	4.43
0.0278	0.707	0.50	25	0.64	4.65	9.08
0.0234	0.595	0.75	35	1.21	8.79	17.88
0.0197	0.500	1.00	40	0.58	4.22	22.09
0.0166	0.420	1.25	45	0.43	3.13	25.22
0.0139	0.354	1.50	60	1.02	7.41	32.63
0.0117	0.297	1.75	80	1.12	8.14	40.77
0.0098	0.250	2.00	120	1.55	11.26	52.03
0.0083	0.210	2.25	200	2.70	19.62	71.66
0.0070	0.177	2.50	270	1.32	9.59	81.25
0.0059	0.149	2.75	400	0.95	6.90	88.15
			PAN	1.63	11.85	100.00
TOTALS				13.76	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.06	0.0377	0.959
10	0.55	0.0269	0.682
16	0.89	0.0212	0.538
25	1.48	0.0141	0.358
40	2.45	0.0072	0.183
50	2.91	0.0052	0.133
60	3.30	0.0040	0.101
75	3.92	0.0026	0.066
84	4.45	0.0018	0.046
90	4.01	0.0024	0.062
95	2.00	0.0098	0.249

Measure	Trask	Inman	Folk-Ward
Median, phi	2.91	2.91	2.91
Median, in.	0.0052	0.0052	0.0052
Median, mm	0.133	0.133	0.133
Mean, phi	2.24	2.67	2.75
Mean, in.	0.0083	0.0062	0.0058
Mean, mm	0.212	0.157	0.149
Sorting	0.429	1.778	1.184
Skewness	1.154	-0.134	-1.032
Kurtosis	0.235	-0.453	0.326
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	1.89
Medium Sand	40	20.20
Fine Sand	200	49.56
Silt/Clay	<200	28.34
	Total	100

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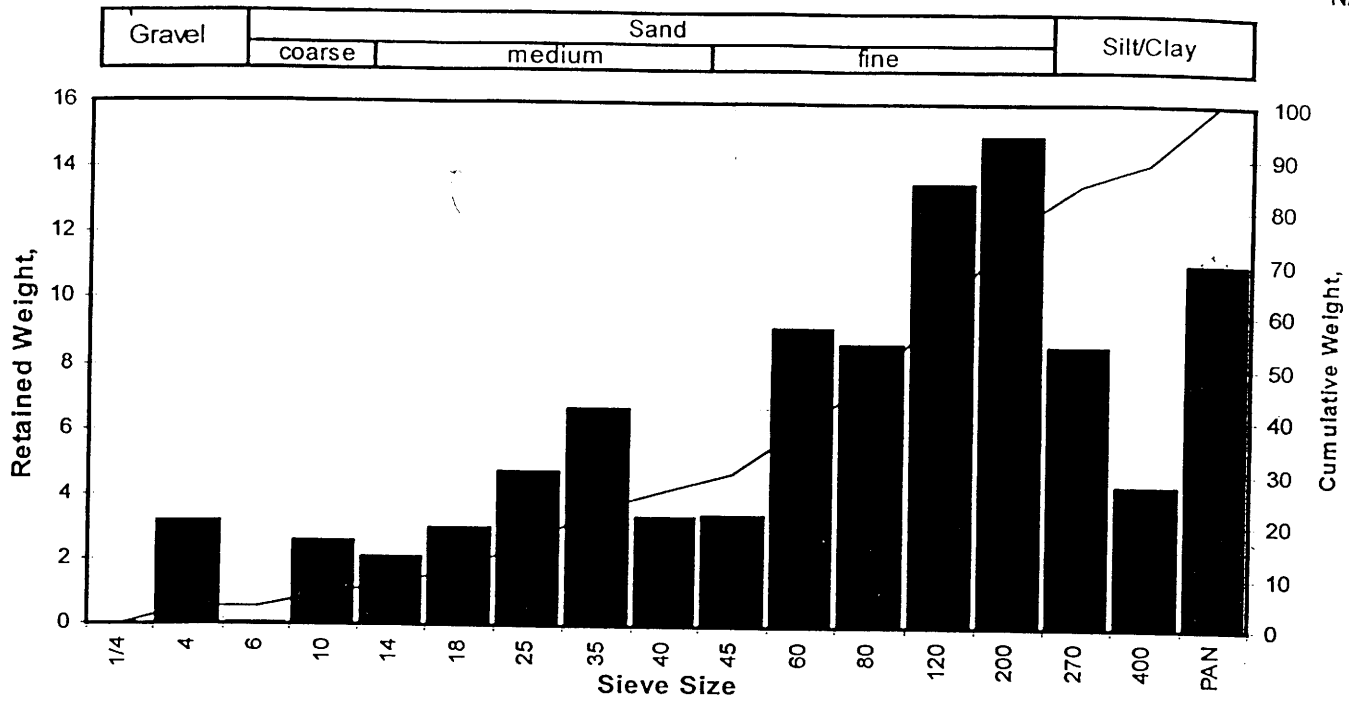
Phone (562) 907-3607 Fax (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422

Client: ERRG
Project: HUNTER'S PT. SHIPYARD
Project No: 773247.3771110

PTS File No: 31200
Sample ID: 109-TUDOR-GT-01
Depth, ft: N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.47	3.22	3.22
0.1324	3.364	-1.75	6	0.01	0.07	3.29
0.0787	2.000	-1.00	10	0.38	2.60	5.89
0.0468	1.189	-0.25	14	0.31	2.12	8.02
0.0331	0.841	0.25	18	0.44	3.02	11.03
0.0278	0.707	0.50	25	0.70	4.80	15.83
0.0234	0.595	0.75	35	0.98	6.72	22.55
0.0197	0.500	1.00	40	0.49	3.36	25.91
0.0166	0.420	1.25	45	0.50	3.43	29.34
0.0139	0.354	1.50	60	1.34	9.18	38.52
0.0117	0.297	1.75	80	1.27	8.70	47.22
0.0098	0.250	2.00	120	1.98	13.57	60.80
0.0083	0.210	2.25	200	2.19	15.01	75.81
0.0070	0.177	2.50	270	1.26	8.64	84.44
0.0059	0.149	2.75	400	0.64	4.39	88.83
			PAN	1.63	11.17	100.00
TOTALS				14.59	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.26	0.0941	2.391
10	-0.17	0.0443	1.126
16	0.51	0.0276	0.701
25	1.18	0.0173	0.441
40	2.09	0.0093	0.236
50	2.60	0.0065	0.165
60	2.97	0.0050	0.128
75	3.71	0.0030	0.076
84	4.22	0.0021	0.053
90	4.25	0.0021	0.052
95	2.13	0.0090	0.229

Measure	Trask	Inman	Folk-Ward
Median, phi	2.60	2.60	2.60
Median, in.	0.0065	0.0065	0.0065
Median, mm	0.165	0.165	0.165
Mean, phi	1.95	2.37	2.45
Mean, in.	0.0102	0.0076	0.0072
Mean, mm	0.259	0.194	0.183
Sorting	0.416	1.856	1.441
Skewness	1.114	-0.126	-0.704
Kurtosis	0.170	-0.089	0.549
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	3.22
Coarse Sand	10	2.67
Medium Sand	40	20.01
Fine Sand	200	49.90
Silt/Clay	<200	24.19
	Total	100

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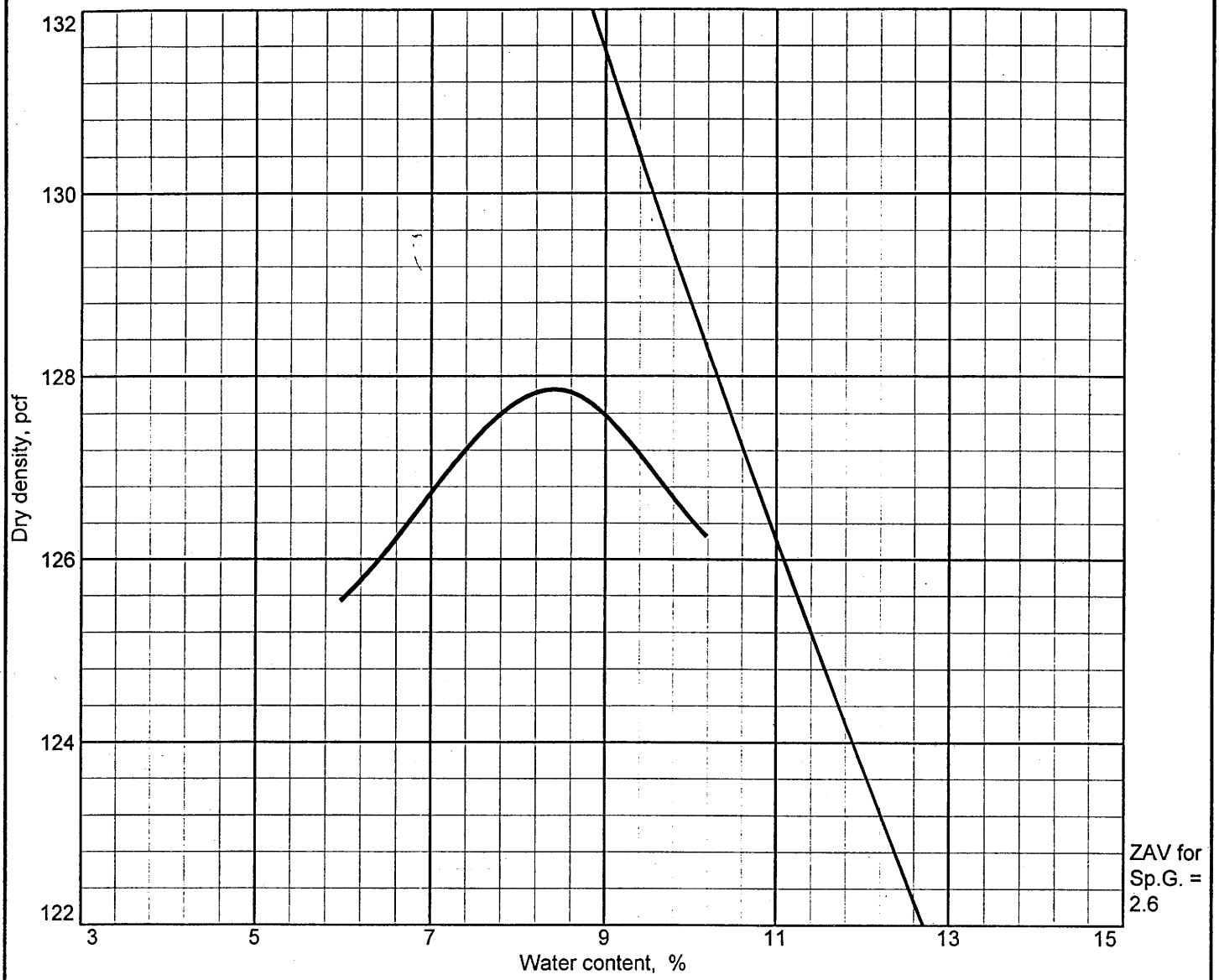
Fax: (562) 907-3610

COMPACTION TEST REPORT



Test specification: ASTM D 698-91 Procedure A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
Stockpile	ML						7.6	59.8

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 127.9 pcf Optimum moisture = 8.4 %	BART Southeast - Brown sandy silt with gravel

Project No. 2032 **Client:** ERRG
Project: HPNS-ERRG

- **Location:** ONSITE STOCKPILE

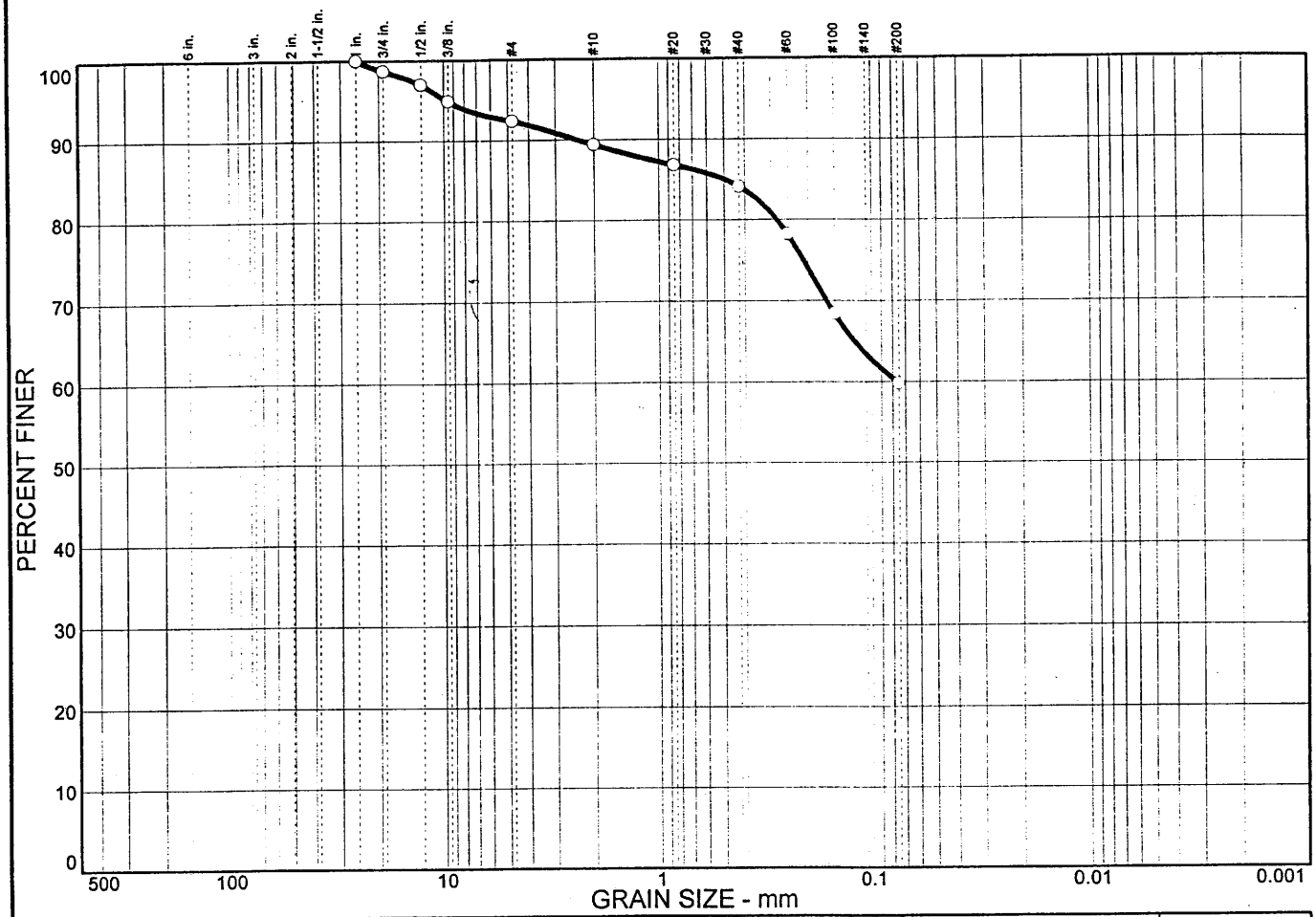
Remarks:

COMPACTION TEST REPORT

Smith-Emery Company

Plate 1

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	7.6	32.6	59.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	98.7		
.5 in.	97.0		
.375 in.	94.9		
#4	92.4		
#10	89.4		
#20	86.8		
#40	84.1		
#60	78.2		
#100	68.4		
#200	59.8		

* (no specification provided)

Soil Description

BART Southeast - Brown sandy silt with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.497 D_{60}= 0.0765 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

Remarks

F.M.=0.46

Sample No.: BART Southeast **Source of Sample:** BART-EAST STOCKPILE **Date:** 06-19-01
Location: ONSITE STOCKPILE **Elev./Depth:** Stockpile

Smith-Emery Company

Client: ERRG
Project: HPNS-ERRG
Project No: 2032 **Plate** 2

Cyme, Inc.	FIELD DAILY REPORT		
1485 Bayshore Boulevard, Suite 459 San Francisco, California 94124-3002 Phone: (415) 468-3522 Fax: (415) 468-4715	Parcel B- Hunters Point Naval Shipyard San Francisco, CA		
	Project	Date:	Page
	307-1	16 OCT 00	1 OF 5

AREAS OF ATTENTION: IR 24-4113; IR-20-4519

CONTRACTOR: 1751, ROBERT GUERRERO, 925 250 8957.

EQUIPMENT WORKING: 1 710D JOHN DEERE BACKHOE W/ 1 SHEEPFOOT ROLLER ATTACHMENT, 1 644 H JOHN DEERE LOADER, 1 WACKER, 1 WATER TRUCK

CYME REPRESENTATIVE: J.P. SETTEPANI **REQUESTED BY:** K. STONESTREET, IT, 12 OCT 00.

6:15 - ARRIVED AT SITE - . PARTICIPATED OF HEALTH + SAFETY AND OF BACKFILLING OPERATIONS PREP. MEETINGS UNTIL 7:15.

7:15: INTRODUCED MYSELF TO ROBERT GUERRERO, 1751 SUPERINTENDENT. 4 CREWS PRESENT.

7:30. LOCATED BACKFILL SITES W/ MR. HOLLIDAY (IT). HE WILL BE OVERSEEING BACKFILLING OPERATIONS FOR IT. MEASURED DEPTHS.

7:45. LEFT SITE TO FETCH NUCLEAR GAUGE.

8:30. RETURNED TO SITE. 1751 CREW HAS PLACED ~ 1'-1½" OF ANGEL SAND - IN SOUTH PORTION OF B-4113. CREW FORGOT TO PLACE SNOW FENCE AT THE BOTTOM. THEY PLACED IT ON TOP OF THE SAND AFTER I TESTED THE MATERIAL. CREW HAS SATISFIED BOTTOM OF NORTH PORTION OF B-4113 AND HAS PLACED SNOW FENCE. CREW PROCEEDED TO PLACE AB (~1 FT) IN SOUTH PORTION OF B-4113. TESTED - HAD CREW REWORK IT - PASSED

9:20 - TRUCK BROUGHT BACKFILL MATERIAL TO IR-20-B4519. CREW HAS PLACED SNOW FENCE AT BOTTOM [illegible] PASSES W/ROLLER.

1000 - AT IR20-B4519 1 FT OF BACKFILL HAS BEEN PLACED AND IS BEING ROLLED 6 TIMES EVERYWHERE.

1100 - CREW HAS STOPPED WORK FOR LUNCH. TESTED AB AT [illegible] PORTION OF B-4113 + BACKFILL IN NORTH PORTION [illegible] SATISFACTORY RESULTS.

11:15 - ANOTHER 1751 HAS BEEN PLACED IN IR B4519 - NOTED AS INDICATED ABOVE.

12:00 CREW HAS REACHED [illegible] GRADE IN SOUTHERN PORTION OF B4113 + 1 FT BGS IN N PORTION. TESTS SATISFACTORY.

1500 - TESTED [illegible] LIFT OF AB [illegible] - SATISFACTORY

1500 - TESTED FINISH [illegible] AT [illegible] - [illegible]

AT THIS CREW [illegible] ADDITIONAL [illegible]. [illegible]

[illegible] - TESTED W/ SATISFACTORY [illegible]

THIS CREW [illegible] [illegible] AT 54519 - THE

RESULTS ARE [illegible].

[illegible] ADDITIONAL 6" - [illegible]

[illegible]

[illegible] ADDITIONAL [illegible] TO REACH ~ 1' BGS.

1555 - TESTING W/ SATISFACTORY RESULTS B-4519

1600 - CREW SHUTTING DOWN SITE B-4519.

1615 - GAVE K. STONESTREET (IT) + D. BRENNAN (IT) A BRIEF OF TODAY'S ACTIVITIES.

1630 - LEFT SITE.

SUMMARY:

IR24-B4113 - COMPLETED

IR20-B4519 - ITSI HAS REACHED 1' BGS. 2 LIFTS OF 6" EACH OF AB REMAIN TO BE PLACED. ITSI TO PLACE AB TOMORROW. JP TO TEST ON NEXT VISIT.

QUANTITIES USED (COMPACTED) =

AB: ~ 3.7 CY [illegible]

[illegible]: [illegible]

[illegible]: ~ 1.2 CY [B4113]

[illegible] ARE APPROXIMATE.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION FIELD	% REL. COMPACTION SPECIFIED	TECH	METHOD
	1	B.4113,S [EXC, BF]	-2	5.412	113.6	#1	99	95	JP	NG
	2	B.4113,S [EXC, BF]	-1	5.48	119.4	#2	91	95	JP	NG
	3	B.4113,S [EXC, BF]	-1	8%	124.3	#2	95	95	JP	NG
	—	B4519 [EXC, BF]	-6.0	OBSERVE	BOTTOM - SOME DUMPING			95	JP	-
	—	B4519 [EXC, BF]	-5.0	FILL PLACED - [illegible]					JP	-
	4	[illegible],N [EXC, BF]	-2	6.94	124.5	#2	95	95	JP	NG
	5	[illegible] [EXC, BF]	-.5	4%	128.9	#3	95	95	JP	NG
	[illegible]	B4519 [EXC, BF]	-4.5	FILL PLACED [illegible]					JP	NG
	6	B4113,N [EXC, BF]	-1	[illegible]	127.3	#2			[illegible]	NG
	7	[illegible]	FG	[illegible]	130.2	#3	[illegible]	[illegible]	JP	NG
	8	B4113,N [EXC, BF]	-.5	6.339	130.4	#3	96	[illegible]	JP	NG
	9	B4113,N [EXC, BF]	0	2.542	133.4	#3	93	95	JP	NG
	10	B4519 [EXC, BF]	-3.5	6.359	128.8	#2	93	95	JP	NG
	11	B4519 [EXC, BF]	-2.5	8.361	126.8	#2	96	95	JP	NG
	12	B4519 [EXC, BF]	-2.0	7.033	127.7	#2	97	95	JP	NG
	13	[illegible]	[illegible]	[illegible]	[illegible]	#2	95	[illegible]	JP	NG

SOIL TYPE		CCC	%OM	MDD
#1	ANGEL SAND	573321	11	114
#2	BACKFILL/ALL DUMPS	573302	8	131
#3	CONC AGG	"	6	136
LABORATORY STANDARD:				

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

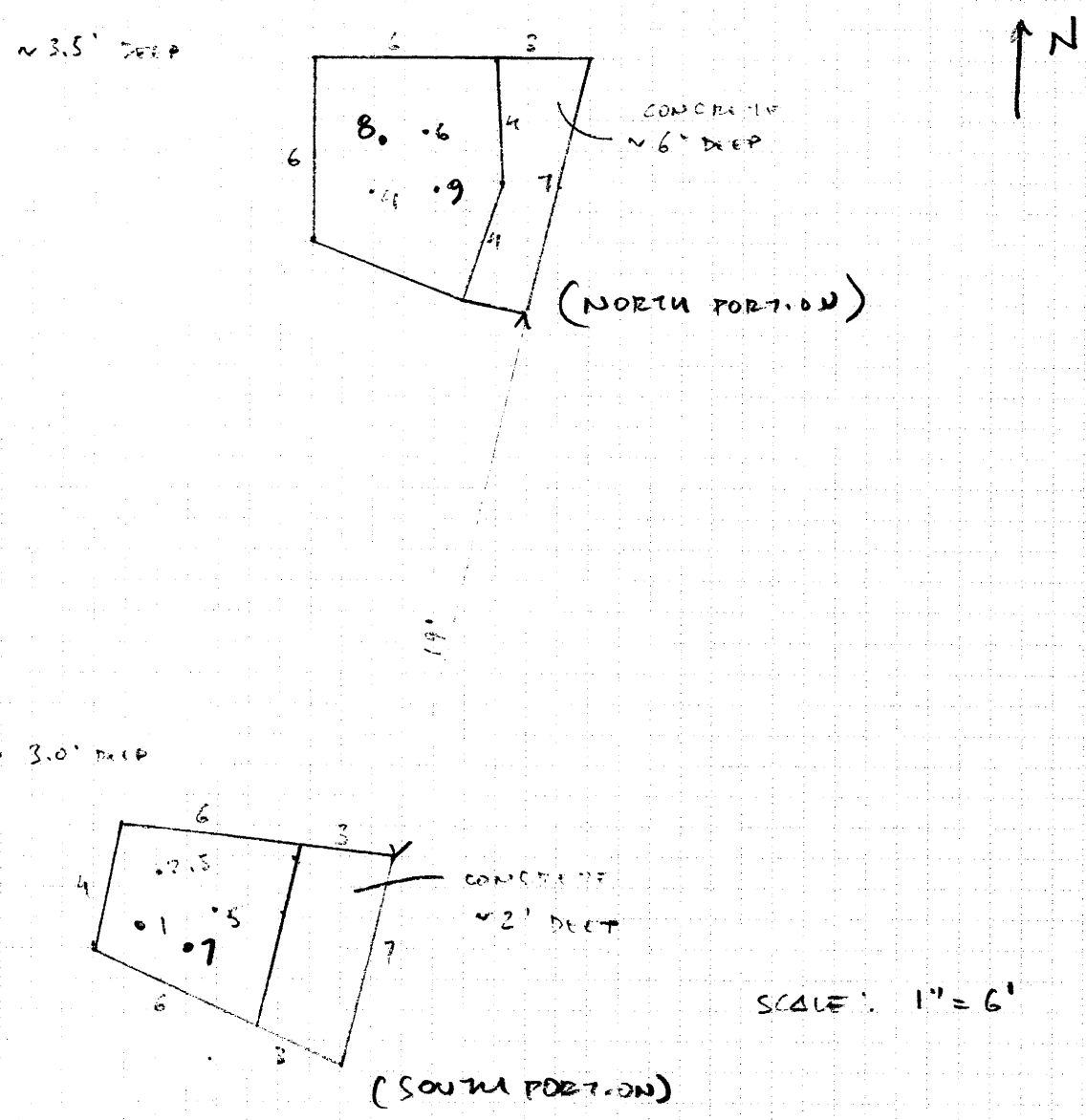
Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	16OCT00	3 of 5

Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: PARCEL B REMEDIATION
Prepared by: JP.
Date Prepared: 16 OCT 00
Checked by: —
Date Checked: —
Project Number: 307.1 **Page Number:** 4 of 5

IR 24-B4113. APPROXIMATE DIMENSIONS



SCALE: 1" = 6'

VOLUME: SAND: 33 CF ~ 1.2 CY

BACKFILL: 49.5CF + 84 = 133.5 CF ≅ 4.9 CY

AB : 49.5CF + 21 + 29.25 = 99.75 CF ≅ 3.7 CY

Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: PARCEL B REMEDIATION
Prepared by: JP
Date Prepared: 16 OCT 00
Checked by: —
Date Checked: —
Project Number: 307-1 **Page Number:** 5 of 5

IR 20-B4519

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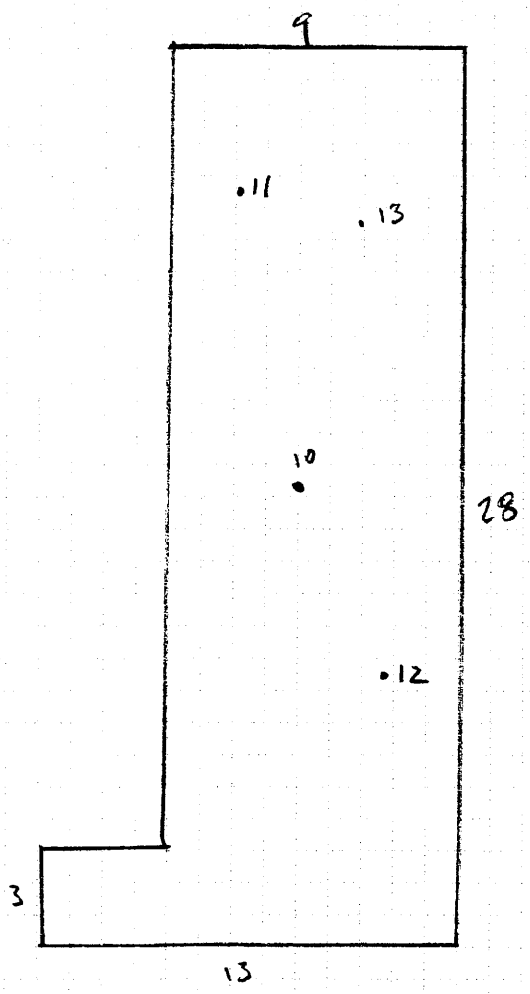


AREA = 2[illegible] SF

PERIMETER = 6[illegible] LF

SCALE: 1" = 6'

VOLUME:

BACKFILL = 1584 CF ~ 59.7 CY

AB =

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	19 DEC 2000	1 OF 5

AREAS OF ATTENTION: IR-20-4519, IR7-7-1

CONTRACTOR: ITSI, CHUCK CLYDE (925) 383-7604

EQUIPMENT WORKING: JOHN DEERE 650 LGP TRACK MOUNTED BULDOZER; JOHN DEERE 624H LOADER; JOHN DEERE 710D BACKHOE MOUNTED W/ SHEEPFOOT ROLLER.

CYME REPRESENTATIVE: JP. SETTEPANI **REQUESTED BY:** C. CLYDE, ITSI.

8:45 - ARRIVED AT IR7-7-1. ITSI IS PLACING BACK FILL MATERIAL FROM DUTRA IN EXCAVATION IN A 1'0" DEEP LIFT. MEET CHUCK, RYAN, MIKE, JIMMY. WE GO THROUGH SPECS + SCHEDULE W/ CHUCK. HE PROVIDES ME WITH SKETCHES OF EXCAVATIONS IR60-60.2 (60-2), IR 24-24-7 (24-7); IR 10-B3324 (B3324); IR7-7-1 (7.1); EE-02 (EE-02).

9:15 TEST TOP LIFT OF SITE IR 20-4519 WHICH HAD REMAINED UNTESTED SINCE COMPLETED ON OCTOBER 14 - RESULT SATISFACTORY.

9:45 VISIT SITES 60-2, EE02, 24-7, B3324, 7.1 + VERIFY DIMENSIONS.

10:15 OBSERVE ITSI COMPACT MATERIAL IN 7.1 - MATERIAL LOOKS DIFFERENT SINCE LAST OCTOBER VISIT. TAKE 1 TEST. RESULTS ARE SATISFACTORY. HOWEVER, MATERIAL LOOKS "CUSHY"

1200 - 1230 - CREW TOOK LUNCH

13:15 TAKE A SAMPLE OF THE MATERIAL.

13:25 MR HALLIDAY STOPS BY - DISCUSS TEST RESULTS W/ HIM. HE NOTICES MATERIAL IS "PUMPY." SUGGESTS TALKING WITH K. STONESTREET TO SEE IF HE WANTS TO TAKE ANOTHER SAMPLE TO THE LAB.

14:10 CANNOT FIND K. STONESTREET - WAYNE AKIYAMA RADIOS HIM - WAYNE + I VISIT SITE 7.1 - HE NOTICES MATERIAL IS "CUSHY." C. CLYDE SAYS IT IS OK. WAYNE SAYS HE IS CONCERNED ABOUT A CONCRETE BORDER THAT IS TO BE BUILT ALONG THE BEACH LINE.

14:40 DECIDE TO TAKE SAMPLE TO THE LAB.

15:00 TALK W/ J. HALLIDAY ABOUT C.O.C + PAPERWORK FOR SAMPLE AGREE TO GET IT FROM HIM TOMORROW.

15:10 MR BRENNAN ASKS ME TO ORDER NEW TESTS FOR ALL MATERIALS.

15:45 LEFT SITE

SUMMARY

- JP. SETTEFRANI TO RETURN TO SITE AT 730, AS AGREED WITH
- C. CLYDE. COMPACTION WILL BE TESTED AT 7.1
ITSI TO START BACKFILLING EEOZ.
- JP. SETTEFRANI WILL GET PAPERWORK FROM J. HOLLIDAY TO TAKE
SAMPLES TO LAB.
- QUANTITIES PLACED TODAY: ~340 CY IN 7.1 BACKFILL

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
	14	B4519 [EXC. BF]	0.0	4.59	132.7	#3	97.6	95	JP	NG
	15	7.1 [EXC. BF]	0.0	11.57	123.2	#2	94.0	90	JP	NG

SOIL TYPE	COC	%OM	MDD
#1 AUGER SAND	573321	11	114
#2 BACKFILL	572502	8	131
#3 CLASS 2 AB	"	6	136
LABORATORY STANDARD:			

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

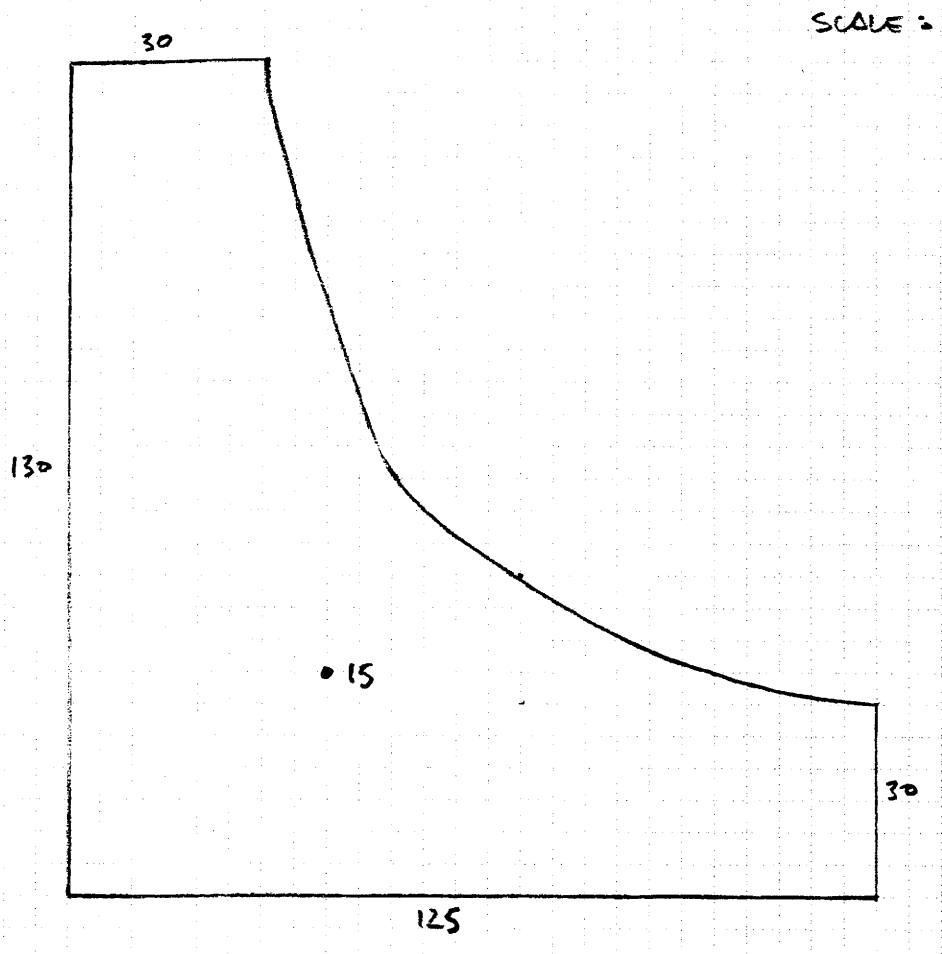
Project	Date	Page
307-1	19 Dec 00	

Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: PARCEL B REMEDIAL ACTION
Prepared by: JP
Date Prepared: 19 DEC00
Checked by: —
Date Checked: —
Project Number: 307-1 **Page Number:** of

IR7-7-1

SCALE: 1" = 30'



N

AREA ≈ 9162 SF

DEPTH ≈ 1 LF (BACKFILL MATERIAL)

VOLUME = 9162 CF ~ 340 CY OF BACKFILL MATERIAL

DRAIN ROCK - PLACED TO APPROXIMATELY 1' BGS

Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: PARCEL B REMEDIATION
Prepared by: JP
Date Prepared: 16 OCT 00
Checked by: —
Date Checked: —
Project Number: 307-1 **Page Number:** 5 of 5

IR 20-84519

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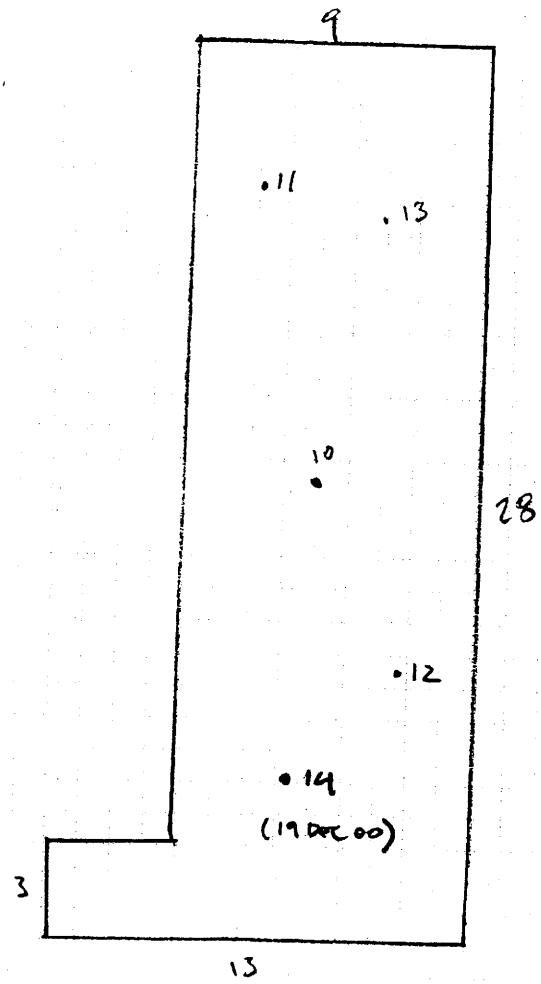

AREA = 264 SF

DEPTH = 6 LF

SCALE: 1" = 6'

VOLUME:

BACKFILL = 1584 CF ~ 58.7 CY

AB =

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	12.20.00	1 of 5

AREAS OF ATTENTION: 1R07-7-1 ; EE02 ; 1R10-3324

CONTRACTOR: ITSI, CHUCK CLYDE (925) 383-7604 ; 4 CREWMEN.

EQUIPMENT WORKING: JOHN DEERE 710D BACKHOE W/ SHEEPFOOT ROLLER ATTACHMENT, 624H LOADER; ROTARY BRUSH

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

700 - SPOKE W/ C. CLYDE BY TELEPHONE WHO TOLD ME THAT HE WOULD NOT GET TO EE02 UNTIL MIDDAY. AGREED TO BE AT THE SITE AROUND LUNCH.

1220 - ARRIVED AT SITE - ITSI HAS PLACED SNOW FENCE AT BOTTOM OF EE02 AND IS DUMPING FIRST LIFT INTO THE EXCAVATION.

1230 - SPOKE W/ C. CLYDE WHO TOLD ME THAT 7-1 WAS READY TO BE TESTED. HE SAID THAT HE WOULD NOT BE ABLE TO GET CLASS 2AB TODAY.

1330 - TESTED 2 LOCATIONS AT 7.1 WITH SATISFACTORY RESULTS.

1400 - AT EE.02 ITSI IS COMPACTING BACKFILL AT 5.0' BGS ON THE EAST SIDE OF THE EXCAVATION

1430 - TESTED 1 LOCATION AT EE02 AT 4 LF BGS WITH SATISFACTORY RESULTS. ITSI HAS STARTED PLACING BACKFILL ON THE WEST SIDE.

1500 - ITSI HAS PLACED BACKFILL TO APPROXIMATELY 4.0' BGS

1520 - TESTED 1 LOCATION AT THE WEST SIDE WITH SATISFACTORY RESULTS. C. CLYDE TOLD ME THAT ITSI HAD STARTED TO BACKFILL SITE 3324.

1540 1 CREWMAN IS SPREADING BACKFILL AT A DEPTH OF APPROXIMATELY 4.0' -

1555 - ITSI HAS SPREAD ANOTHER LIFT IN EE02. THE WON'T BE COMPACTING IT TODAY

1610 - ITSI HAS FINISHED SPREADING BACKFILL AT 3324

1615 - AGREED WITH C. CLYDE TO BE BACK AT THE SITE AT 730 TOMORROW.

1630 - LEFT SITE.

SUMMARY:

. JP TO RETURN TO SITE AT 730, AS AGREED W/ CLYDE

. BACKFILLING OF EE02 + 3324 TO CONTINUE

. JP TO GET PAPERWORK FROM J. HALLIDAY TO TAKE SAMPLES TO LAB

. QUANTITIES PLACED TODAY: ~ 100 CY IN EE02

~ 5 CY IN 3324

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV. Ft	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
	16	7.1 [EXC. BF]	0.0	9.668	118.7	#2	90.5	90	JP	NG
	17	7.1 " "	0.0	12.24	121.9	#2	93	90		
	18	3324 (EAST; EXC. BF]	-4.0	12.32	123.2	#2	94	85		
	~~20~~ 19	3324 (WEST; EXC. BF]	-4.0	14.4	118.1	#2	90	85		

SOIL TYPE		COC	%OM	MDD
#2	BACKFILL	572502	8	131
LABORATORY STANDARD:				

Cyme, Inc.

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San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

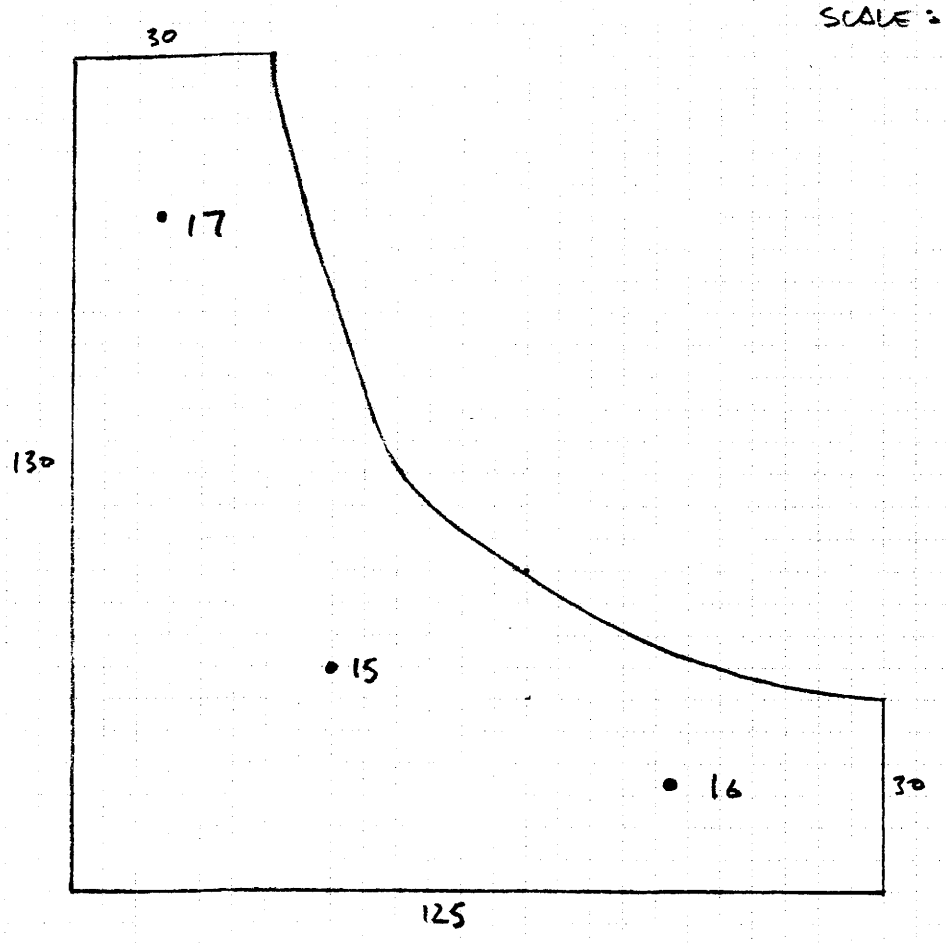
Project	Date	Page
307-1	12-20-00	

Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: PARCEL B REMEDIAL ACTION
Prepared by: JP
Date Prepared: 19 DEC 00
Checked by: —
Date Checked: —
Project Number: 307-1 **Page Number:** of

IR7-7-1

SCALE: 1" = 30'



N

AREA: ~ 9162 SF

DEPTH: ~ 1 LF (BACKFILL MATERIAL)

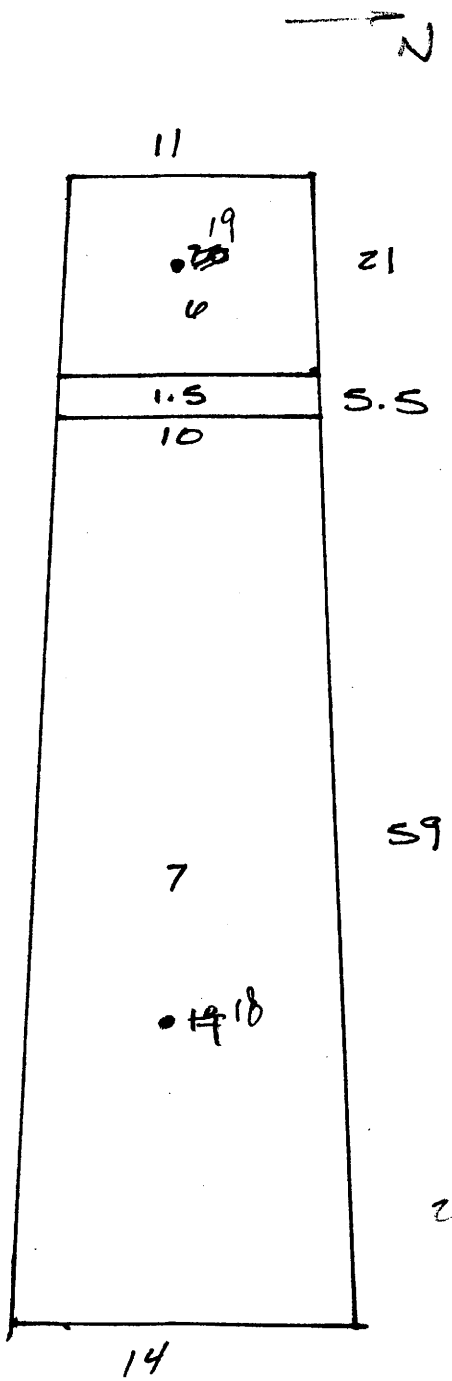
VOLUME = 9162 CF ~ 340 CY OF BACKFILL MATERIAL

DRAIN ROCK - PLACED TO APPROXIMATELY 1' BGS

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

By Chuck Clyde Date 12-17-00 Subject Backfill EE-02 Sheet No.____ of____

Chkd. By ____ Date _____ Proj. No. 00-160



$11 \times 21 \times 6 = 1386^{\square'}$

$5 \times 10 \times 1.5 \quad 75^{\square}$

$59 \times 7 \times 12 = 4956^{\square}$

$$\frac{4956^{\square} + 75^{\square} + 1386^{\square}}{27} = 237.7$$

20 DEC 00 - CY PLACED: ~ 96 CY

Recyclable and made from recycled paper.

Cyme, Inc.	FIELD DAILY REPORT		
1485 Bayshore Boulevard, Suite 459 San Francisco, California 94124-3002 Phone: (415) 468-3522 Fax: (415) 468-4715	Parcel B- Hunters Point Naval Shipyard San Francisco, CA		
	Project	Date:	Page
	307-1	12 21 00	1 of 5

AREAS OF ATTENTION: EE02 + IR10-3324

CONTRACTOR: ITSI, CHUCK CLYDE (925) 383-7604; 4 CREWMEN

EQUIPMENT WORKING: 1 J. DEERE 710D BACKHOE MOUNTED W/ SHEEPFOOT ROLLER; 1 WACKER; 1 J. DEERE 624H LOADER; 1 ROTATING BRUSH; 1 WATER TRUCK

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

745 - ARRIVE AT SITE. ITSI COMPACTING BACKFILL AT EE02.

800 - TEST 1 LOCATION AT SOUTH PORTION OF 3324 AT ~4' BGS WITH SATISFACTORY RESULTS. (#20).

835 - TEST 2 LOCATIONS AT EE02 (E+W) AT ~3' BGS WITH GOOD RESULTS (#21, 22)

845 - TEST 1 LOCATION AT SOUTH PORTION OF 3324 AT ~3' BGS WITH GOOD RESULTS (#23)

900 - TEST 1 LOCATION AT EE02 (E) AT 2' BGS WITH GOOD RESULTS (#24).

930 - TEST 1 LOCATION AT EE02 (W) AT 2.5' BGS WITH GOOD RESULTS (#25).

945 - MEET WITH STEVE AIOSA (IT) WHO IS SUBSTITUTING FOR J. HALLIDAY AND I GIVE HIM AN UPDATE ON EE02 + 3324. I ASK HIM TO FILL UP A COC FORM SO THAT I CAN TAKE SAMPLES OF THE BACKFILL MATERIAL TO THE LAB. HE DOES SO.

1000 - TAKE SAMPLES OF CLASS 2 AB + BACKFILL MATERIAL (4 + 5).

1015 - HAVE STEVE AIOSA FOLLOW ME TO 3324 WHERE I TAKE A TEST AT 2' BGS WITH GOOD RESULTS (#26)

1035 - TEST ONE LOCATION AT EE02 (W) AT ~ 1.75' BGS WITH GOOD RESULTS (#27)

1050 - TEST 2 LOCATIONS AT 3324 [SOUTH PART] AT 1' BGS. NEITHER PASSES. (#28, 29) MATERIAL MAY BE TOO DRY. REPORT RESULTS TO C. CLYDE.

1110 - TEST 1 LOCATION AT EE02 AT 1' BGS WITH GOOD RESULTS (#30)

1130 - RETEST BACKFILL AT 3324 AT 1' BGS. IT PASSES (#31)

1140 - ITSI SHUTS DOWN 3324 FOR TODAY.

1145 - ITSI STARTS PLACING TOP LIFT IN EE02.

1200 - 1340 ITSI HAVING BACKFILL BROUGHT TO SITE.

1340 - C. CLYDE TELLS ME THAT ITSI WON'T BE DOING ANY MORE COMPACTION TODAY.

1445 - LEFT SITE.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
	20.	10/3324 (S) [EXC., BF]	-4.0	13.96	118.2	#2	90%	85%	JT.	NG.
	21.	EE02 (E) " "	-3.0	12.53	120.3	#2	92%	85%		
	22.	EE02 (W) " "	-3.0	12.98	121.1	#2	92.5%	85%		
	23.	10/3324 (S) " "	-3.0	11.31	121.5	#2	92.5%	85%		
	24.	EE02 (E) " "	-2.0	10.01	124.5	#2	95%	95%		
	25.	EE02 (W) " "	-2.5	10.20	125.1	#2	95.5%	95%		
	26.	10/3324 (S) " "	-2.0	11.11	125.8	#2	96%	95%		
	27.	EE02 (W) " "	-1.75	11.01	125.7	#2	96%	95%		
	28.	10/3324 (S) " "	-1.0	3.641	126.1	#3	92.5%	95%		
	29.	10/3324 (S) " "	-1.0	4.021	126.0	#3	92.5%	95%		
	30.	EE02 " "	-1.0	9.758	126.5	#2	96%	95%		
	31.	10/3324 (S) " "	-1.0	6.235	130.0	#3	95%	95%		

SOIL TYPE	CoC	%OM	MDD
#2 BACKFILL	573302	8	131
#3 Class 2 AB	573302	6	136

LABORATORY STANDARD:

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

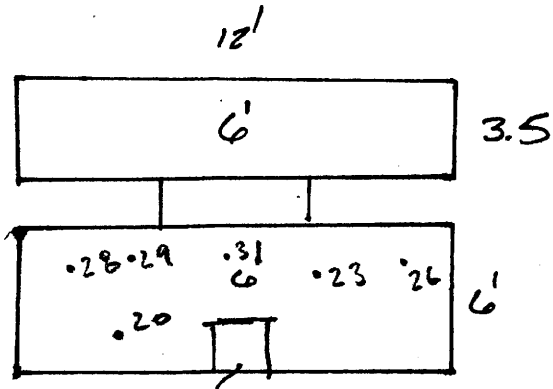
Project	Date	Page
307-1	21 12 2000	2 / 5

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

By Chuck Clyde Date 12-12-00 Subject Backfill - B3324 Sheet No. 3 of 5

Chkd. By ____ Date ____ Proj. No. 00-1100

N



$12 \times 6 \times 3.5 = 252^{\#}$

$6' \times 6' \times 12' = 432^{\#}$

$3' \times 3.5' \times 3.5' = 36.75$

$$\frac{252 + 432 - 36.75}{27} = \frac{647.25}{27} = 23.97 \text{ yrds}$$

23.97 cu yards

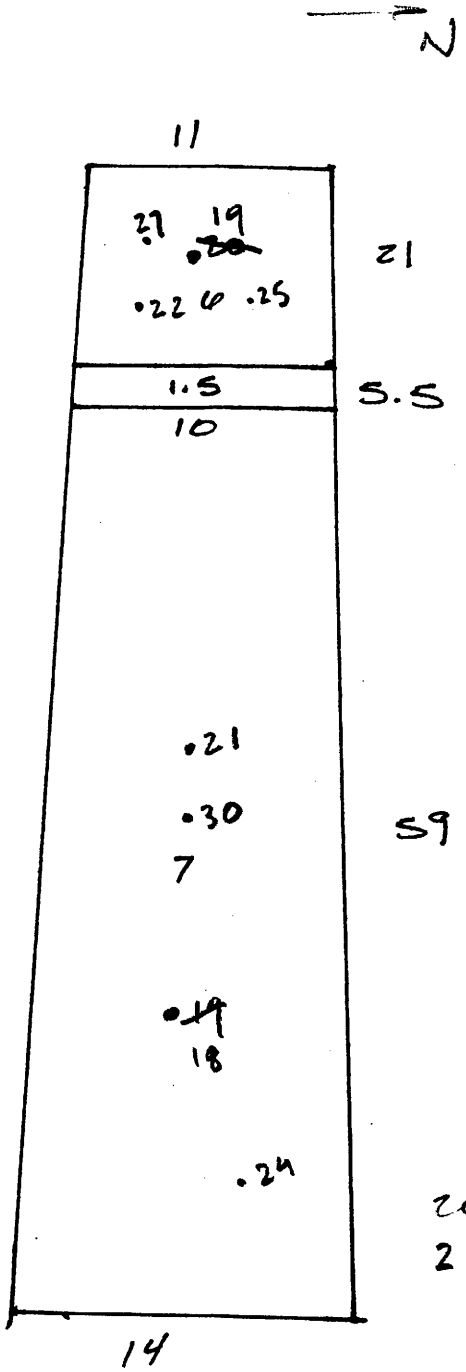
21 DEC 00 CY PLACED: ~11 CY BACKFILL
~3 CY (AB)

Recyclable and made from recycled paper.

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

By Chuck Clyde Date 12-17-00 Subject Backfill EE-02 Sheet No. 4 of 5

Chkd. By ____ Date ____ Proj. No. 00-160



11 x 21 x 6 = 1386 ft³

5 x 10 x 1.5 = 75 ft³

59 x 7 x 12 = 4956 ft³

$$\frac{4956^{ft} + 75^{ft} + 1386^{ft}}{27} = 237.7$$

20 DEC 00 - CY PLACED: ~ 96 CY (BACKFILL)

21 DEC 00 - CY PLACED: ~ 182 CY "

~ 42 CY (A.B)

Recyclable and made from recycled paper.

SUMMARY

- JP TO RETURN TO SITE ON WEDNESDAY, DECEMBER 27, WHEN BACKFILLING OPERATIONS WILL RESUME.
- SITE EE02 WAS BACKFILLED TO GROUND SURFACE. THIS FINAL LIFT REMAINS TO BE COMPACTED.
- SITE 10/3324 WAS BACKFILLED TO 1' BGS.
- TOOK 1 SAMPLE EACH OF CLASS 2AB + BACKFILL.
- QUANTITIES PLACED SO FAR (APPROXIMATELY):

10/3324 : ~10.7 CY BACKFILL (COMPACTED) ; ~2.6 CY CLASS 2AB (COMPACTED)

EE02 : { ~182 CY BACKFILL (COMPACTED) ; ~42 CY CLASS 2AB } (COMPACTED)

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	DEC 27, 2000	1 OF 7

AREAS OF ATTENTION: IR60-60.2 (60.2); EE02 (EE02); IR10-B3324 (3324)

CONTRACTOR: ITSI, CHUCK CLYDE (925) 383-7604; 3 CREWMEN [IR24-24-7 (24-7)]

EQUIPMENT WORKING: 1 J. DEERE 710D BACKHOE MOUNTED W/ SHEEPFOOT ROLLER; 1 J. DEERE 624H LOADER, 1 WATER TRUCK, 1 BOMAG [15W-40] ROLLER COMPACTOR

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

815 ARRIVED AT SITE. ITSI COMPACTING BACKFILL AT 60.2.

830 ITSI HAS PLACED AND COMPACTED BACKFILL TO ~4' BGS. TESTED 1 LOCATION WITH GOOD RESULTS. (#32)

945 ITSI HAS PLACED + COMPACTED BACKFILL TO ~ 3' BGS. TESTED 1 LOCATION W/ SATISFACTORY RESULTS (#33)

1030 ITSI HAS PLACED + COMPACTED BACKFILL TO ~ 2' BGS. TESTED WITH GOOD RESULTS (#34)

1115 ITSI HAS PLACED + COMPACTED BACKFILL TO ~ 1' BGS. TESTED WITH GOOD RESULTS (#35)

1200 ITSI HAS PLACED ~ 1' LIFT OF CLASS 2 AB. IT HAS NOT BEEN COMPACTED BECAUSE ROLLER HAS NOT BEEN DELIVERED TO THE SITE. ITSI IS ALSO WAITING FOR DRAIN ROCK TO BE DELIVERED TO THE SITE TO PLACE IN 24-7 WHICH HAS SOME WATER AT THE BOTTOM.

1200 - 1230 - ITSI CREWMEN TAKING LUNCH

1245. ITSI HAS HAD ROLLER COMPACTOR DELIVERED TO SITE AND HAS COMPACTED THE TOP LIFT FOR EE02 - TESTED 1 LOCATION WITH GOOD RESULTS. (#36)

1300. MORE DRAIN ROCK WAS BROUGHT TO THE SITE.

1320 - ITSI IS SETTING UP TO BACKFILL 24-7.

1345 - TOOK A SAMPLE OF THE DRAIN ROCK - FOUND OUT THAT IT IS FROM PILARCITOS OF WHICH WE HAVE NO ANALYTICAL DATA.

1400 ITSI HAS PLACED DRAIN ROCK TO ~4' BGS. SNOW FENCE HAS BEEN PLACED AT THE BOTTOM, AS OBSERVED IN ALL SITES SO FAR. FILTER FABRIC HAS BEEN PLACED OVER DRAIN ROCK.

1425 ITSI HAS PLACED BACKFILL TO A DEPTH OF ~3' BGS. TOOK 1 TEST AT ONE LOCATION WHICH DID NOT MEET THE MINIMUM STANDARD. ASKED ITSI TO REWORK THE LIFT. (#37)

1440 RETESTED THE LIFT WITH SATISFACTORY RESULTS (#38)

1510 ITSI PLACED ANOTHER 1' LIFT TO 2' BGS. TESTED WITH SATISFACTORY RESULTS. (39)

1530 J. HALLIDAY (IT) SIGNED COC # 572637 CORRESPONDING TO 1½" DRAIN ROCK - PILARCITOS.

1615. LEFT SITE

SUMMARY

EE02 - COMPLETED

60.2 - TOP LIFT REMAINS TO BE COMPACTED

24.7 - BACKFILLED + COMPACTED TO 2' BGS

TOOK SAMPLE OF 1½" DRAIN ROCK (COC # 572637)

TOMORROW:

JP. SETTEPANI TO RETURN TO SITE AT 7:30A.

ITSI TO COMPLETE BACKFILLING OF 60.2, 24.7, 3324.

MATERIAL PLACED TODAY:

24-7 :	7 CY	DRAIN ROCK
	14 CY	BACKFILL
60.2 :	65 CY	BACKFILL
	13 CY	CLASS 2 AB
EE02 :	Ø	

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
122700	32	60.2 (EXC, BF)	-4.0	11.80	117.4	#2	95%	85%	JP	NG
	33	SAME	-3.0	12.42	117.1	#2	96%	85%	JP	NG
	34	SAME	-2.0	13.99	124.1	#2	95%	95%		
	35	SAME	-1.0	11.73	126.1	#2	96%	95%		
	36	EE02 [EXC., BF]	0.0	7.713	132.9	#3	91.5%	95%		
	37	IR24-24.7 [EXC.; BF]	-3.0	14.25	108.8	#2	83%	85%		
	38	IR24-24.7 [EXC.; BF]	-3.0	14.35	112.5	#2	86%	85%		
	39	IR 24-24.7 [EXC.; BF]	-2.0	9.197	127.6	#2	97.5%	95%		

SOIL TYPE	CoC	%OM	MDD
#2 BACKFILL	573302	8	131
#3 CLASS 2 AB	573302	6	136

LABORATORY STANDARD:

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

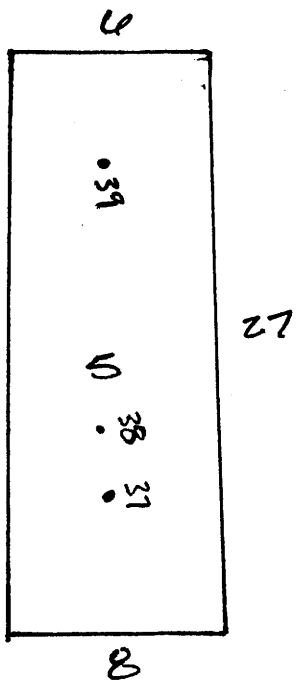
Project	Date	Page
307-1	122700	3 of 7

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

By [illegible] Date 12.12.00 Subject Backfill - ~~B3524~~ 24-7 Sheet No. 4 of 7

Chkd. By ____ Date ____ Proj. No. 00-160

N →



$$27 \times 7 \times 5 = \frac{945^{\square'}}{27} = \underline{\underline{35\text{yds}}}$$

12/27/00 YARDAGE PACED:

DRAINROCK ~ 7 CY

BACK FILL ~ 14 CY

Recyclable and made from recycled paper.

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

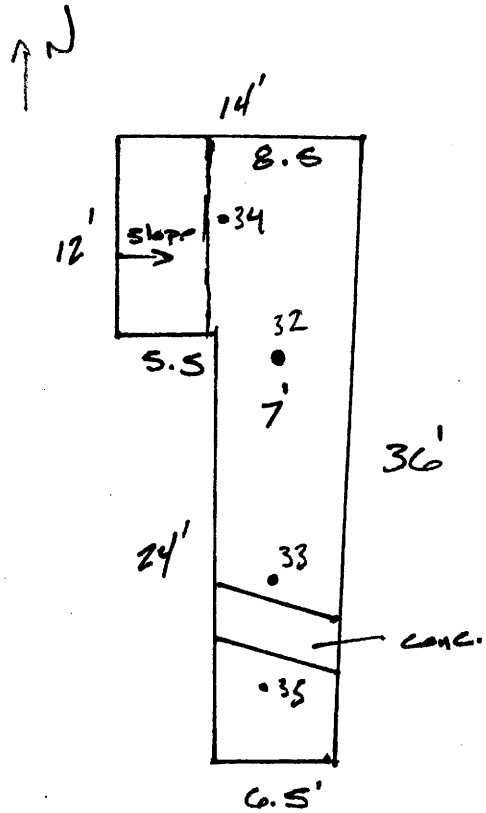
By Chuck Clyde Date 12-12-00 Subject Backfill Ex ~~27-7~~ 60-2 Sheet No. 5 of 7

Chkd. By ____ Date 12-12-00 Proj. No. 00-160

Excavation 60-2

$$\frac{12 \times 5.5 \times 7}{2} = 231^{\square'}$$

$$7.5 \times 36 \times 7 = 1890^{\square}$$



conc. $2.5 \times 2.5 \times 6.5 = 40.63^{\square'}$

$$\frac{231 + 1890 - 40.63}{27} = \frac{2080.37}{27} = \underline{\underline{77 \text{ yds}}}$$

12/27/00 - YARDAGE PLACED:

CLASS 2AB ≈ 13 CY

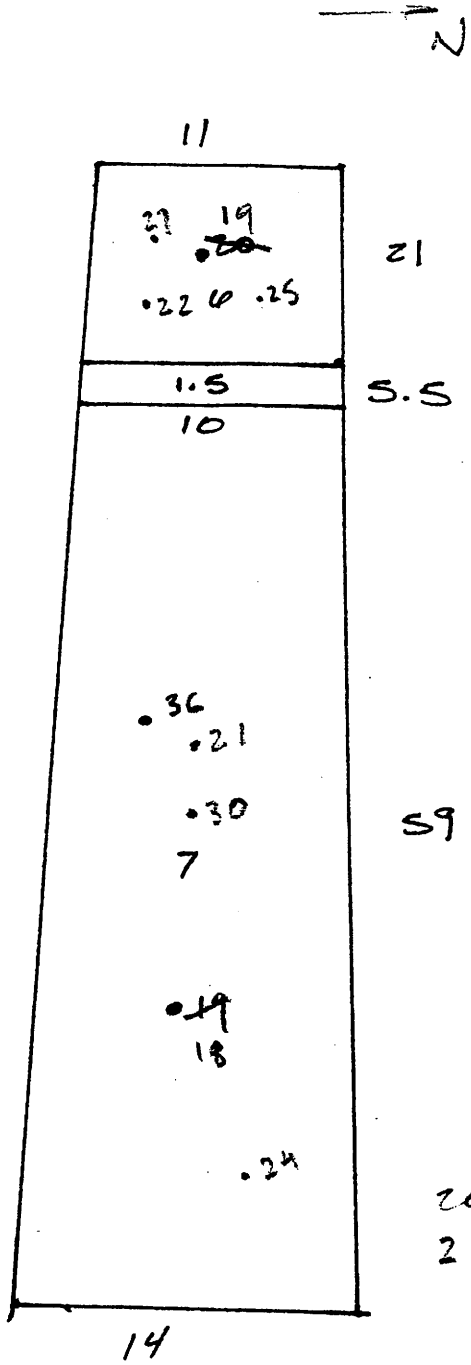
BACKFILL ≈ 65 CY

Recyclable and made from recycled paper.

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

By Chuck Clyde Date 12-17-00 Subject Backfill EE-02 Sheet No. 6 of 7

Chkd. By ____ Date ____ Proj. No. 00-160



$11 \times 21 \times 6 = 1386^{\square'}$

$5 \times 10 \times 1.5 \quad 75^{\square}$

$59 \times 7 \times 12 = 4956^{\square}$

$$\frac{4956^{\square} + 75^{\square} + 1386^{\square}}{27} = 237.7$$

20 DEC 00 - CY PLACED : ~ 96 CY (BACKFILL)

21 DEC 00 - CY PLACED : ~ 182 CY "

~ 42 CY (A.B)

Recyclable and made from recycled paper.

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	DEC 28, 2000	1 OF 6

AREAS OF ATTENTION: IR 10-B 3324 (3324); IR60-60-2 (60-2); IR24-24-7 (24-7)

CONTRACTOR: ITSI; CHUCK CLYDE (925) 383-7604; 1 CREWMAN

EQUIPMENT WORKING: 1 J. DEERE 624H LOADER; 1 WACKER; 1 WATER TANK; 1 ROTATING BRUSH; 1 BOMAG [15W-40] ROLLER COMPACTOR

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

730 - ARRIVED AT SITE AS AGREED W/ C. CLYDE YESTERDAY - ITSI HAS BACKFILLED NORTH SIDE OF 3324 TO ~3' BGS AT WEST SIDE AND TO ~3.5' BGS AT EAST SIDE. TOOK 1 TEST AT EACH LOCATION WITH GOOD RESULTS. (#40, 41)

750 - ITSI IS DOING DUST CONTROL. C. CLYDE INFORMS ME THAT THEY EXPECT CLASS 2AB TO BE DELIVERED LATER TODAY

830 - ITSI HAS PLACED ANOTHER LIFT. TEST ONE LOCATION WITH GOOD RESULTS. ITSI PROCEEDS TO PLACE ANOTHER LIFT. (#42).

920 - ITSI HAS PLACED A 6" LIFT - I AM INFORMED THAT CLASS 2AB WILL BE PLACED ON THE TOP 1'6". TEST 1 LOCATION WITH GOOD RESULTS. (#43).

1000. ITSI PLACING 1 LIFT AT 24-7.

1045. TESTED ONE LOCATION AT 24-7 AT 1'0 BGS. IT PASSED (#44)

1225. CLASS 2AB FINALLY ARRIVED AT SITE; ITSI STARTED PLACING TOP LIFT IN 24-7

1230 I WAS APPROACHED BY DON TILLERY (IT SUPERINTENDENT FOR DO 91 - PRESENT CONTRACT IS WITH DO. 109) ABOUT TESTING COMPACTION OF BACKFILL AT A SMALL EXCAVATION IN PARCEL E, WHICH IS THE DO 91 PROJECT. I REMINDED HIM THAT OUR CONTRACT ONLY COVERS DO 109. WE VERIFIED IT BY GOING THROUGH THE DOCUMENTS. DON TILLERY SAID THAT HE WOULD GET BACK TO ME ON THAT.

1300 DON TILLERY TOLD ME THAT HE HAD SPOKEN W/ ANITA [MALAHOWSKI] WHO SAID THAT I COULD CHARGE THE DO 91 TESTS UNDER DO 109 UNDER THE COMPACTION TESTING (LINE ITEM # 33200103)

AND THAT I MAKE A NOTE OF IT.

1320 ITSI HAS FINISHED COMPACTING THE TOP LIFT AT 24.7. TESTED 1 LOCATION W/ GOOD RESULTS. (#45)

1350. CALLED BILLY LIN (CYME) TO INFORM HIM OF DON TILLERY'S REQUEST. HE SAID OK. [SEE SEPARATE REPORT FOR THOSE TESTS]

1405. ITSI HAS NOT RECEIVED MORE CLASS 2 AB, YET.

1430. VISITED SITE AT BLDG 302 W/ D. BRENNAN (LT).

1510. ITSI HAS FINISHED COMPACTING THE TOP LIFT OF 60.2, PLACED YESTERDAY. TESTED 1 LOCATION WITH GOOD RESULTS. (#46)

1535. STOPPED BY BLDG 302 - IT HAS PLACED + COMPACTED ~ 1' OF PG+E SPEC. SAND. MEASURED DRY DENSITY + MOISTURE CONTENT AT ONE LOCATION.

1550 RETURNED TO TRAILER TO LOCATE APPROPRIATE DATA FOR SAND AT BLDG 302. AGREED W/ D. TILLERY TO RECORD DATA UNTIL A VALUE FOR MAXIMUM DRY DENSITY IS FOUND. FOR NOW, I WILL ASSUME A MDD VALUE OF 125 PCF.

1645 LEFT SITE

SUMMARY

ITSI HAS FINISHED BACKFILLING ALL EXCAVATIONS RELEASED TO THEM W/ THE EXCEPTION OF 3324 THAT WILL BE COMPLETED WHEN MORE EXCAVATIONS ARE RELEASED.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
12/28/00	40	3324 [NORTH; EXC; BF]	-3.5	10.56	116.9	#2	89	85	JP	NG
	41	SAME	-3.0	11.34	120.3	#2	92	85		
	42	SAME	-2.0	11.09	125.5	#2	96	95		
	43	SAME	-1.5	9.104	126.3	#2	96.5	95		
	44	24-7	-1.0	9.468	127.0	#2	97	95		
	45	24-7	0.0	4.094	129.5	#3	95	95		

SOIL TYPE		COC #	%OM	MDD
#2	BACKFILL	573302	8	131
#3	CLASS 2AB	573302	6	136

LABORATORY STANDARD:

Cyme, Inc.
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	12/28/00	1 of

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

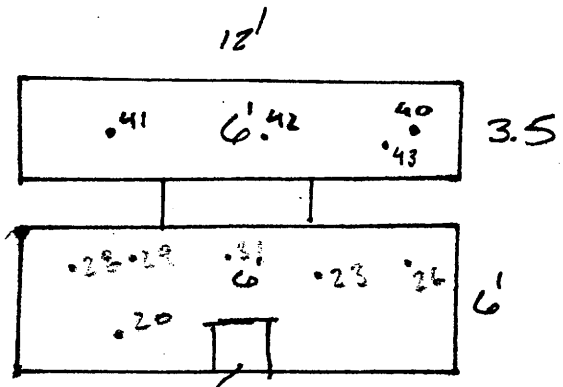
By Chuck Clyde Date 12-12-00 Subject Backfill - B3324 Sheet No. 3 of 6

Chkd. By ____ Date ____ Proj. No. 60-160

N

$12 \times 6 \times 3.5 = 252^{\#}$

$6' \times 6' \times 12' = 432^{\#}$



$3' \times 3.5' \times 3.5' = 36.75$

$$\frac{252 + 432 - 36.75}{27} = \frac{647.25}{27} = 23.97 \text{ yrds}$$

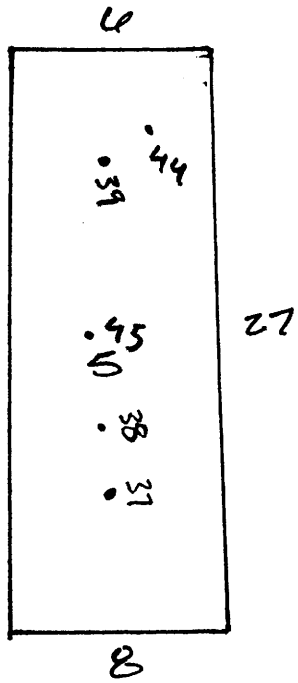
23.97 cu yards

21 DECON CY PLACED: ~11 CY BACKFILL
~3 CY (AS)

28 DECON CY PLACED: ~7 CY BACKFILL

Recyclable and made from recycled paper.

N



$27 \times 7 \times 5 = \frac{945^{\square'}}{27} = \underline{\underline{35 \text{ yds}}}$

12/27/00 YARDAGE PLACED:

DRAINROCK ~ 7 CY

BACK FILL ~ 14 CY

12/28/00 YARDAGE PLACED:

BACK FILL: ~ 7 CY

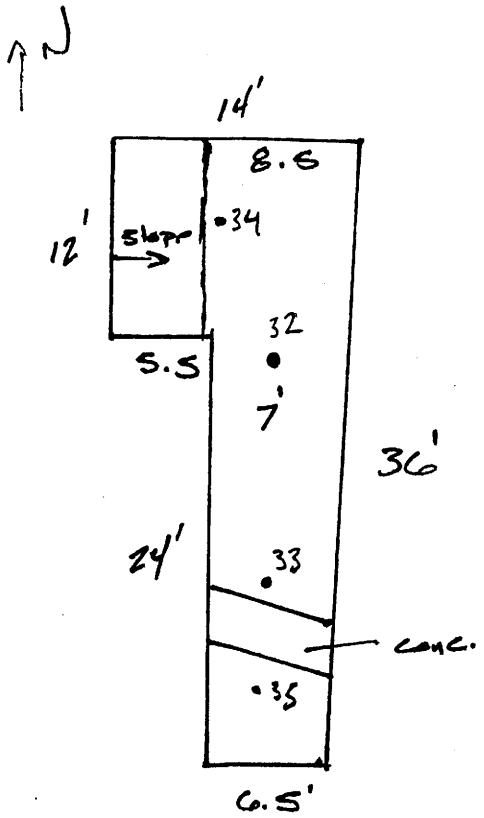
CLASS 2AB: ~ 7 CY

Recyclable and made from recycled paper.

Excavation 60-2

$$\frac{12 \times 5.5 \times 7}{2} = 231^{\square'}$$

$$7.5 \times 360 \times 7 = 1890^{\square}$$



conc. $2.5 \times 2.5 \times 6.5 = 40.63^{\square'}$

$$\frac{231 + 1890 - 40.63}{27} = \frac{2080.37}{27} = \underline{\underline{77 \text{ yrds}}}$$

12/27/00 - YARDAGE PLACED:

CLASS 2AB ≈ 13 CY

BACKFILL ≈ 65 CY

Recyclable and made from recycled paper.

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	01/30/01	1 of 3

AREAS OF ATTENTION: 18.2 E ; TRENCH E OF BLDG 130

CONTRACTOR: ITSI - CHUCK CLYDE (925)383-7604, 3 CREWMAN

EQUIPMENT WORKING: 1 J.DEERE 310 BACKHOE EQUIPPED W/ VIBRATING PLATE ; 1 J DEERE 624H LOADER ; 1 BOMAG ROLLER COMPACTOR; 1 ROTATING BRUSH.

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: K. STONESTREET ; 012901

855 ARRIVE AT SITE. ITSI IN IR 18.

910 TEST ONE LOCATION AT 18-2E AT 4' BGS W/ GOOD RESULTS (46). ITSI HAS PLACED SNOW FENCE AT BOTTOM OF EXCAVATION. BACKFILL HAS BEEN PLACED W/ LOADER + ROLLER COMPACTOR.

10:00 ITSI CONTINUES PLACING MATERIAL AT 18-2 + COMPACTING IT W/ VIBRATING PLATE. CREW MEMBER SAYS THAT ROLLER HAD GOT STUCK A FEW TIMES.

1020. NO WORK AT TRENCH EAST OF BLDG. 130.

1030-1130. ITSI CONTINUES TO PLACE BACKFILL IN 1' THICK LIFTS IN 18-1

1200 - WORK HAS STOPPED AT 18-2(E). FOR NOW.

1255 - WORK HAS RESUMED AT 18-2(E).

1330 - TESTED 1 LOCATION AT 4' BGS AT 18.2 (E) W/ GOOD RESULTS (47).

1400 - TESTED 1 LOCATION AT 3' BGS AT 18.2 (E) W/ GOOD RESULTS (48)

1500 - TESTED 1 LOCATION AT 2' BGS AT 18.2 (E) W/ GOOD RESULTS (49)

1520 - J. DEERE 120 EXCAVATOR BROUGHT TO IR 18-18.2 (E).

1550 - TESTED 1 LOCATION AT 1' BGS AT 18.2 (E) W/ GOOD RESULTS (50).

1615 - LEFT SITE.

SUMMARY -

18.2 BACKFILLED TO 1' BGS. ITSI TO COMPLETE TOMORROW.

CYME TO RETURN TO SITE TOMORROW AT 9:00A.

TOTAL VOLUME PLACED TODAY: ~249 CY OF BACKFILL (#5)

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
123001	46	18.2(E)	-4.0	11.48	125.5	#5	98.8	85	JP	NG
123001	47	18.2(E)	-4.0	10.51	126	#5	99	85	JP	NG
123001	48	18.2 (E)	-3.0	9.765	125.6	#5	98.8	85	JP	NG
123001	49	18.2 (E)	-2.0	9.985	125.8	#5	99	95	JP	NG
123001	50	18.2 (E)	-1.0	8.435	125.7	#5	99	95	JP	NG

SOIL TYPE		COC	%OM	MDD
#4	CLASS 2AB	572632	8	134
#5	BACKFILL	572632	9	127

LABORATORY STANDARD:

Cyme, Inc.
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	12/30/01	2 of 3

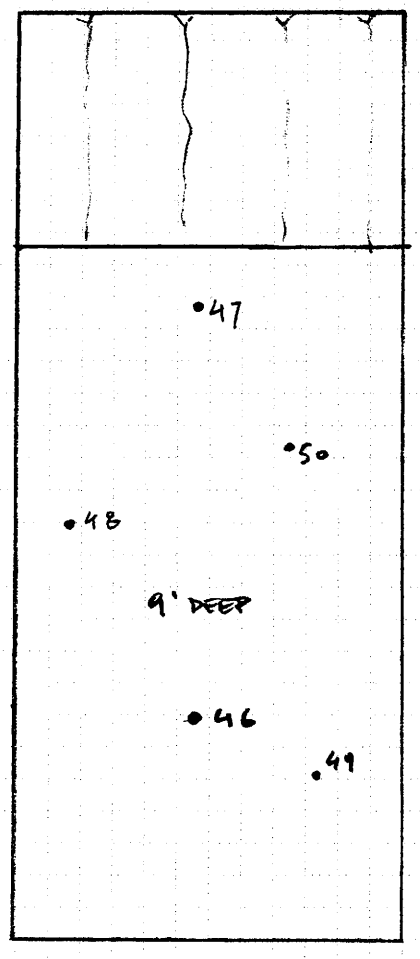
Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: HUNTERS PT. PARCEL B REMEDIATION
Prepared by: JP.
Date Prepared: 01-30-01
Checked by: NA
Date Checked: NA
Project Number: 307-1 **Page Number:** 3 of 3

SITE IR 18-18-2 (EAST)

N

SCALE: 1" ~ 10'



VOLUME: BACK FILL: 6720 CF = 24.9 CY
CLASS 2AB: 963 CF 35 CY
TOTAL: 284 CY

Cyme, Inc.

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	01/31/01	1 OF 5

AREAS OF ATTENTION: 18.2 E + N; 24-6 (SITE EAST OF BLDG 130)

CONTRACTOR: ITSI - CHUCK CLYDE (925) 383-7604, 3 CREWMEN

EQUIPMENT WORKING: 1 J. DEERE BACKHOE W/ VIBRA-PLATE; 1 J. DEERE 624H LOADER; 1 BOMAG ROLLER COMPACTOR, 1 ROTATING BRUSH; 1 J. DEERE 120 EXCAVATOR

CYME REPRESENTATIVE: J.P. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

9:15 - ARRIVED AT SITE - ITSI HAS STARTED PLACING BACKFILL IN 18-2(N). SITE 18.2(E) HAS NOT BEEN COMPLETELY BACKFILLED FOR LACK OF ENOUGH AB.

9:25 - ITSI SPREADING DRAIN ROCK AT 24-6.

9:45 - ITSI CONTINUES BACKFILLING 18-2 N.

9:50. ASKED JD LENZEN IF MORE SOIL SAMPLES NEED TO BE TAKEN TO LAB - HE SAID "NO."

10:00 - ITSI HAS STOPPED WORK AT 24-6

10:45 - ITSI HAS STOPPED WORK AT 18.2 (N) FOR LACK OF MATERIAL. SITE HAS BEEN BACKFILLED TO ~6' BGS

11:15 - ITSI DOING GENERAL WORK AT 18-2

11:20 - ITSI CONTINUES SPREADING DRAIN ROCK AT 24-6

1250. ITSI COMPACTING AB AT 18.2 (E)

1300 - ITSI HAS PLACED FILTER FABRIC OVER DRAINROCK AT 24-6. [NOTE: SNOW FENCE HAS BEEN PLACED BELOW DRAIN ROCK]

1330 - TESTED 1 LOCATION AT 0' BGS AT 18.2 E WITH SATISFACTORY RESULTS. (51)

1400 - ITSI STARTED BACKFILLING 24-6.

1530 - ITSI CONTINUES BACKFILLING 24-6

1630 - TESTED 1 LOCATION AT 4' BGS AT 24.6 W/ GOOD RESULTS (52)

1700 - LEFT SITE -

SUMMARY

ITSI COMPLETED 18.2 E AND STARTED 18.2 N + 24.6.

ITSI WILL "CLEAN UP" 18.2 WHEN 18.2 N IS COMPLETED.

CYME WILL BE BACK TOMORROW AT 9:00.

YARDAGE: 18.2 N: Ø CY - CLASS 2 AB; 54 CY - BACKFILL; Ø CY DRAINROCK.
18.2 E: 35 CY - CLASS 2 AB; Ø CY - BACKFILL; Ø CY - DRAINROCK.
24.6: Ø CY - CLASS 2 AB; 95 CY - BACKFILL; ~400 CY - DRAINROCK

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
013101	51	18-2E	0.0	6.5%	131.8	#4	98.4	95	JP	NG
013101	52	24-6	-4.0	7.548%	128.5	#5	101.2	85	JP	NG

SOIL TYPE	coc	%OM	MDD
#4 - Class 2AB	512632	8	134
#5 - Backfill	512632	8	127
LABORATORY STANDARD:			

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	01 31 01	2 of 5

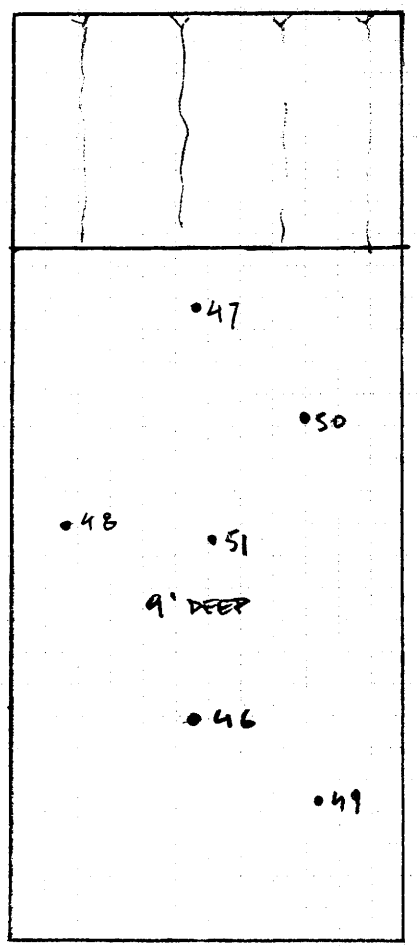
Cyme, Inc.
Professional Consulting Engineers
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: HUNTERS PT. PARCEL B REMEDIATION
Prepared by: JP.
Date Prepared: 01-30-01
Checked by: NA
Date Checked: NA
Project Number: 307-1 **Page Number:** 3 of 35

SITE IR 18-18-2 (EAST)

N ↑

SCALE:
1" ~ 10'

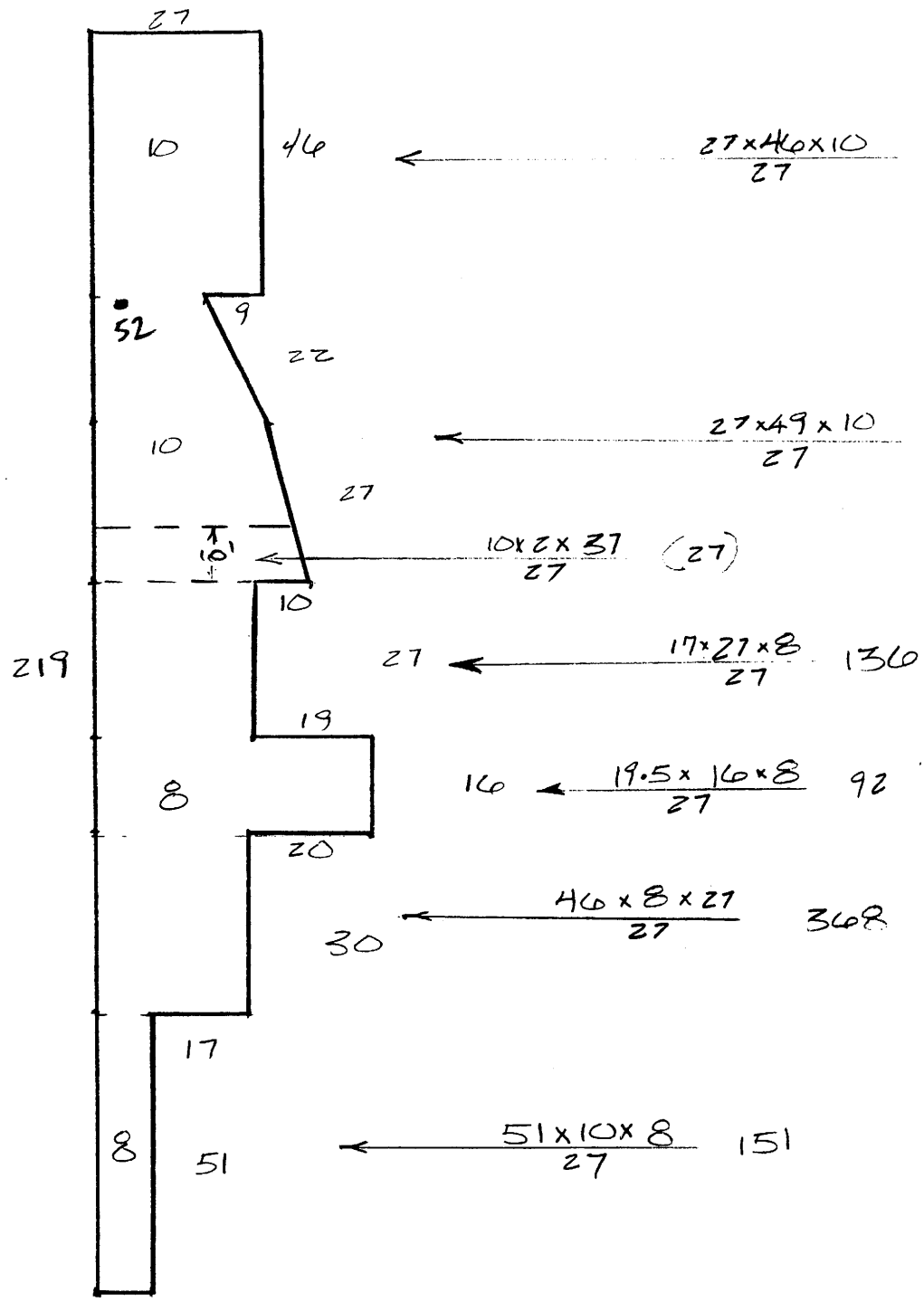


VOLUME: BACK FILL: 6720 CF = 24.9 CY
CLASS 2AB: 963 CF 35 CY
TOTAL: 284 CY

Innovative Technical Solutions, Inc. www.itsi.com

By C. Clyde Date _____ Subject EXCAVATION 201-6 Sheet No. 4 of 5

Chkd. By _____ Date _____ Project No. _____



$\frac{27 \times 46 \times 10}{27}$ 460 cuyrds

$\frac{27 \times 49 \times 10}{27}$ 490 cuyrds

$\frac{10 \times 2 \times 27}{27}$ (27)

$\frac{17 \times 27 \times 8}{27}$ 136

$\frac{19.5 \times 16 \times 8}{27}$ 92

$\frac{46 \times 8 \times 27}{27}$ 368

$\frac{51 \times 10 \times 8}{27}$ 151

460 + 490 − 27 + 136 + 92 + 368 + 151 = 1670 cuyrds

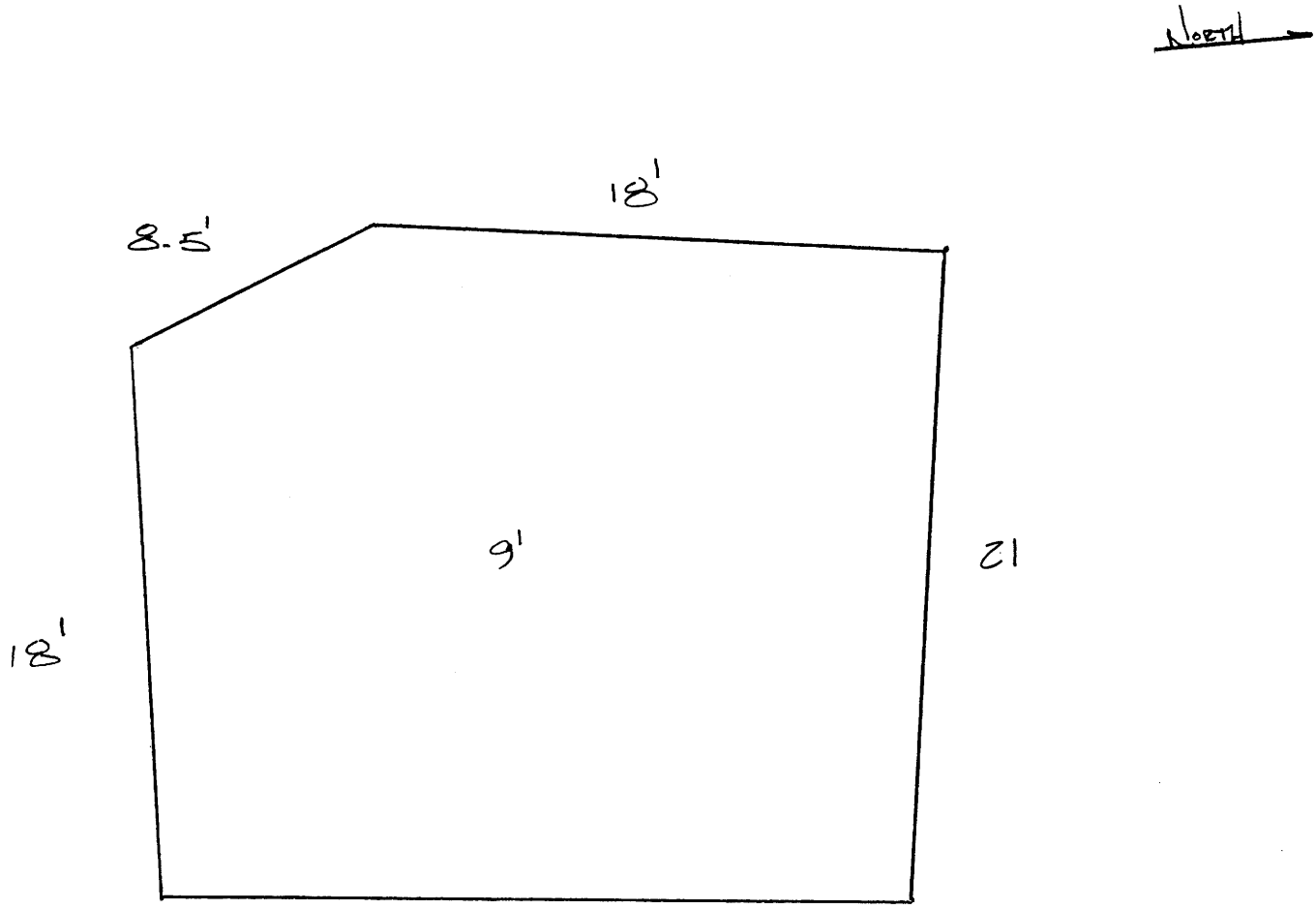
PLACED	BACKFILL	DRAINROCK	CLASS 2 AB
013101	95	~380	∅
020101		∅	

Innovative Technical Solutions, Inc. www.itsi.com

By C CLYDE Date 01-22-01 Subject EXCAVATION 18-2N Sheet No. 5 of 5

Chkd. By _____ Date _____ Project No. 00-160

$$19.5' \times 25' \times 9' = \frac{4387.5^{\square'}}{27} = 162.5 \text{ yrds}$$



PLACED	BACKFILL	CLASS 2 AB
01.31.01 -	54 cy	∅ (NO TESTS - OBSERVED)

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/01/01	1 of 4

AREAS OF ATTENTION: 24-6; 24-2/3114

CONTRACTOR: ITSI, CHUCK CLYDE (925) 383-7604; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/ VIBRAPLATE; 1 JD 624H LOADER; 1 SOMAG [illegible] COMPACTOR; 1 JD 120 EXCAVATOR; 1 ROTATING BRUSH.

CYME REPRESENTATIVE: JP. SETTEPANI **REQUESTED BY:** AS REQ'D BY PROJECT.

900 - ARRIVED AT SITE. ITSI HAS PLACED ~2' OF BACKFILL IN 24-6. I WAS TOLD THAT WORK TODAY WOULD CONSIST OF [illegible] 24-2/3114.

915 - TESTED 2 LOCATIONS AT 24-6 AT 2' BGS + 3' BGS WITH GOOD RESULTS. (53, 54)

930 - ITSI HAS PLACED SNOW FENCE ON BOTTOM OF 24-2 AND HAS STARTED TO PLACE [illegible].

[illegible] ITSI CONTINUES BACKFILLING 24-6

1150 - ITSI HAS PLACED [illegible] OF BOTTOM LAYER 3114 AND IS [illegible] CONTROL [illegible] LINE [illegible] IN 24-2/3114.

1250 - TESTED 1 LOCATION AT 24-6 AT 1' BGS WITH GOOD RESULTS (55).

1415 - TESTED 2 LOCATIONS AT 24-2/3114 AT 3' BGS + 2' BGS WITH GOOD RESULTS (56, 57). ITSI WILL FINISH BACKFILLING THIS EXCAVATION NEXT WEEK BECAUSE NO MORE MATERIAL IS AVAILABLE

1430 - ITSI IS SPREADING CLASS 2AB IN 24-5

1510 - TESTED 1 LOCATION AT 24-6 AT 0.0 BGS WITH GOOD RESULTS (58)

LEFT SITE AT 15:45.

SUMMARY -

- ITSI FINISHED 24-6 + STARTED 24-2/3312. THERE WAS NO WORK AT IR18 BESIDES STOCKPILING
- CYME WILL BE BACK MONDAY WHEN WORK RESUMES AT SITES 24-2/3114 + 18-2E.

YARDAGE - (TODAY)

IR 24-24-6 - Ø CY DRAINROCK; 155 CY BACKFILL; 95 CY CLASS 2AB

IR 24-24-2/B3114 - Ø CY DRAINROCK; 111 CY BACKFILL; Ø CY CLASS 2AB.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
020101	53	24-6 (EXC) (BP)	-2.0	9.623	127.7	#5	100%	95	JP	NG
	54	24-6 (EXC) (BP)	-3.0	8.702	124.2	#5	98%	85	JP	NG
	55	24-6 (EXC) (BF)	-1.0	8.28	130.2	#5	102%	95	JP	NG
	56	24-2/3114 (EXC, BF)	-3.0	8.009	125.4	#5	98.7%	85	JP	NG
	57	24-2/3114 (EXC, BF)	-2.0	8.014	130.5	#5	103%	95	JP	NG
	58	24-6 (EXC) (BF)	0.0	3.789	129.4	#4	96.6%	95	JP	NG

SOIL TYPE		COC #	%OM	MDD
#4	CLASS 2 AB	572632	8	134
#5	BACKFILL	572632	9	127

LABORATORY STANDARD: ASTM D-698

Cyme, Inc.
1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	02 01 01	2 of 4

Innovative Technical Solutions, Inc. www.itsi.com

By C. Clyde Date 01-22-01 Subject EXCAVATION 24-2/B3114 Sheet No. 3 of 4

Chkd. By Date Project No. 00-160

NORTH

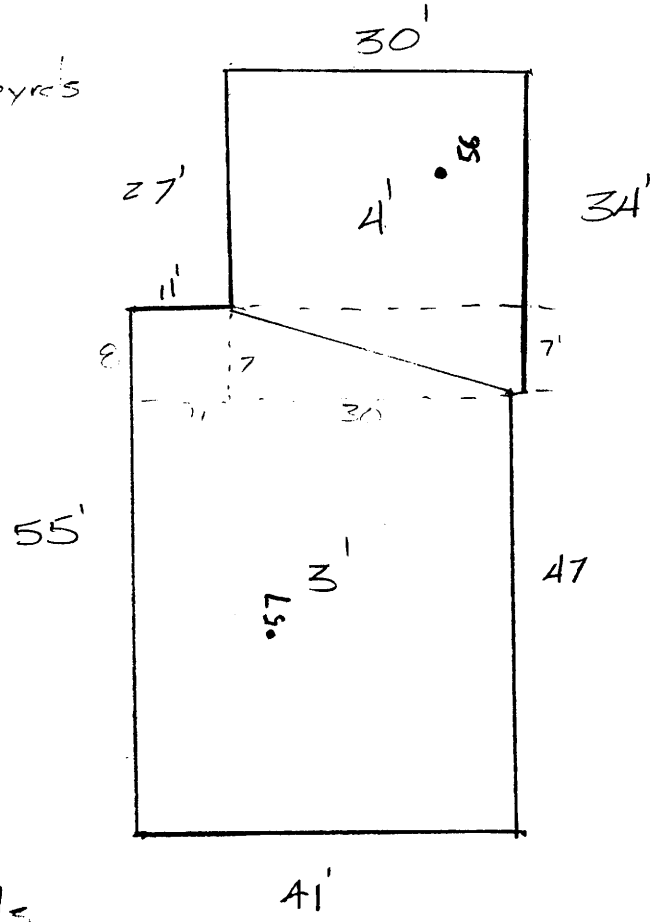
$\frac{27 \times 30 \times 4}{27} = 120$ yrds

$\frac{7 \times 30 \times 4}{2} = \frac{420}{27} = 16$ yrds

$\frac{11 \times 7.5 \times 3}{27} = 9$ yrds

$\frac{7 \times 30 \times 3}{2} = \frac{315}{27} = 12$

$\frac{47 \times 41 \times 3}{27} = 214$ yrds



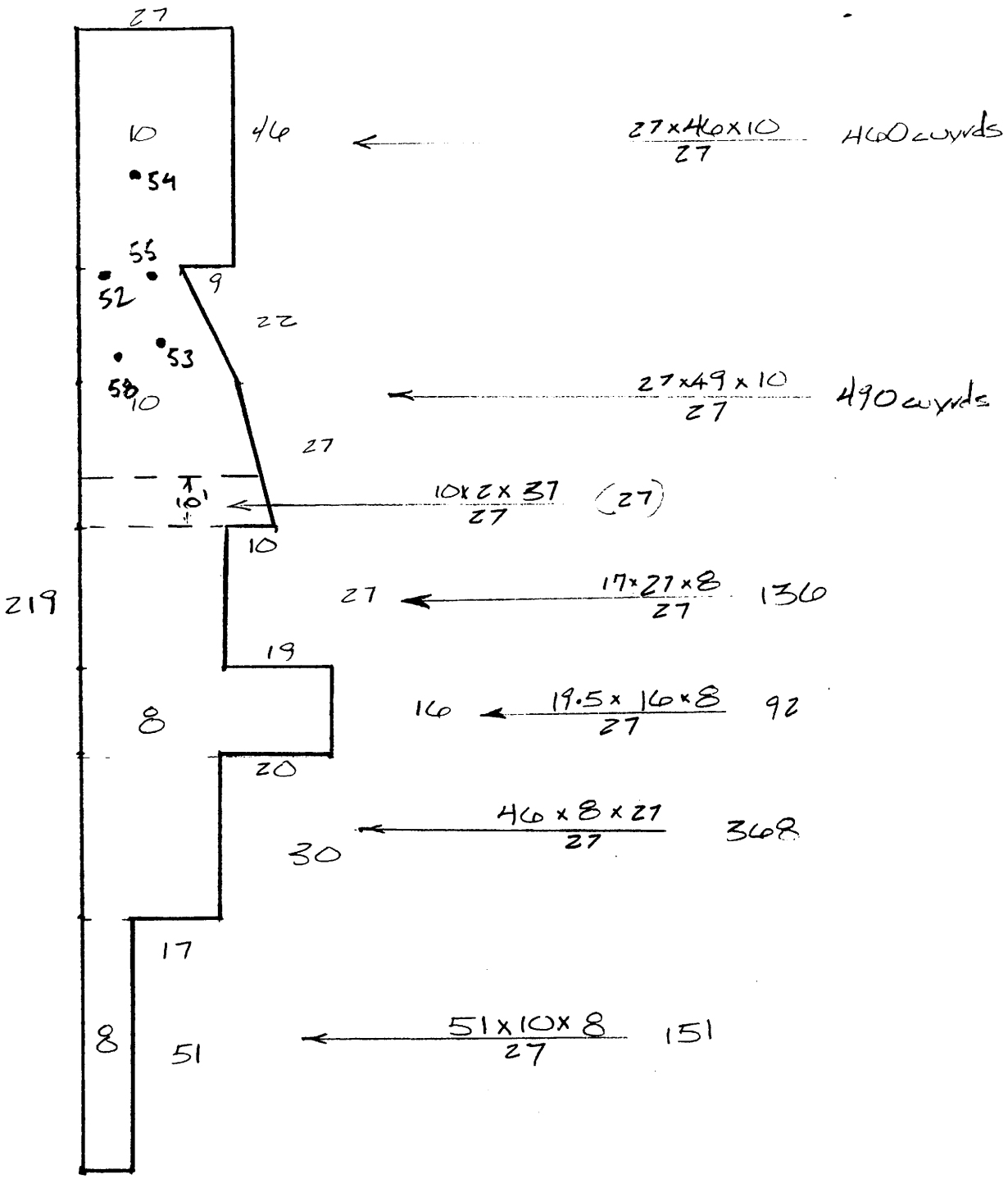
TOTAL = 371 cuyrds

PLACED	DRAIN ROCK	BACKFILL	AB
02 01 01	∅	~111 CY	∅

Innovative Technical Solutions, Inc. www.itsi.com

By C. Clyde Date Subject EXCAVATION 2d-6 Sheet No. 4 of 5

Chkd. By Date Project No.



460 + 490 − 27 + 136 + 92 + 368 + 151 = 1670 cuyrds

PLACED	BACKFILL	DRSINROCK	CLASS 2 & B
013101	95	~380	∅
020101	285	∅	95

Cyme, Inc.	FIELD DAILY REPORT		
1485 Bayshore Boulevard, Suite 459 San Francisco, California 94124-3002 Phone: (415) 468-3522 Fax: (415) 468-4715	Parcel B- Hunters Point Naval Shipyard San Francisco, CA		
	Project	Date:	Page
	307-1	02/05/01	1 of 6

AREAS OF ATTENTION: 24-2/3114 ; 18.2 (N) ; 3324.

CONTRACTOR: ITSI ; CHUCK TAYLOR (415) 383-7604 ; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/VIBRAPLATE ; 1 JD 624H LOADER ; 1 BOMAG ROLLER COMPACTOR ; 1 JD 120 EXCAVATOR

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT.

1005. ARRIVED AT SITE. ITSI CONTINUES BACKFILLING 24-2/3114.

1010. K. STONESTREET INFORMS ME THAT MORE SITES HAVE BEEN RELEASED.

1045- TESTED 2 LOCATIONS AT 24-2/3114 AT 2' BGS + 1' BGS WITH GOOD RESULTS. NORTH SIDE OF SITE HAS HAD NO BACKFILL PLACED IN IT, YET.

1055. ITSI STARTS TO BACKFILL NORTH SIDE (59, 60).

1110- ITSI HAS STOPPED WORK AT 24-2/3114 FOR NOW.

1200 - ITSI RESTARTS BACKFILLING 18.2 (N).

1245- ALL WORK HAS STOPPED AT 18-2 (N) + 24-2/3114. ITSI IS FINISHING BACKFILLING OF EXCAVATION 3324

1300 - WORK HAS RESUMED AT 18-2 (N). WORK HAS STOPPED AT 24-2/3114.

1400 - TESTED 2 LOCATIONS AT 3324, AT 0' BGS W/ GOOD RESULTS (61, 62)

1420- TESTED 2 LOCATIONS AT 18.2 (N) WITH GOOD RESULTS AT 4.0' BGS + 3'0" BGS. (65, 64)

1435 - TOOK A SAMPLE OF BACKFILL BY SPECS REQUIREMENT. STEVE (AIOSA) SIGNED COC.

1445 - TESTED 2 LOCATIONS AT 18.2 (N) AT 2' BGS + 1' BGS. RESULTS WERE SATISFACTORY. (65, 66)

1520 - TESTED 1 LOCATION AT 18.2 (N) AT 1' BGS W/ GOOD RESULTS (67).

1545 - LEFT SITE.

SUMMARY

- SITES 18.2 (N) BACKFILLED TO 1' BGS + 3324 COMPLETED. SITE 24-2/3114 HAS BEEN BACKFILLED TO ~1' BGS BUT REMAINS AT ~3' BGS AT SOME LOCATIONS ALONG THE NORTH SIDE.
- JP TO BE BACK TOMORROW AT ~1000. ITSI WILL COMPLETE 24-2/3114 + 18.2 (N) ; AND START ONE OF THE SITES RELEASED BY TT. EHI TODAY.
- HANDAGE: 3324:- AB - ~4 CY ; 18.2 : BACKFILL ~93 CY ; 24-2/3114 : BACKFILL ~111 CY

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/05/01	59	24-2/3114 (BF; EXC)	-2	6.931	124.7	#5	98%	95	JP	NG
	60	24-2/3114 (BF; EXC)	-1	7.531	126.5	#5	100%	95	JP	NG
	61	3324 (BF; EXC)	0	6.005	132.8	#4	99%	95	JP	NG
	62	SAME	0	6.231	133.7	#4	100%	95	JP	NG
	63	18-2(N) (BF; EXC)	-4	9.511	124.5	#5	98%	85	JP	NG
	64	SAME	-3	9.086	127.4	#5	100%	85	JP	NG
	65	SAME	-2	9.070	126.5	#5	100%	95	JP	NG
	66	SAME	-1	8.055	122.3	#5	96%	95	JP	NG
	67	SAME	-1	7.331	127.6	#5	100	95	JP	NG

SOIL TYPE		COC #	%OM	MDD
#4	CLASS 2 AB	572632	8	134
#5	BACKFILL	572632	9	127

LABORATORY STANDARD: ASTM D698

Cyme, Inc.

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San Francisco, California 94124-3002
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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	02/05/01	2 of 6

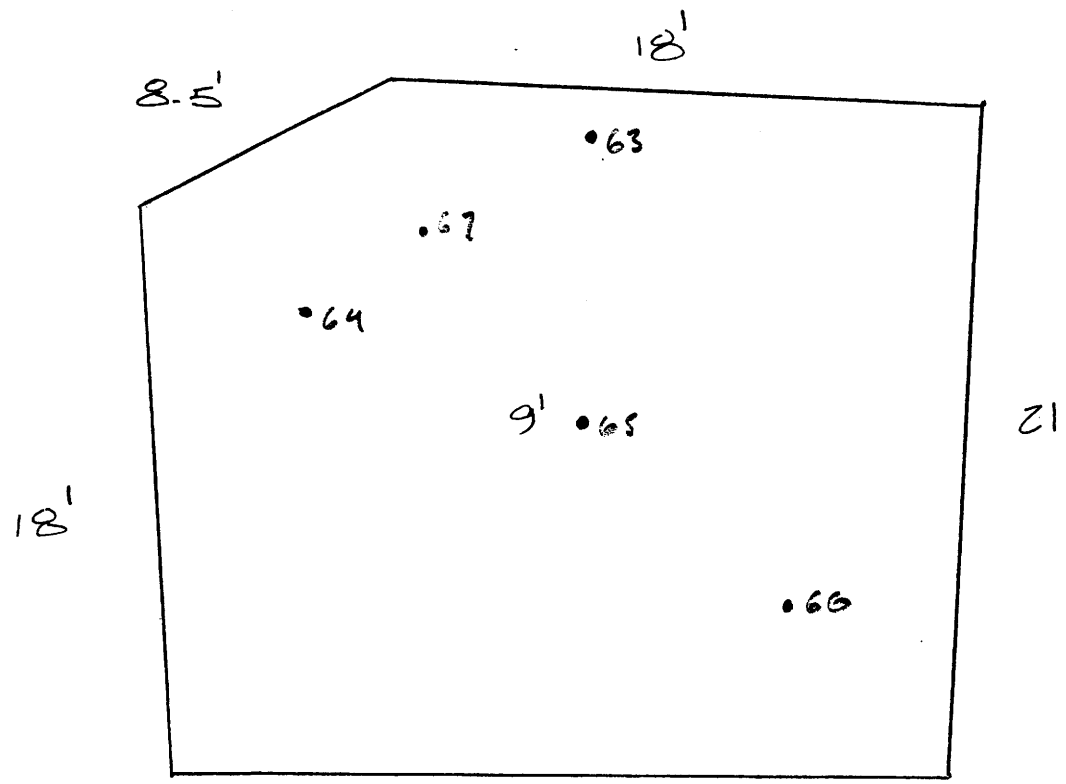
Innovative Technical Solutions, Inc. www.itsi.com

By C CLYDE Date 01-22-01 Subject EXCAVATION 18-2N Sheet No. 4 of 56

Chkd. By _____ Date _____ Project No. 00-1600

$$19.5' \times 25' \times 9' = \frac{4387.5^{cf}}{27} = 162.5 \text{ yrds}$$

NORTH →



PLACED	BACKFILL	CLASS 2 AB
01.31.01 -	54 cy	∅ (NO TESTS - OBSERVED)
02/05/01	93 cy	∅

Innovative Technical Solutions, Inc. www.itsi.con

By C. Clyde Date 01-22-01 Subject Excavation 24-2/53114 Sheet No. 1 of 1

Chkd. By Date Project No. 00-160

NORTH

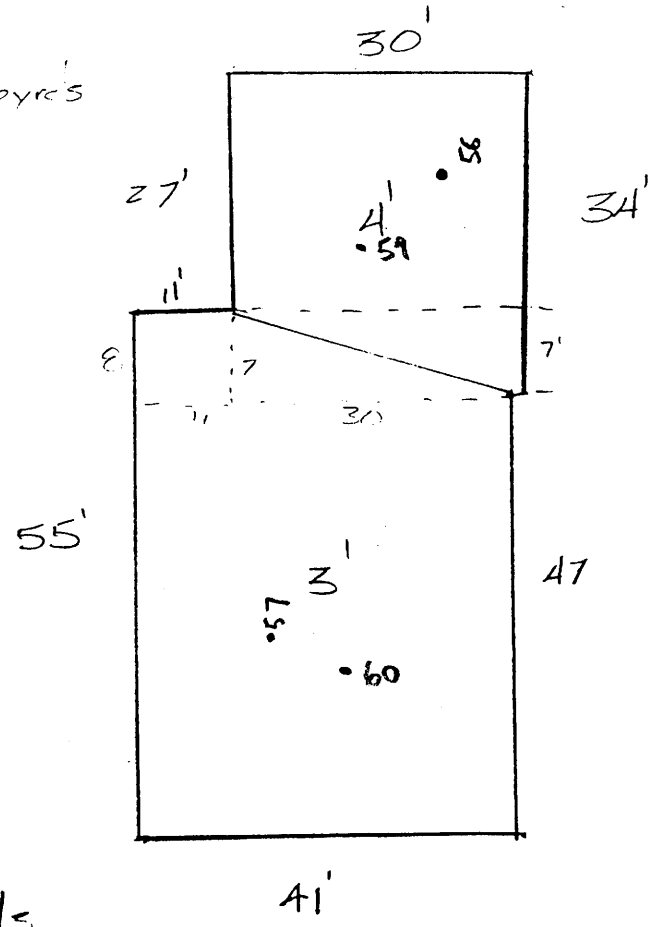
$\frac{27 \times 30 \times 4}{27} = 120$ yrds

$\frac{7 \times 30 \times 4}{2} = \frac{420}{27} = 16$ yrds

$\frac{11 \times 7.5 \times 3}{27} = 9$ yrds

$\frac{7 \times 30 \times 3}{2} = \frac{315}{27} = 12$

$\frac{47 \times 41 \times 3}{27} = 214$ yrds



TOTAL = 371 cuyrds

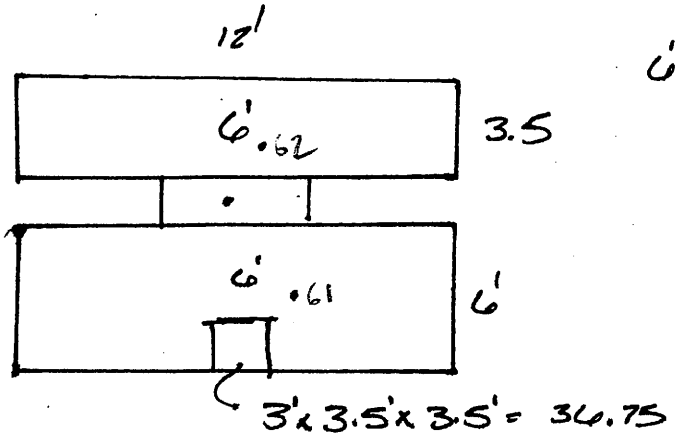
PLACED	DRAIN ROCK	BACKFILL	AB
02 01 01	∅	~111 CY	∅

ITSI INNOVATIVE TECHNICAL SOLUTIONS, INC.

By Chuck Clyde Date 12-12-00 Subject Backfill - B3324 Sheet No. 6 of 6

Chkd. By ____ Date ____ Proj. No. 60-160

N



$12 \times 6 \times 3.5 = 252^{\#}$

$6' \times 6' \times 12' = 432^{\#}$

$$\frac{252 + 432 - 36.75}{27} = \frac{647.25}{27} = 23.97 \text{ yrds}$$

23.97 cu yards

Recyclable and made from recycled paper.

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/06/01	1 of 4

AREAS OF ATTENTION: 18-2 (N); 24-2/3114

CONTRACTOR: ITSI, C. CLAYPE (925) 383-7604; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/VIBRAPLATE; JD 624H LOADER; 1 BOMAG ROLLER COMPACTOR; 1 JD 120 EXCAVATOR; 1 ROTATING BRUSH; 1 TRUCK; 1 WATER TRUCK

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

1010 ARRIVED AT SITE. ITSI HAS FINISHED 18-2(N) + HAS PLACED MORE BACKFILL IN 24-2/3114.

1030 TESTED 2 LOCATIONS AT 24-2/3114 AT 2' BGS + 1' BGS W/ SATISFACTORY RESULTS. (68, 69).

1045 - 1115 - UNLOADED RETURNED SAMPLES FROM LAB + DID PAPERWORK W/ JD LENZEN (LT)

1140 TESTED 1 LOCATION AT 1' BGS ALONG THE NORTH SIDE OF 24-2/3114. WITH GOOD RESULTS. (70)

1155 TESTED 1 LOCATION AT 18.2(N) AT GROUND SURFACE - RESULTS WERE UNSATISFACTORY - (71). TOLD MIKE (ITSI) ABOUT RESULT AND HE WENT TO REWORK THE SURFACE.

1210 ITSI CONTINUES PLACING THE LAST LIFT ON 24-2/3114.

1225 RETESTED ONE LOCATION AT 18.2(N) AT GROUND SURFACE W/ GOOD RESULTS (72).

1300 LEFT SITE.

SUMMARY

- 18.2 (N) COMPLETED.
- 24-2/3114 - TOP LIFT BEING PLACED; TO BE TESTED TOMORROW
- JP. SETTEPANI TO RETURN TO SITE TOMORROW AT ~10:00.

- YARDAGE
- 18.2 (N) - AB: 18 CY
- 24-2/3114 - BACKFILL ~150 CY; AB ~111 CY.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/06/01	68	24.2/3114 (BF, EXC)	-2'	6.919	127.5	#5	100%	95	JP	NG
	69	SAME	-1'	7.537	129.0	#5	102%	95	JP	NG
	70	SAME	-1'	7.777	130.1	#5	102%	95	JP	NG
	71	18.2(N)	0.0	3.008	121.9	#4	91%	95	JP	NG
	72	SAME	0.0	4.500	129.4	#4	97%	95	JP	NG

SOIL TYPE	COC #	%OM	MDD
#4 CLASS 2 AB	572632	8	134
#5 BACKFILL	572632	9	127
LABORATORY STANDARD:			

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	02/06/01	2 of 9

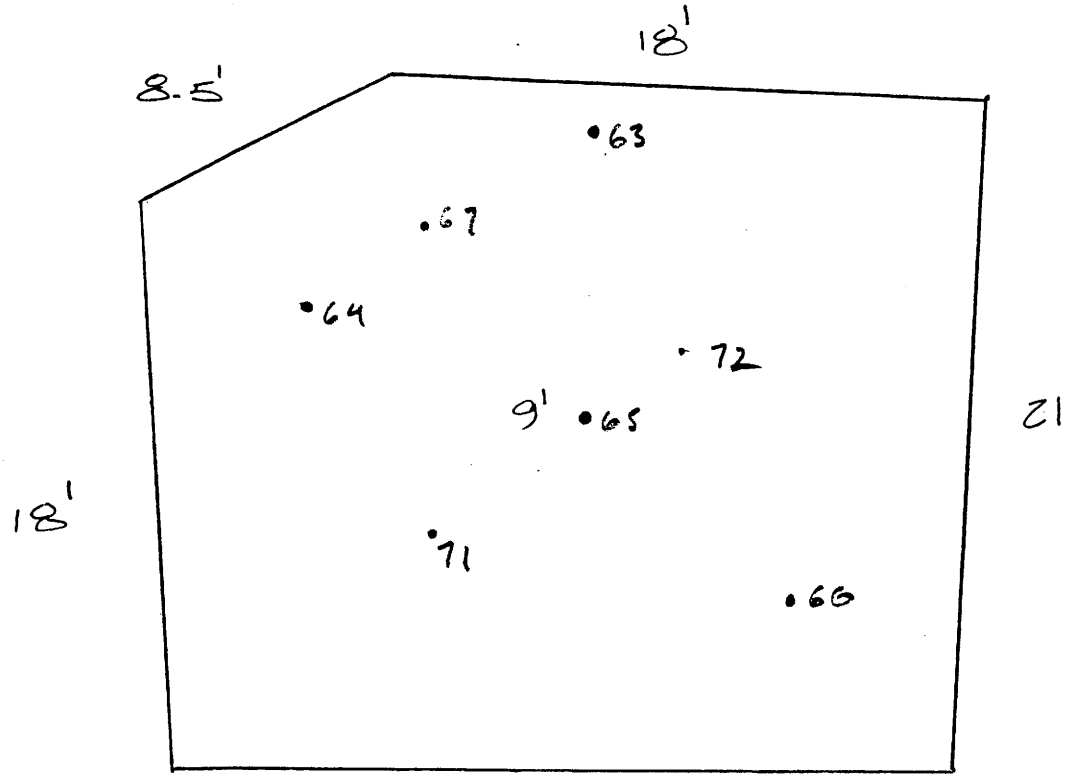
Innovative Technical Solutions, Inc. www.itsi.com

By C CLYDE Date 01-22-01 Subject EXCAVATION 18-2N Sheet No. #3/ of

Chkd. By Date Project No. 00-1600

$$19.5' \times 25' \times 9' = \frac{4387.5^{cf}}{27} = 162.5 \text{ yrds}$$

NORTH



PLACED	BACKFILL	CLASS 2 AB	
01.31.01 -	54 cy	ϕ	(NO TESTS - OBSERVED)
02/05/01	13 cy	ϕ	
02/06/01	ϕ cy	18	

Innovative Technical Solutions, Inc. www.itsi.c

By C. Clyde Date 01-22-01 Subject Excavation 24-2/B3114 Sheet No. 4 of

Chkd. By Date Project No. 00-1

NORTH

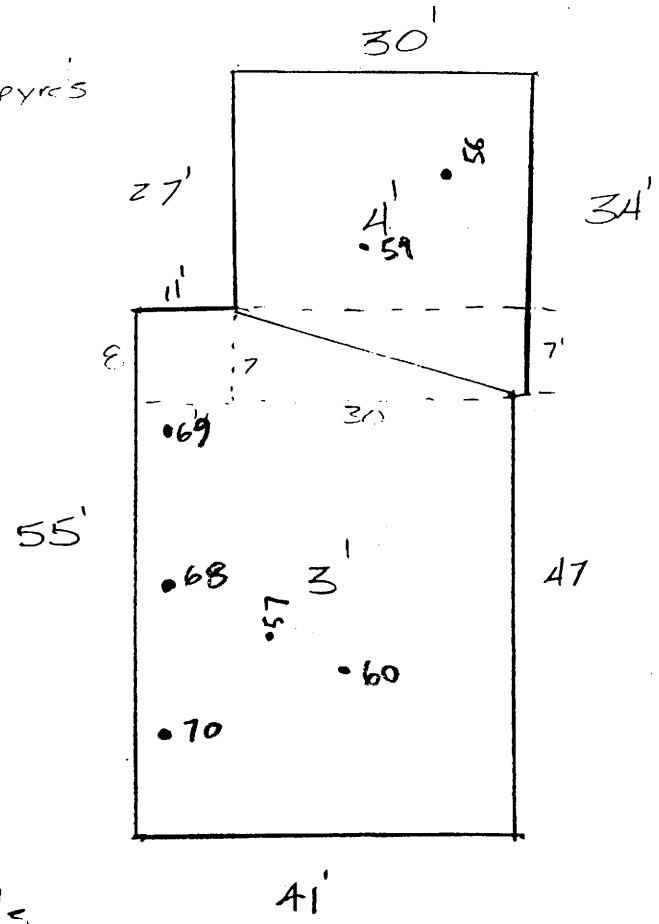
$\frac{27 \times 30 \times 4}{27} = 120$ yrds

$\frac{7 \times 30 \times 4}{2} = \frac{420}{27} = 16$ yrds

$\frac{11 \times 7.5 \times 3}{27} = 9$ yrds

$\frac{7 \times 30 \times 3}{2} = \frac{315}{27} = 12$

$\frac{47 \times 41 \times 3}{27} = 214$ yrds



TOTAL = 371 cuyrds

PLACED	DRAIN ROCK	BACKFILL	AB
02 01 01	∅	~111 CY	∅
{020501 / 020601}	∅	~150 CY	~111 CY

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/07/01	1 OF 4

AREAS OF ATTENTION: 24-2/3114 ; 3422

CONTRACTOR: ITSI (C CLYDE, 925 383 7604 ; 4 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE EQUIPPED W/ VIBRA PLATE ; 1 JD 624H LOADER ; 1 BOMAG ROLLER COMPACTOR ; 1 TRUCK ; 1 WATER TRUCK

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT.

1015 ARRIVED AT SITE. ITSI HAS STARTED PLACING BACKFILL IN 3422. DRAIN ROCK HAS BEEN PLACED TO APPROXIMATELY 7.0' BGS. FILTER FABRIC IS VISIBLE. CREW IS IDLE BECAUSE TELEPHONE LINE HAS BECOME UNHOOKED FROM POLE.

1035 - TESTED GROUND SURFACE AT 24-2/3114, COMPLETED YESTERDAY. RESULTS WERE SATISFACTORY. (73)

1110 - TESTED 1 LOCATION AT 3422 AT 4' BGS WITH GOOD RESULTS. (74)

1135 - TESTED 1 LOCATION AT 3422 AT 3' BGS W/ GOOD RESULTS (75).

1210 - TESTED 1 LOCATION AT 3422 AT 2' BGS W/ GOOD RESULTS (76).

1245 - TELEPHONE CABLE BEING HOOKED BACK TO POLE.

1315 - WORK AT 3422 HAS RESUMED.

1345 - TESTED ANOTHER LOCATION AT 3422 AT 1' BGS W/ GOOD RESULTS (77)

1350 ITSI HAS STARTED TO WORK IN EAST SIDE OF 3422.

1430 - TESTED 1 LOCATION AT 3422 AT 4' BGS W/ GOOD RESULTS (78)

1500 - TESTED 1 LOCATION AT 3422 AT 3' BGS W/ GOOD RESULTS (79)

1540 - TESTED 1 LOCATION AT 3422 AT 2' BGS W/ GOOD RESULTS (80)

1615 - TESTED 1 LOCATION AT 3422 AT 1' BGS W/ GOOD RESULTS (81)

1630 - LEFT THE SITE.

SUMMARY

- 24-2/3114 WAS SUCCESSFULLY BACKFILLED
- 3422 WAS BACKFILLED TO APPROXIMATELY 1.0' BGS + SHOULD BE FINISHED TOMORROW.
- JP. SETTEPANI TO RETURN TO SITE AT 10:00 TOMORROW.

YARDAGE:

3422 - AB - Ø ; DRAIN ROCK - 67 CY ; BACKFILL ~ 144 CY.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
2/7/01	73	24-2/3114 (BF; EXC)	0.0	3.449	132.9	#4	99%	95	JP	NG
	74	3422 (BF; EXC)	-4	7.274	117.6	#5	93%	85	JP	NG
	75	SAME	-3	7.739	126.0	#5	99%	85	JP	NG
	76	SAME	-2	7.478	128.2	#5	101%	95	JP	NG
	77	SAME	-1	7.751	125.4	#5	99%	95	JP	NG
	78	SAME	-4	9.875	124.5	#5	98%	85	JP	NG
	79	SAME	-3	9.165	123.5	#5	97%	85	JP	NG
	80	SAME	-2	9.420	125.7	#5	99%	95	JP	NG
	81	SAME	-1	7.816	127.2	#5	100%	95	JP	NG

SOIL TYPE		%OM	MDD
#4 CLASS 2AB	572632	8	134
#5 BACKFILL	572632	9	127
LABORATORY STANDARD:			

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

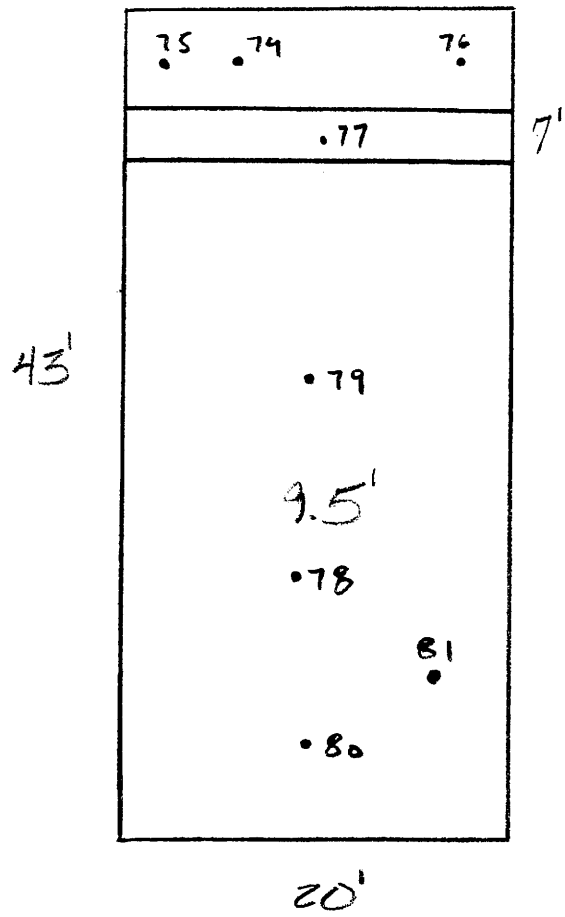
Project	Date	Page
307-1	2/7/01	2 of 4

Innovative Technical Solutions, Inc. www.itsi.com

By C. Clyde Date _____ Subject EXCAVATION B3422 Sheet No. 3 of 4

Chkd. By _____ Date _____ Project No. _____

$$\frac{43' \times 20' \times 9.5'}{27} = 303 \text{ cu yds}$$



YARDAGE	AB	DRAIN ROCK	BACK FILL
02/07/01	∅	67 CY	144 CY

NORTH →

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By C. Clyde Date 01-22-01 Subject Excavation 24-2/B3114 Sheet No. 1 of

Chkd. By Date Project No. 00-1

NORTH

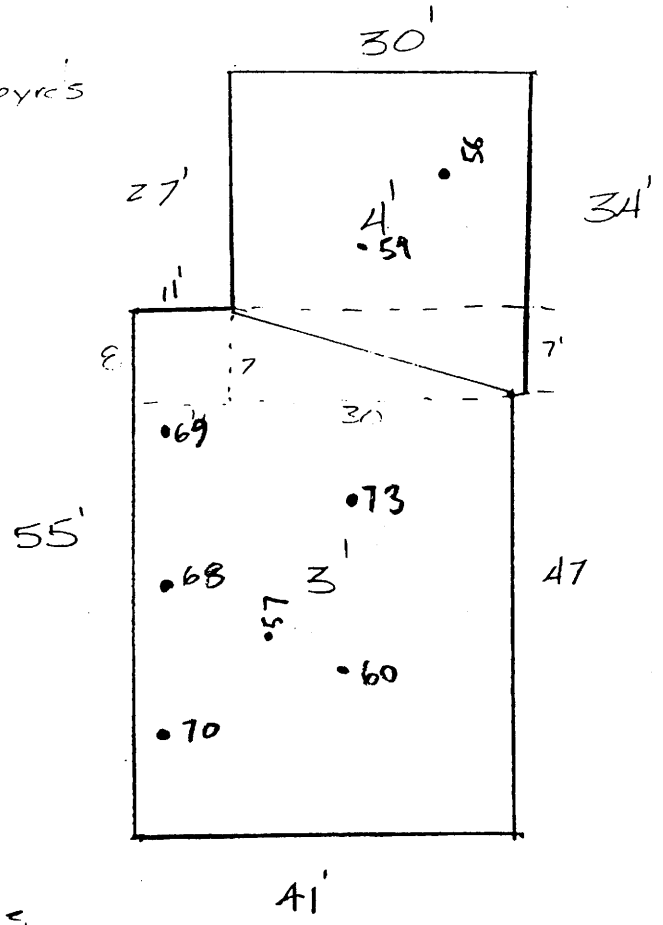
$\frac{27 \times 30 \times 4}{27} = 120$ yrds

$\frac{7 \times 30 \times 4}{2} = \frac{420}{27} = 16$ yrds

$\frac{11 \times 7.5 \times 3}{27} = 9$ yrds

$\frac{7 \times 30 \times 3}{2} = \frac{315}{27} = 12$

$\frac{47 \times 41 \times 3}{27} = 214$ yrds



TOTAL = 371 cuyrds

PLACED	DRAIN ROCK	BACKFILL	AB
02 01 01	∅	~111 CY	∅
020501 / 020601	∅	~150 CY	~111 CY

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/08/01	1 of 4

AREAS OF ATTENTION: B3422; B2616; 23-1/23-3

CONTRACTOR: ITSI (C. CLYDE, (925) 5837604); 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACK HOE EQUIPPED W/VIBRA PLATE; 1 JD 624 H LOADER; 1 JD 120 EXCAVATOR; 1 TRUCK.

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT.

1030 - ARRIVED AT SITE. ITSI IS FINISHING BACKFILLING + COMPACTING THE TOP LIFT AT B3422

1040. TESTED 1 LOCATION AT 2616 AT 4' BGS. IT FAILED. (82)

1045 - TOLD ITSI CREW ABOUT RESULTS.

1055 - TESTED 1 LOCATION AT B3422 AT GROUND SURFACE W/GOOD RESULTS (83)

1115 - ITSI REWORKED LIFT AT 4' BGS AT 2616. I RETESTED THE LOCATION W/SATISFACTORY RESULTS (84).

1140. TESTED ANOTHER LOCATION AT 3' BGS AT 2616 W/ GOOD RESULTS (85)

1155. TESTED ANOTHER LOCATION AT ~2' BGS AT 2616 W/ GOOD RESULTS (86)

1220. TESTED ANOTHER LOCATION AT -1' BGS AT 2616 W/ GOOD RESULTS (87)

1415. TESTED ANOTHER LOCATION AT GROUND SURFACE AT 2616 W/ GOOD RESULTS (88).

1425. ITSI "DEMOBED" TO START BACKFILLING 23-1/23-3.

1430. FIRST LOAD OF DRAIN ROCK HAS BEEN PLACED. CREW PLACES SNOWFENCE IN BOTTOM OF THE REST OF THE EXCAVATION.

1510. SPEAK W/C. CLYDE + AGREE TO BE BACK AT THE SITE AT 10:00 MONDAY.

1530 - LEAVE THE SITE.

SUMMARY

- B3422 + B2616 COMPLETED TODAY
- 23-1/23-3 START TOD.

JP TO RETURN TO SITE MONDAY 10:00, UNLESS OTHERWISE AGREED W/ CLYDE.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/08/01	82	B2616 (BF; EXC)	-4.0	12.000	106.7	#5	84 %	85	JP	NG
	83	B3422 (BF; EXC.)	0.0	4.126	128.8	#4	96 %	95	JP	NG
	84	B2616 (BF; EXC.)	-4.0	9.717	122.7	#5	97 %	85	JP	NG
	85	SAME	-3.0	7.953	128.9	#5	102 %	85	JP	NG
	86	SAME	-2.0	9.797	127.6	#5	100 %	95	JP	NG
	87	SAME	-1.0	9.272	126.3	#5	99 %	95	JP	NG
	88	SAME	0.0	6.125	131.9	#4	98 %	95	JP	NG

SOIL TYPE	COC	%OM	MDD
#4 CLASS 2 AB	572632	8	134
#5 BACKFILL	572632	9	127

LABORATORY STANDARD:

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

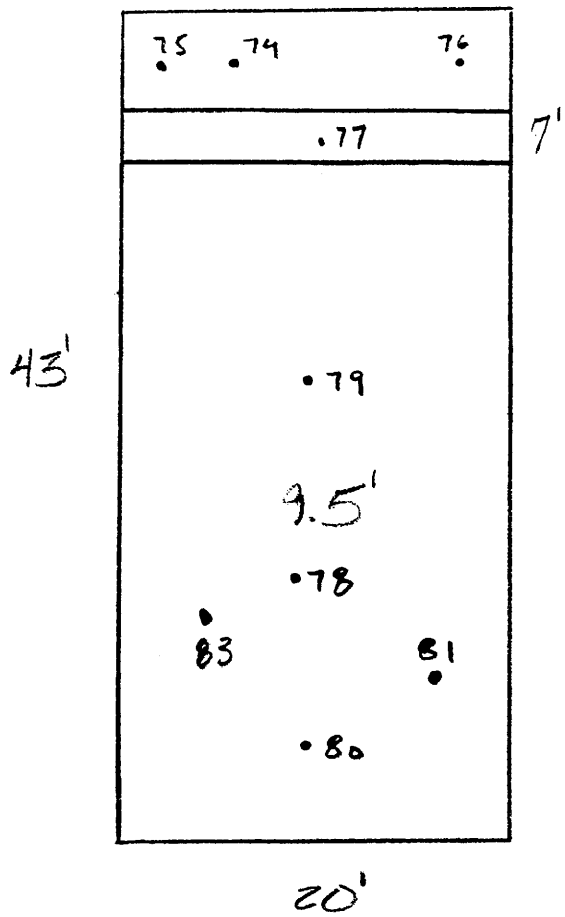
Project	Date	Page
307-1	02/08/01	2 of 4

Innovative Technical Solutions, Inc. www.itsi.com

By C. Clyde Date Subject EXCAVATION B3422 Sheet No. 3 of 4

Chkd. By Date Project No.

$$\frac{43' \times 20' \times 9.5'}{27} = 303 \text{ cu yds}$$



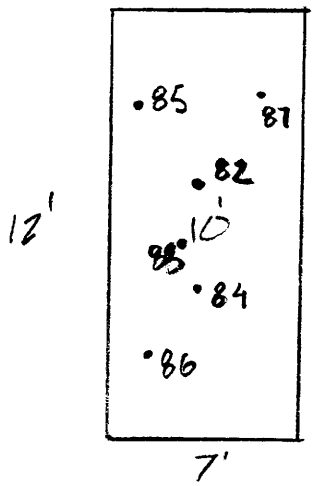
YARDAGE	AB	DRAIN ROCK	BACK FILL
02/07/01	∅	67 CY	144 CY
02/08/01	32	∅	∅

NORTH →

Innovative Technical Solutions, Inc. www.itsi.com

By C Clyde Date Subject EXCAVATION B2C016 Sheet No. 4 of 4

Chkd. By Date Project No.



$\frac{12 \times 7 \times 10'}{27} = 31$ cuyrds

YARDAGE	DRAIN ROCK	BACK FILL	AB
8FE301	∅ cy	28 cy	3 cy

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/13/01	1 of 3

AREAS OF ATTENTION: 23-1/3 ; 2414

CONTRACTOR: ITSI (C. CLYDE, 925 383 7604 ; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE EQUIPPED W/ VIBRAPLATE ; 1 JD 624H LOADER ; 1 JD 120 EXCAVATOR ; 1 TRUCK

CYME REPRESENTATIVE: JP-SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

1015 ARRIVED AT SITE. ITSI HAS BACKFILLED 23-1/23-3 TO ~1' BGS

1030 ITSI "SCRATCHED" SURFACE OF BACKFILL TO 2' BGS. TESTED THAT LOCATION W/ GOOD RESULTS (89).

1040. TESTED ANOTHER LOCATION AT 1' BGS W/ GOOD RESULTS (90).

1055. HAD ITSI "SCRATCH" A SPOT TO 3' BGS. TESTED THAT LOCATION W/ GOOD RESULTS (91). ACCORDING TO ITSI, DRAIN ROCK WAS PLACED TO APPROXIMATELY 4' BGS. ALONG THE NORTH SIDE OF THE EXCAVATION BOULDERS HAD TO BE PLACED AND COVERED W/ FILTER FABRIC BECAUSE WALL WAS UNDERMINED - FILTER FABRIC PREVENTS FINES FROM BEING WASHED AWAY W/ SUBSEQUENT TIDES.

1150 ITSI STOPS BACKFILLING OPERATIONS DUE TO SUDDEN FLOW OF WATER FROM SE CORNER FROM EXCAVATION (SEE FIGURE; ITEM 1).

1250 ITSI MOVES ONTO 2414 TO START BACKFILLING OPERATIONS.

1255. AGREE W/ C. CLYDE TO COME BACK TOMORROW BECAUSE ITSI DOES NOT EXPECT TO REACH 4' BGS TODAY AT 2414.

1305. REMIND ITSI TO PLACE SNOW FENCE ON BOTTOM OF 2414.

13:40 LEFT SITE.

SUMMARY

- ITSI ALMOST FINISHED BACKFILLING 23-1/23-3. OPERATIONS HAD TO BE INTERRUPTED DUE TO INFLOW OF WATER FROM UNDERGROUND PIPE.
- ITSI HAS STARTED BACKFILLING 2414
- YARDAGE: 23-1/23-3: DRAINROCK: 67 CY; BACKFILL: ~67 CY; AB: <22 CY.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/13/01	89	23-1/23-3 (BF, EXC)	-2	10.6	125.2	#7	96	95	JP	NG
	90	SAME	-1	10.7	125.5	#7	96	95	JP	NG
	91	SAME	-3	13.43	118.2	#7	90	85	JP	NG

SOIL TYPE	C-C #	%OM	MDD
#4 CLASS 2 AB	572632	8	134
#7 BACK FILL	572631	7	131

LABORATORY STANDARD: ASTM D698

Cyme, Inc.

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
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By C Clyde Date _____ Subject EXCAVATION 23-3/23-1 Sheet No. 3 of 3

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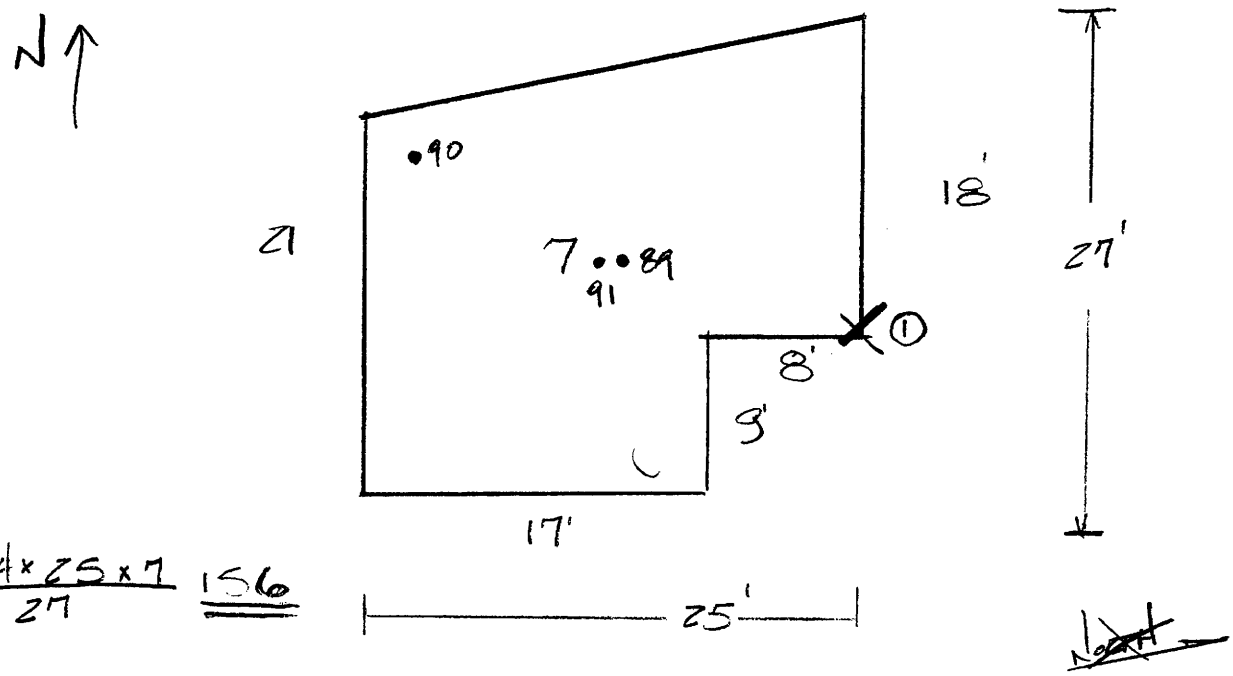

$\frac{24 \times 25 \times 7}{27}$ 156

YARDAGE	DRAINROCK	BACKFILL	AB
02/08/01 - 02/12/01	~67CY	∅	∅
02/13/01	∅	67	<22

Cyme, Inc.

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/14/01	1 OF 3

AREAS OF ATTENTION: 2414, 23-1/23-3

CONTRACTOR: ITSI (C. CLYDE, 925 383 7604; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/VIBRAPLATE, 1 JD 624H LOADER, 1 TRUCK, 1 BOMAG ROLLER COMPACTOR

CYME REPRESENTATIVE: JP. SETTEPANI **REQUESTED BY:** AS REQ'D BY PROJECT.

745 - ARRIVED AT SITE. ITSI BACKFILLING 2414. SO FAR, BACKFILL HAS BEEN PLACED TO A DEPTH OF 5' BGS. ACCORDING TO CREW, DRAINROCK HAS BEEN PLACED TO 7' BGS. AS OBSERVED YESTERDAY AT ~1540 BEFORE I LEFT THE SITE, SNOW FENCE HAS BEEN PLACED AT THE BOTTOM OF THE EXCAVATION. WITH REGARDS TO 23-1/23-3, IT IS TO FIX THE PIPE TODAY.

810 - TESTED 1 LOCATION (AT 2414) AT 4' BGS W/ GOOD RESULTS (92)

845 - TESTED 1 LOCATION AT 3' BGS AT 2414 W/ GOOD RESULTS (93).

935 - TESTED 1 LOCATION AT 2' BGS AT 2414 W/ GOOD RESULTS (94)

1030 - TESTED 1 LOCATION AT 1' BGS AT 2414 W/ GOOD RESULTS (95)

1100 - AGREED W/ ITSI TO BE BACK ~9:00-9:30 TOMORROW TO TEST SITE AT 1207 + TEST 2414 + 23-1/23-3 TOP LIFTS.

1130 - LEFT SITE.

SUMMARY:

- ITSI HAS ALMOST FINISHED BACKFILLING 2414 + EXPECTS TO FINISH 23-1/23-3 TODAY. I WILL TEST TOP LIFTS OF THESE 2 SITES DURING NEXT VISIT.
- YARDAGE: 2414: ~66 CY DRAINROCK; 132 CY BACKFILL, 22 CY AB.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/14/01	92	2414 (BF, EXC)	4	-127.4	8.083	#7	97	85	JP	NG
	93	SAME	3	-124.2	9.427	#7	95	85	JP	NG
	94	SAME	2	-128.3	8.489	#7	98	95	JP	NG
	95	SAME	1	-129.9	8.159	#7	99	95	JP	NG

SOIL TYPE	COC #	%OM	MDD
#4 CLASS 2AB	572632	8	134
#7 BACKFILL	572631	7	131

LABORATORY STANDARD: ASTM D698

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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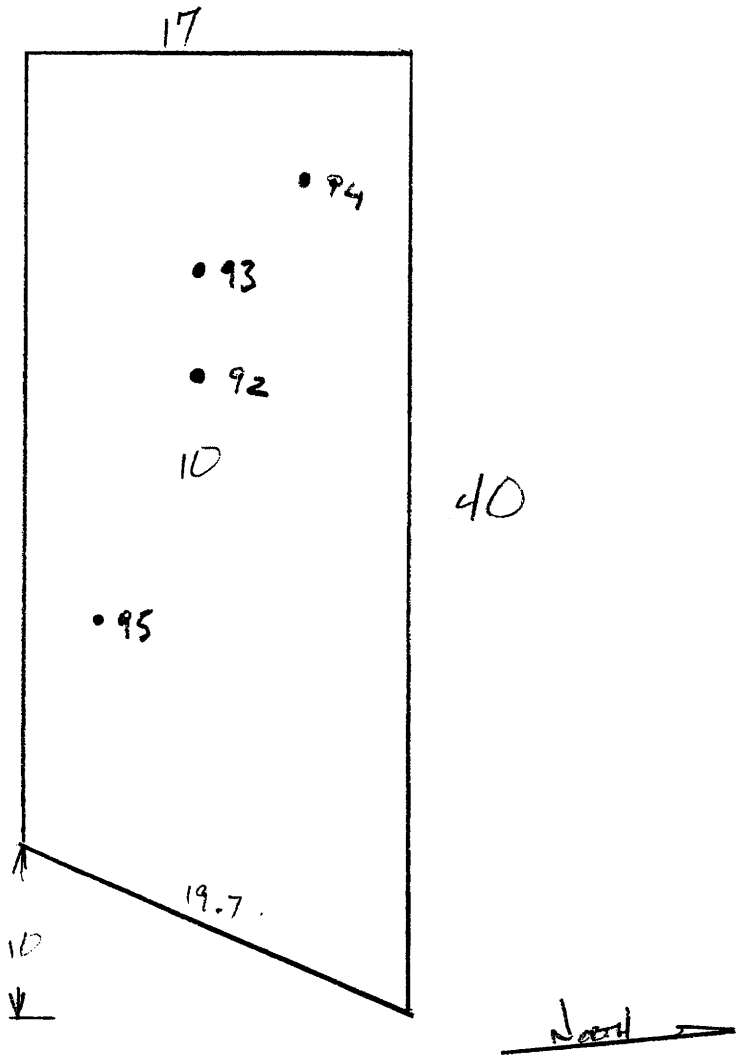
$\frac{35' \times 10' \times 17}{27}$ 220.4



YARDAGE	DRAIN ROCK	BACKFILL	AB
02/13/01 — 02/14/01	~66 CY	~132 CY	~22 CY

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	02/15/01	1 OF 3

AREAS OF ATTENTION: 23-1/23-3; 2414; 7.1 (E)

CONTRACTOR: ITSI (C CLYDE 925 383 7604); 4 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/ HYDRAPLATE; 1 JD 624H LOADER; 1 TRUCK; 1 SMALL ROLLER COMPACTOR

CYME REPRESENTATIVE: J.T. SEMTEPANI **REQUESTED BY:** AS REQ'D BY PROJECT.

925 ARRIVED AT SITE. ITSI SAYS IT HAS NOT BEEN GIVEN CLEARANCE TO START BACKFILLING 7.1(E). FURTHERMORE, 2414 HAS NOT BEEN COMPLETED DUE LACK OF MATERIAL. 23-1/23-3 IS COMPLETED.

940 TEST 1 LOCATION AT GROUND SURFACE AT 23-1/23-3 W/ GOOD RESULTS. (96)

945 ITSI PLACING BACKFILL IN 2414.

950. CHECK W/ K. STONESTREET ON CLEARANCE TO START 7.1(E) AND HE SAYS THAT SITE HAS BEEN CLEARED.

1005. TALK W/ ITSI WHO HAVE BEEN TOLD THE SAME.

1035- ITSI PLACING SNOW FENCING ON BOTTOM OF EXCAVATION.

1115- ITSI HAS STARTED BACKFILLING 7.1 E.

1200- LEFT SITE

SUMMARY

- ITSI COMPLETED 23-1/23-3. 2414 REMAINS W/ SOME AB TO BE ADDED - TOP LIFT TO BE TESTED DURING NEXT VISIT.
- ITSI HAS STARTED TO BACKFILL 7.1 (E). I MADE ARRANGEMENTS TO TENTATIVELY BE BACK AT SITE AT 10:00 ON MONDAY, CONTINGENT ON WEATHER. I WILL BE IN TOUCH W/ ITSI ON THAT ISSUE.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/15/01	96	23-1/23-3	0.0	6.171	130.1	#4	97	95	JP	NG

SOIL TYPE	COC#	%OM	MDD
#4 CLASS 2 AB	572632	8	134
#7 BACKFILL	572631	7	131
LABORATORY STANDARD:			

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
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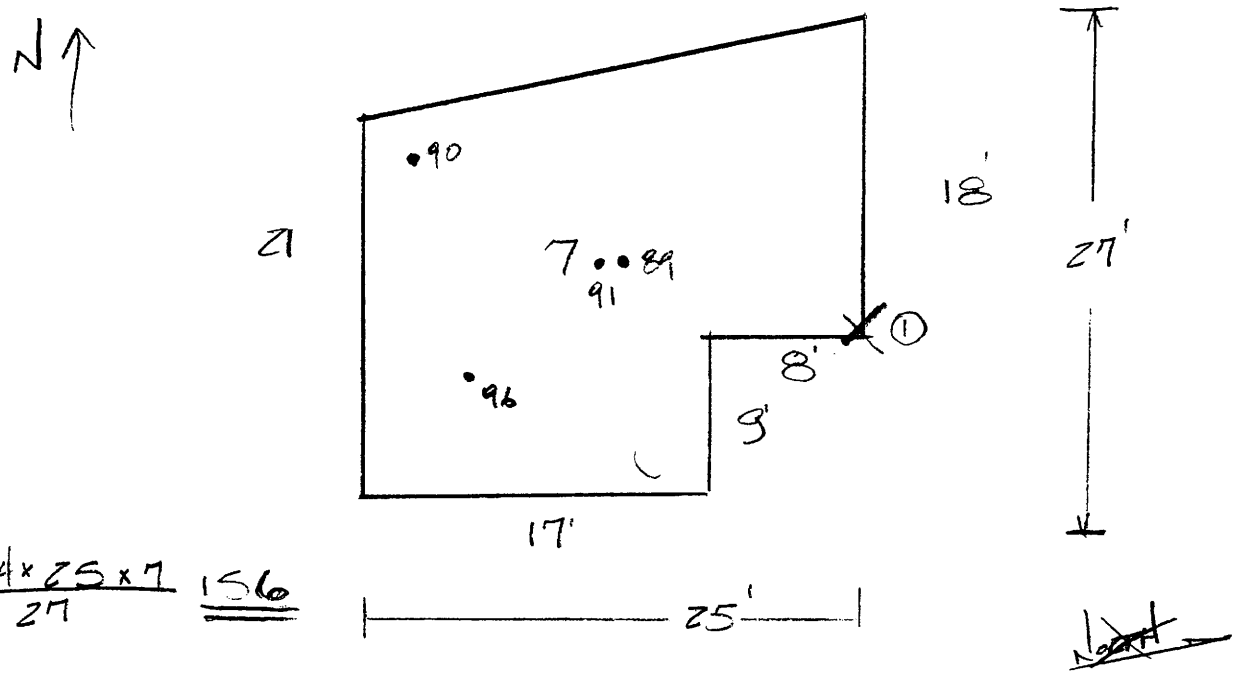

$\frac{24 \times 25 \times 7}{27}$ 156

YARDAGE	DRAINROCK	BACKFILL	AB
02/08/01 - 02/12/01	~67CY	∅	∅
02/13/01	∅	67	<22

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
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AREAS OF ATTENTION: 7-1(e); 2414

CONTRACTOR: ITSI (C. CLYDE; 925 383 7604); 4 CREWMAN

EQUIPMENT WORKING: 1 JD BACKHOE/W/ VIBRAPLATE; 1 JD 624H LOADER; 1 BOMAG ROLLER COMPACTOR.

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: C. CLYDE; 02/23/01

955. ARRIVED AT SITE. ITSI IS BACKFILLING 7.1. ITSI HAS PLACED DRAINROCK TO A DEPTH OF ~ 9' BGS IN MAIN AREA OF EXCAVATION + TO ~ 5' BGS IN AREA AT S.E. CORNER - BACKFILL HAD BEEN PLACED TO ~ 6.5' BGS AT THIS LOCATION DURING LAST VISIT TO THE SITE (02/15/01). FILTER FABRIC HAS BEEN PLACED OVER DRAIN ROCK. THERE WERE SOME PUDDLES IN THE S.E. AREA NEXT TO THE RAMP. MATERIAL LOOKED EXTREMELY WET. CHUCK (ITSI) TOLD ME THAT THE WATER WAS FROM THE PLASTIC THAT HAD BEEN PLACED OVER THE EXCAVATION (TO PROTECT IT FROM GETTING WET FROM LAST WEEK'S WEATHER) BEING REMOVED. HE SAID HE HAD DEWATERED THE AREA.

1020 ALEX WONG (QC, ITSI) BROUGHT UP THE FACT THAT THE MATERIAL WAS WET. HE ALSO ASKED ABOUT THE COMPACTION REQUIREMENTS. I SHOWED HIM THE SPECS. LEFT WITH CHUCK TO GET COPIES OF DRAWINGS OF 7.1 + VERIFY VOLUMES OF MATERIAL THAT HAS BEEN BROUGHT IN.

1035 CHUCK GOT PAGED TO GO BACK TO SITE WITH ME TO SPEAK W/ D. BRENNAN (QC, ITSI). DISCUSSED SPECS + PLACEMENT OF FILL W/ ALEX, D. BRENNAN, C. CLYDE + CREW. LEFT W/ D. BRENNAN TO VERIFY POSSIBLE MISSING TESTS FOR 23-1/23-3 + 2414.

1100 - 1200 - CHECK RECORDS + CLARIFY TESTING OF 23-1/23-3 + 2414. ALSO BROUGHT UP: BACKFILL MATERIAL TESTING DATA IS NOT MAKING IT TO D. BRANNAN. I TOLD HIM + W. AKIYAMA (WHO HAD BROUGHT IT UP) THAT ALL LAB RESULTS ARE FORWARDED TO J. D. LENZEN (IT) AND THAT AN INVOICE IS ATTACHED TO THEM.

I AGREED TO CLARIFY THIS ISSUE W/ JD. [JD WAS GONE FOR THE DAY, SO I TOLD D. BRANNAN THAT I WOULD CHECK WITH HIM TOMORROW.]

1210 - CREW HAS NOT YET REACHED 4' BGS.

1210 - 1230 CHECK CUBIC YARDAGE OF DRAIN ROCK, SELECT BACKFILL + CLASS 2 AB BROUGHT TO DATE W/ C. CLYDE.

1300 - CHECK W/ J. HALLIDAY (ITS) IF HE HAS BEEN GETTING LAB DATA ON COMPACTION TESTS. HE SAYS HE HAS BEEN GETTING INVOICES ATTACHED TO THE REPORTS + THAT HE HAS SIGNED THEM.

1315 - I COMMUNICATE THIS TO W. AKIYAMA WHEN HE STOPS BY 7.1.

[NOTE - ACCORDING TO C. CLYDE 2414 IS NOT READY TO BE TESTED].

1430 - TESTED 1 LOCATION 4' BGS AT 7.1 WITH GOOD RESULTS (97).

1500 - ITSI CONTINUES PLACING BACKFILL.

1530 - SPOKE W/ MIKE OCHS (ITSI) WHO SAID THEY EXPECTED TO REACH +4' BGS BY TOMORROW MORNING. AGREED TO BE IN TOUCH BEFORE ARRIVING AT SITE TOMORROW.

1545 - LEFT SITE.

SUMMARY

- 2414 NOT READY TO BE TESTED
- 7.1 - BEING BACKFILLED.
- JP TO LIAISON W/ JD. LIAISON FATE OF LAB DATA -

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
02/26/01	97	7.1 (BF; EXC)	-4.0	11.89	121.4	#7	93	85	JP	NG

SOIL TYPE	COC	%OM	MDD
#4 CLASS 2AB	512632	8	134
#7 BACKFILL	512631	7	131
LABORATORY STANDARD:			

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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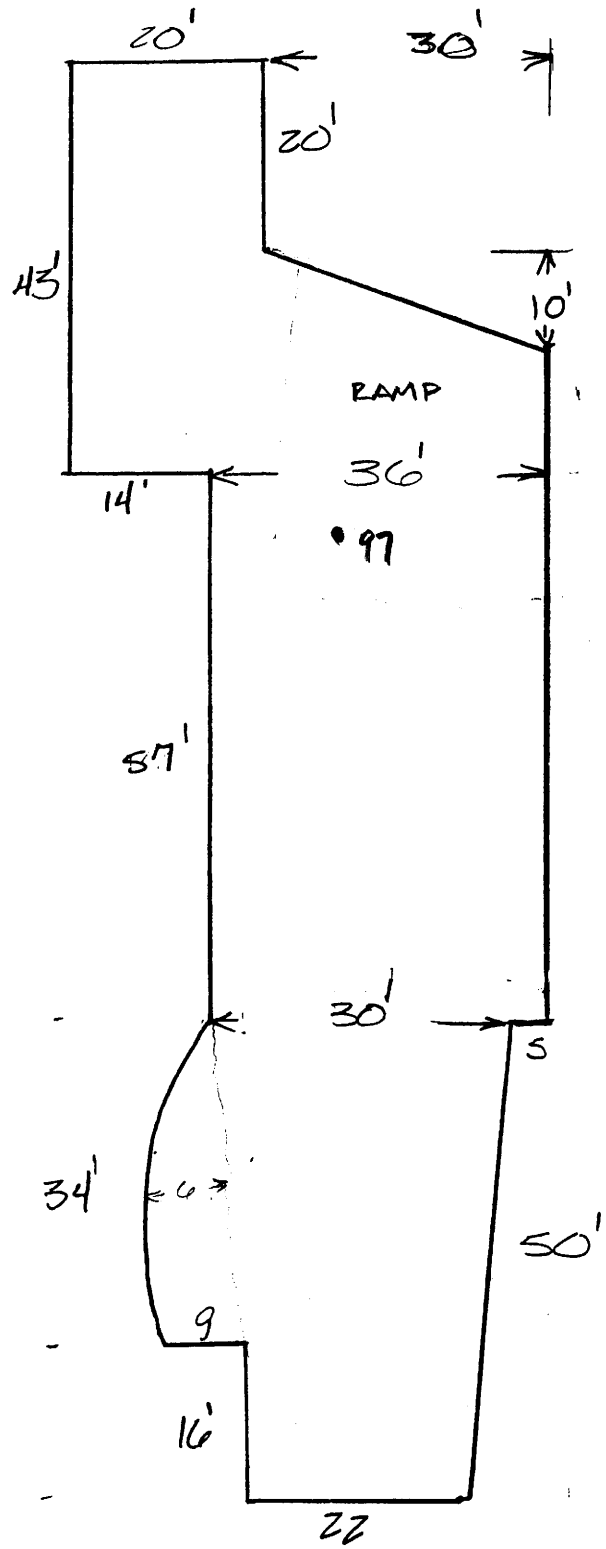

$\frac{20 \times 20 \times 10}{27} = 148$

$\left(\frac{23 \times 50 \times 10}{27}\right) - \left(\frac{\frac{10 \times 30 \times 10}{27}}{2}\right) = 370$

$\frac{35.5 \times 57 \times 10}{27}$ 749.

$\frac{26 \times 50 \times 10}{27} = 481.$

$\frac{5 \times 34 \times 10}{27} = 63$

TOTAL = 1811 cu yds

N

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	2/27/01	1 OF 3

AREAS OF ATTENTION: 7.1

CONTRACTOR: ITSI (C. CLYDE ; 925 383 7604) ; 3 CREWMEN

EQUIPMENT WORKING: 1 JD BACKHOE W/ VIBRAPLATE ; 1 JD 624H LOADER ; 1 BOMAG ROLLER COMPACTOR.

CYME REPRESENTATIVE: JP - SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT.

1215 - ARRIVED AT SITE. ITSI IS BACKFILLING 7.1 AND HAS REACHED ~7' BGS AT THE NORTH END OF THE EXCAVATION AND ~5' BGS AT THE MIDDLE AREA.

1240 - TOOK 2 TESTS AT 4.0' BGS + 3.0' BGS (98, 99) W/ GOOD RESULTS

1300 - TOOK 1 BAG SAMPLE OF 1½" DRAIN ROCK. COULD NOT FIND PROPER PERSON TO SIGN COC, SO WILL HAVE IT DELIVERED TOMORROW.

1345 - LEFT SITE

SUMMARY

- 7.1 - ITSI CONTINUES BACKFILLING.
- COC FOR DRAIN ROCK SAMPLE: WILL BE SIGNED TOMORROW
- FOLLOW UP W/ J.D. LENZEN ON D. BRANNAN'S QUESTION - TOMORROW [LENZEN NOT AVAILABLE]
- WILL BE TENTATIVELY BACK AT 1000 WHEN ITSI WILL HAVE REACHED 4' BGS AT THE NORTH END OF 7.1 (ACCORDING TO M. OCHS (ITSI)). WILL BE IN TOUCH TOMORROW BEFORE ARRIVING TO SITE.
- 2419 NOT READY TO BE TESTED.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
2/27/01	98	7.1 (EXC, BP)	-4	10.19	123.2	#7	94	85	JP	NG
	99	SAME	-3	11.90	121.1	#7	92	85	JP	NG

SOIL TYPE		CoC	%OM	MDD
#7	BACKFILL	572638	7	131
LABORATORY STANDARD:				

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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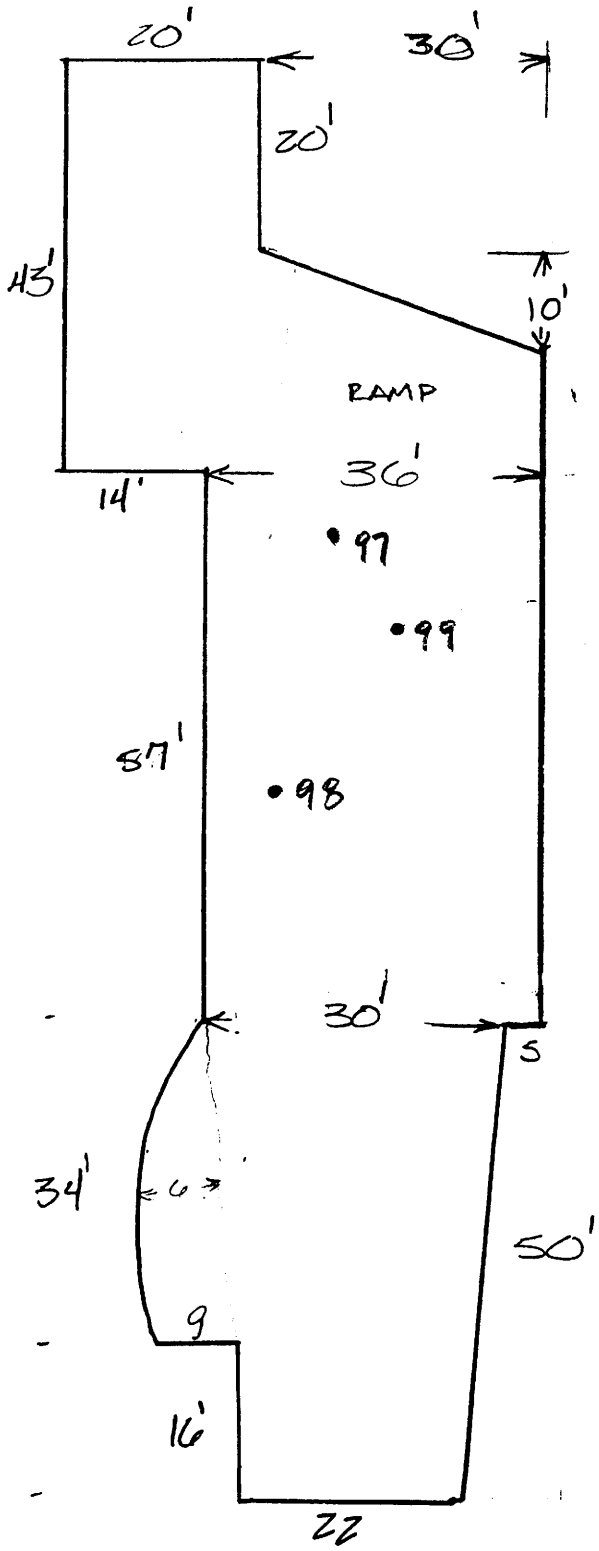

$$\frac{20 \times 20 \times 10}{27} = 148$$

$$\left(\frac{23 \times 50 \times 10}{27}\right) - \left(\frac{\frac{10 \times 30 \times 10}{27}}{2}\right) = 370$$

$$\frac{35.5 \times 57 \times 10}{27} \quad 749.$$

$$\frac{26 \times 50 \times 10}{27} = 481.$$

$$\frac{5 \times 34 \times 10}{27} = 63$$

TOTAL = 1811 cu yds

N

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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307-1	02/28/01	1 OF 4

AREAS OF ATTENTION: 7-1 (E).

CONTRACTOR: ITSI (C. CLYDE 925-383-7604); 2 CREWMEN.

EQUIPMENT WORKING: 1 JD BACKHOE W/ VIBRAPLATE; 1 JD 624H LOADER; 1 BOMAG ROLLER COMPACTOR

CYME REPRESENTATIVE: JP. SETTEPANI **REQUESTED BY:** AS REQ'D BY PROJECT

11:55 - ARRIVED AT SITE. ITSI HAS BACKFILLED 7.1 TO ~4' BGS AT THE NORTH END. TESTED 3 LOCATIONS AT 4' BGS, 3' BGS, 2' BGS W/ GOOD RESULTS. AGREED W/ C. CLYDE TO BE BACK ~NOON TOMORROW.

13:00 - MET W/ JD. LENZEN WHO SIGNED COC FOR SAMPLE (B), 1½" DRAINROCK. WE DISCUSSED ISSUE OF GEOTECHNICAL DATA FOR BACKFILL MATERIAL NOT GETTING TO D. BRANNAN. HE SAID THAT HE WOULD TALK W/ J. HALLIDAY + S. ALOSA TO ENSURE THAT D. BRANNAN GETS INFORMATION.

1340 - LEFT SITE.

SUMMARY

- 7.1 CONTINUES TO BE BACKFILLED + MAY BE COMPLETED TOMORROW. SITE 3422 MAY START TOMORROW
- TOOK SAMPLE OF 1½" DRAINROCK TO LAB.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
2/28/01	100	7.1 (E) [EXC., BF.]	-4	10.15	124	#7	95	85	JP	NG
	101	SAME	-3	9.707	124.7	#7	95	85		
	102	SAME	-2	7.969	126.7	#7	97	85		

SOIL TYPE	COC	%OM	MDD
#7 SEWER BACKFILL	572631	7	131

LABORATORY STANDARD: D 698 ASTM.

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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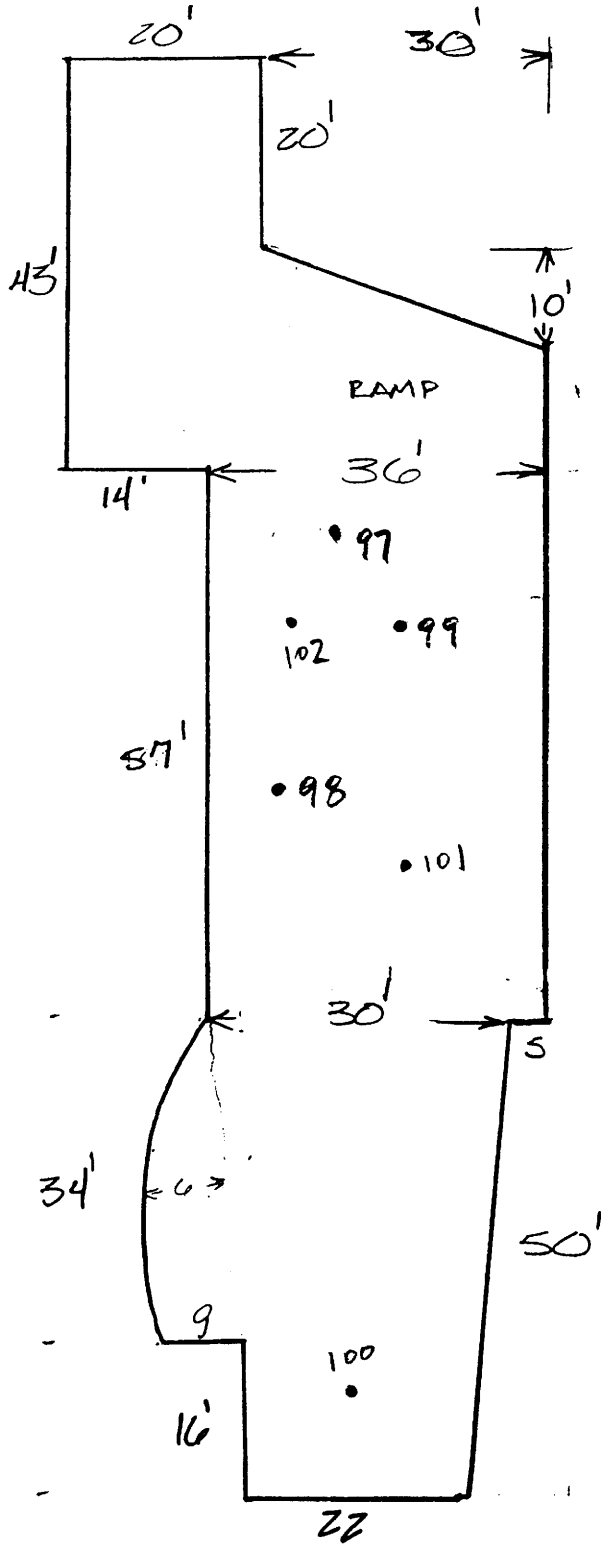

$\frac{20 \times 20 \times 10}{27} = 148$

$\left(\frac{23 \times 50 \times 10}{27}\right) - \left(\frac{\frac{10 \times 30 \times 10}{27}}{2}\right) = 370$

$\frac{35.5 \times 57 \times 10}{27}$ 749.

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TOTAL = 1811 cu yds

N

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	03/01/01	1 OF 3

AREAS OF ATTENTION: 7.1 (E)

CONTRACTOR: ITSI (C. CLYDE 925 383 7604); 2 CREWMAN

EQUIPMENT WORKING: 1 JD BACKHOE W/ VIBRAPLATE; 1 JD 624H LOADER; 1 BOMAG ROLLER COMPACTOR.

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS REQ'D BY PROJECT

1155 ARRIVED AT SITE. ITSI HAS BACKFILLED 7.1 TO ~ 1' BGS AT NORTH END AND ~ 2' BGS AT SOUTHEAST END. ITSI HAS STARTED TO PLACE CLASS 2AB AT SOUTH OF 7.1(E).

1215. TESTED 2 LOCATIONS AT 2' BGS + 1' BGS, RESPECTIVELY (103, 104). RESULTS WERE SATISFACTORY.

1250 - REMINDED K. STONESTREET (SUPERINTENDENT W/ IT) THAT CYME'S CONTRACT IS EXPIRING ON MARCH 12, 2001. HE SAID HE WOULD CALL PROCUREMENT TO ADDRESS THIS.

1300 - LEFT SITE.

SUMMARY

7.1(E) - BACKFILLING CONTINUES.

JP TO REMAIN IN TOUCH W/ ITSI TO SCHEDULE NEXT VISIT.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
03/01/01	103	7.1 (EXC ; BF)	-1	9.238	127.9	#7	98	95	JP	NG
1	104	SAME (EXC ; BF)	-2	9.226	130.4	#7	99	95	JP	NG

SOIL TYPE	COC	%OM	MDD
#7 BACKFILL	572631	7	131

LABORATORY STANDARD: ASTM D698

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

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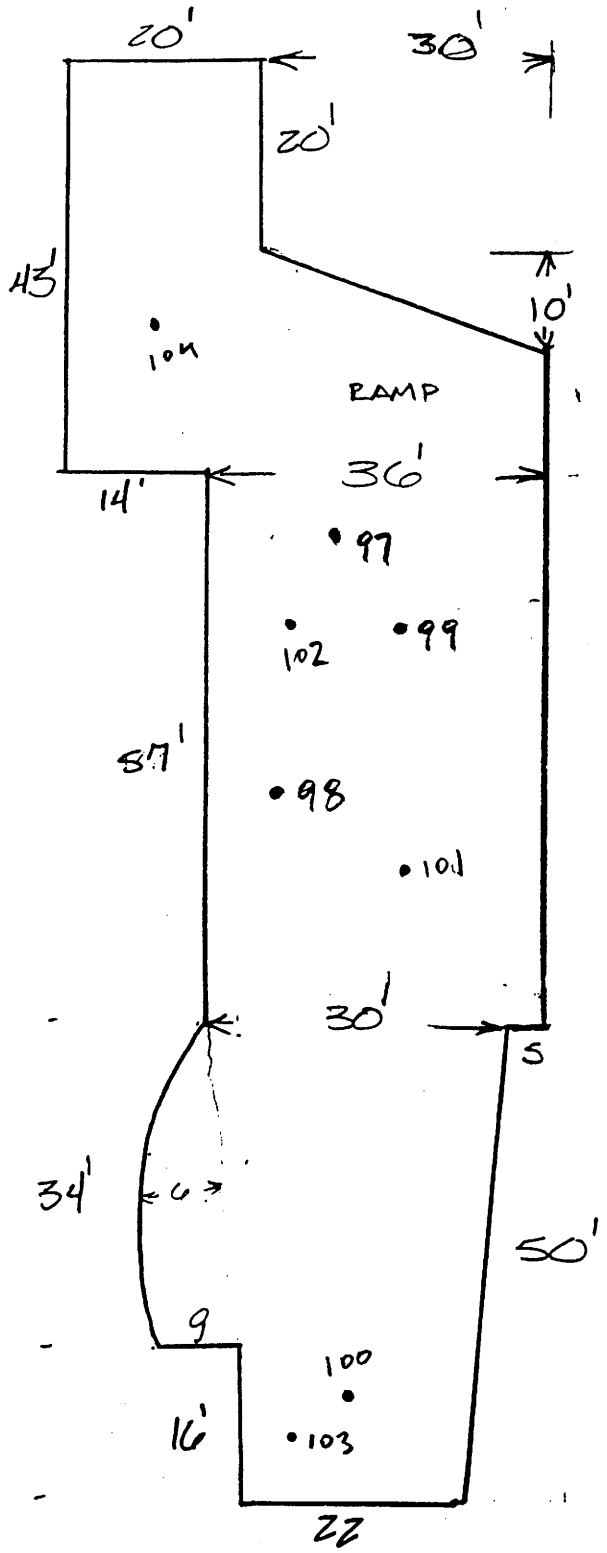

$\frac{20 \times 20 \times 10}{27} = 148$

$\left(\frac{23 \times 50 \times 10}{27}\right) - \left(\frac{\frac{10 \times 30 \times 10}{27}}{2}\right) = 370$

$\frac{35.5 \times 57 \times 10}{27}$ 749.

$\frac{26 \times 50 \times 10}{27} = 481.$

$\frac{5 \times 34 \times 10}{27} = 63$

TOTAL = 1811 cu yds

N

Cyme, Inc.

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	03/06/01	1 of 6

AREAS OF ATTENTION: 7-3/7-5; 7.1(E); 2414

CONTRACTOR: ITSI (CHUCK CLYDE, 925 383 7604; 3 CREWMEN

EQUIPMENT WORKING: 1 TRUCK; 1 JD 450G BULDOZER

CYME REPRESENTATIVE: JP. SETTEZANI **REQUESTED BY:** AS NEEDED BY PROJECT

855 - ARRIVED AT SITE. ITSI PLACING DRAINROCK TO 3' BGS AT EAST END OF 7-3/7.5. BACKFILL HAS BEEN PLACED TO 2' BGS AT WEST HALF OF 7-3/7-5, FILTER FABRIC IS VISIBLE AT SOME SPOTS ALONG THE SHORELINE

915 - TESTED 1 LOCATION AT 2' BGS AT WEST HALF OF 7-3/7-5 WITH SATISFACTORY RESULTS (105).

945 - TESTED 1 LOCATION AT 0' BGS AT 7.1(E) W/GOOD RESULTS (106)

955 - C CLYDE GAVE ME A SAMPLE OF 1½" DRAINROCK FROM VULCAN, NEW SOURCE FOR THE MATERIAL

1010 - TESTED 1 LOCATION AT 0' BGS AT 2414 W/GOOD RESULTS (107)

1040 - TESTED 1 LOCATION AT 1' BGS AT 7.1 W/GOOD RESULTS.

1045 - MADE ARRANGEMENTS W/ MIKE OCHS TO BE BACK AFTER NOON TODAY. LEFT SITE

1300 - RETURNED TO SITE. ITSI HAS ALMOST REACHED FINISH GRADE AT 7-3. DRAINROCK HAS BEEN PLACED TO APPROXIMATELY 3' BGS AT 7-5 PORTION OF EXCAVATION. IT IS AT EASTERNMOST PART OF 7.5.

1325. FILLED UP COC FOR DRAINROCK + HAD J. HALLIDAY SIGN IT.

1335 - ARRANGED W/ MIKE OCHS TO BE BACK AT SITE TOMORROW AFTER 1030

1415. LEFT SITE

SUMMARY

- TOOK 1 SAMPLE OF 1½" DRAINROCK (VULCAN)
- 2414 - ALL FINISHED
- 7.1 - " "
- 7.3 - ALMOST DONE
- 7.5. ITSI WILL CONTINUE ON THIS TOMORROW.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
3/6/01	105	7-3/7.5 (BF, EXC)	-2	10.69	121	#7	92	90	JP	NG
	106	7.1 (E)	0	10.31	128.2	#4	96	95	JP	NG
	107	24 IN	0	7.465	128.5	#4	96	95	JP	NG
	108	7-3/7.5 (BF, EXC)	-1	9.288	121.8	#7	93	90	JP	NG

SOIL TYPE	COC #	%OM	MDD
#7 BACKFILL	572631	7	131
#4 CLASS 2 AB	572632	8	134
LABORATORY STANDARD:			

Cyme, Inc.

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

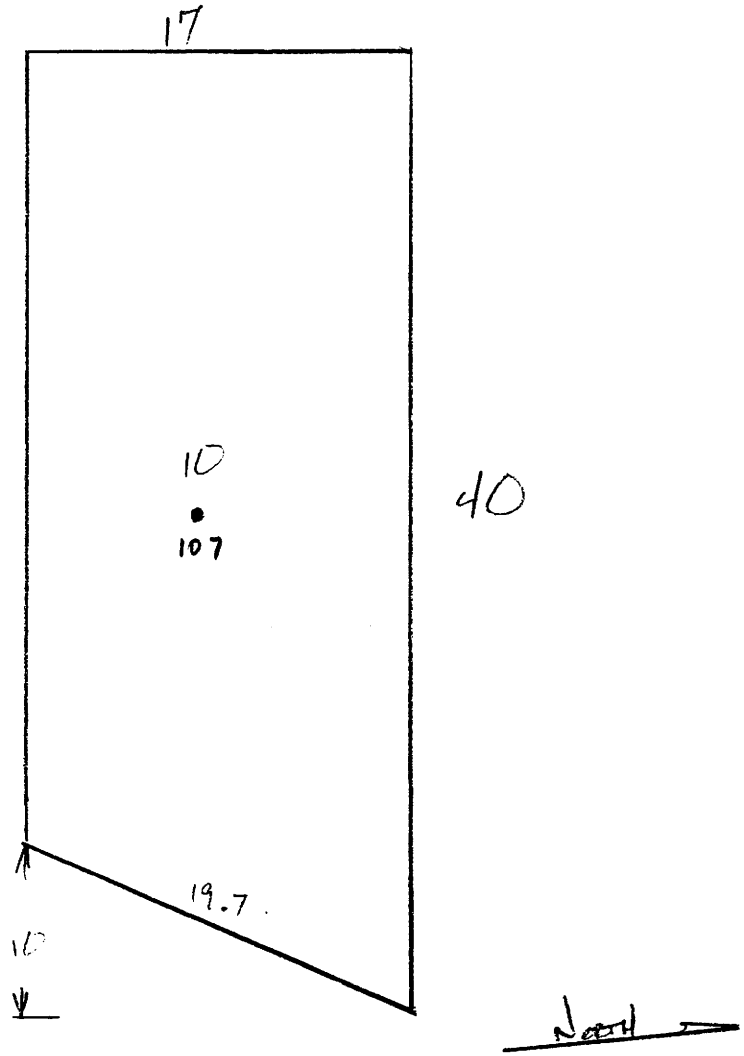
Project	Date	Page
307-1	03/06/01	2 OF 6

Innovative Technical Solutions, Inc. www.itsi.com

By _____ Date _____ Subject EXCAVATION B2414 Sheet No. 3 of 6

Chkd. By _____ Date _____ Project No. _____

$\frac{35' \times 10' \times 17}{27}$ 220.4



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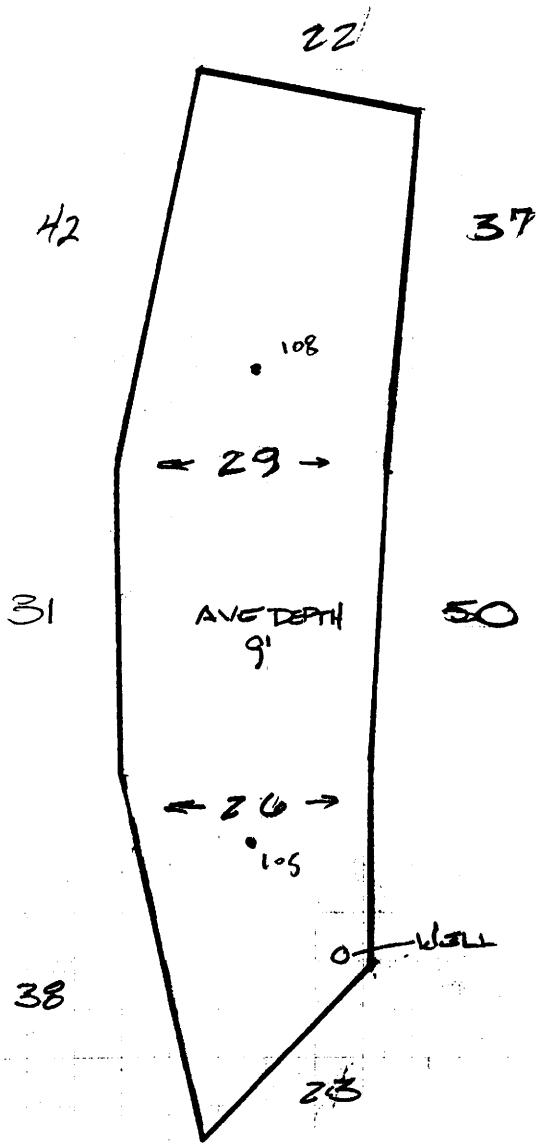
By _____ Date _____ Subject EXCAVATION 7-3 AS OF 2/27 Sheet No. 4 of 6

Chkd. By _____ Date _____ Project No. _____



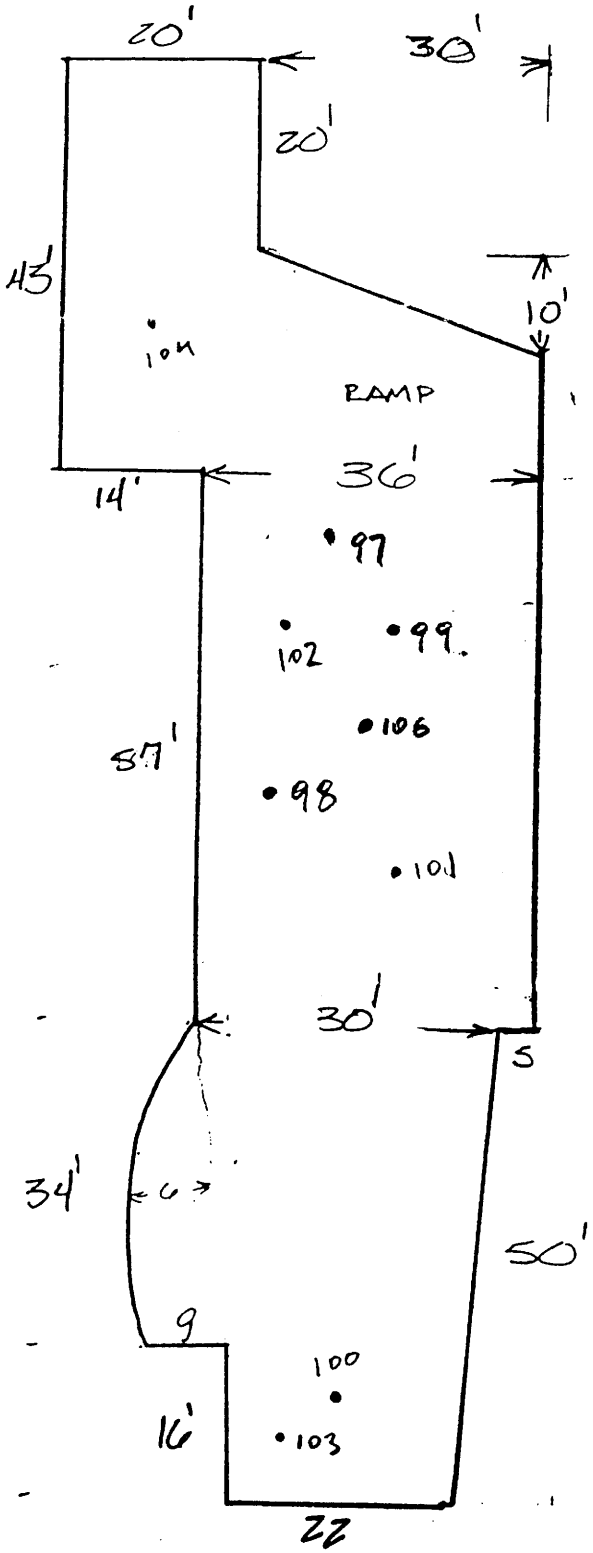
$$\frac{25.5 \times 39.5 \times 9}{27} = 336.1$$

$$\frac{59.5 \times 27 \times 9}{27} = 536.5$$

TOTAL = 872

By _____ Date _____ Subject EXCAVATION 7-1 Sheet No. ~~3 of 3~~ 5 of 6

Chkd. By _____ Date _____ Project No. _____



$$\frac{20 \times 20 \times 10}{27} = 148$$

$$\left(\frac{23 \times 50 \times 10}{27}\right) - \left(\frac{\frac{10 \times 30 \times 10}{27}}{2}\right) = 370$$

$$\frac{35.5 \times 57 \times 10}{27} \quad 749.$$

$$\frac{26 \times 50 \times 10}{27} = 481.$$

$$\frac{5 \times 34 \times 10}{27} = 63$$

TOTAL = 1811 cu yds

N

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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	03/07/01	1 OF 5

AREAS OF ATTENTION: 7.3; 7.5

CONTRACTOR: ITSI (C. CLYDE, 925 383 7604); 4 CREWMEN.

EQUIPMENT WORKING: 1 JD 450G BULDOZER, 1 BOMAG ROLLER COMPACTOR
1 JD 624 H LOADER.

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS NEEDED BY JOB

1130 - ARRIVED AT SITE. ITSI HAS COMPLETED 7.3 + IS BACKFILLING 7.5. AREA OVEREXCAVATED YESTERDAY IS BEING SAMPLED. MIKE OCHS INFORMS ME THAT THEY HAVE AUTHORIZATION TO BACKFILL THIS AREA AS SOON AS SAMPLING IS COMPLETED.

1145 - TEST 1 LOCATION AT 7.5 AT 2' BGS W/ UNSATISFACTORY RESULTS. I ASK ITSI TO BE WORK THE AREA (109).

1200 - WHILE REWORKING IS TAKING PLACE AT 7.5, I TEST SURFACE OF 7.3 W/ SATISFACTORY RESULTS. (110)

1215 - RETEST 1 LOCATION AT 2' BGS AND TEST 1 LOCATION AT 1' BGS W/ GOOD RESULTS. (111, 112).

1245 - RETURN SAMPLES TO IT. JD NOT AVAILABLE TO SIGN COC'S.

1300 - INFORM K. SCONESTREET (IT, SUPERINTENDANT) THAT B. LIN DOES NOT WANT TO RENEW CONTRACT EXPIRING ON MARCH 12. I TOLD HIM THAT I WOULD BE AVAILABLE UNTIL MONDAY TO BRING THE NEW TECHNICIAN UP-TO SPEED.

1310 - TRY TO REACH JD INTENDED TO HAVE HIM SIGN COC'S. W/ OUT SUCCESS.

1315 - GO BACK TO SITE AND ARRANGE W/ MIKE OCHS TO BACK TOMORROW AT 8:00

1330 - HAVE COC'S SIGNED BY JD.

1400 - LEAVE SITE.

→

SUMMARY

- 7-3 COMPLETED
- 7-5 IN PROGRESS - SHOULD BE COMPLETED TOMORROW.
- 3622 - TO START TOMORROW.
- ALL SAMPLES OF LOST BATCH BROUGHT BACK TODAY - JD SIGNED COC'S.

JP. TO RETURN TO SITE AT 8:00 TOMORROW.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
03/07/01	109	7.5 (BF - EXC)	-2	7.243	114.9	# 7	88	90	JD	NG
	110	7.3 (BF - EXC)	-0	7.925	131.4	# 7	100	90		
	111	7.5 (BF - EXC)	-2	8.324	124.4	# 7	95	90		
	112	7.5 (BF - EXC)	-1	8.724	128.1	# 7	98	90		

SOIL TYPE	COC	%OM	MDD
#7 BACKFILL	572631	7	131

LABORATORY STANDARD: ASTM D698

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TABLE 1 - SOILS TESTING

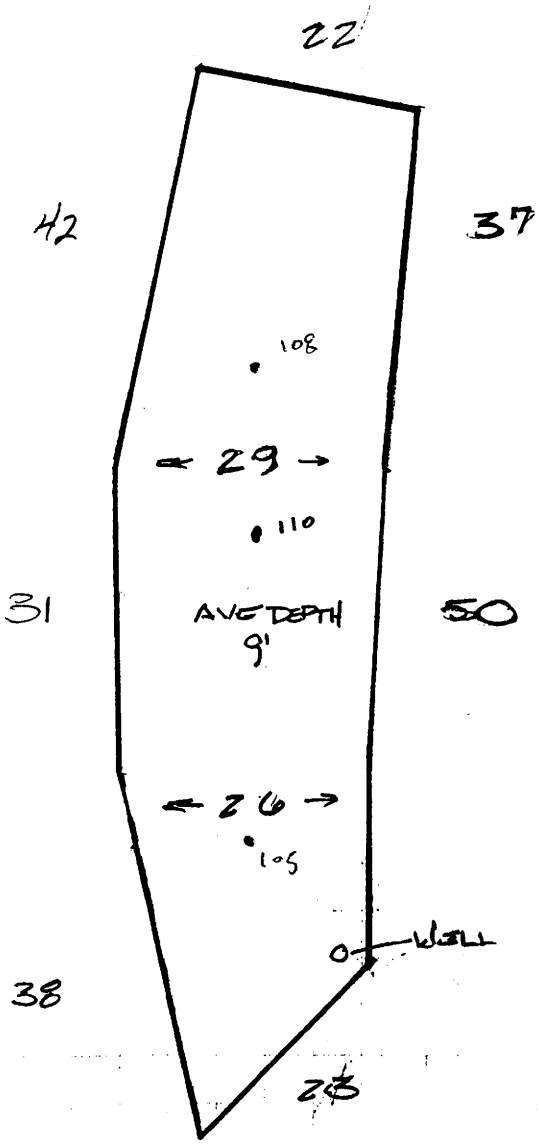
Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	03/07/01	3 of 5

Innovative Technical Solutions, Inc. www.itsi.com

By _____ Date _____ Subject EXCAVATION 7-3 AS OF 2/27 Sheet No. 4 of 5

Chkd. By _____ Date _____ Project No. _____



$$\frac{25.5 \times 39.5 \times 9}{27} = 336.1$$

$$\frac{59.5 \times 27 \times 9}{27} = 536.4$$

TOTAL = 872

Innovative Technical Solutions, Inc. www.itsi.com

By _____ Date _____ Subject EXCAVATION 7-5 AS OF 3-5 Sheet No. 5 of 5

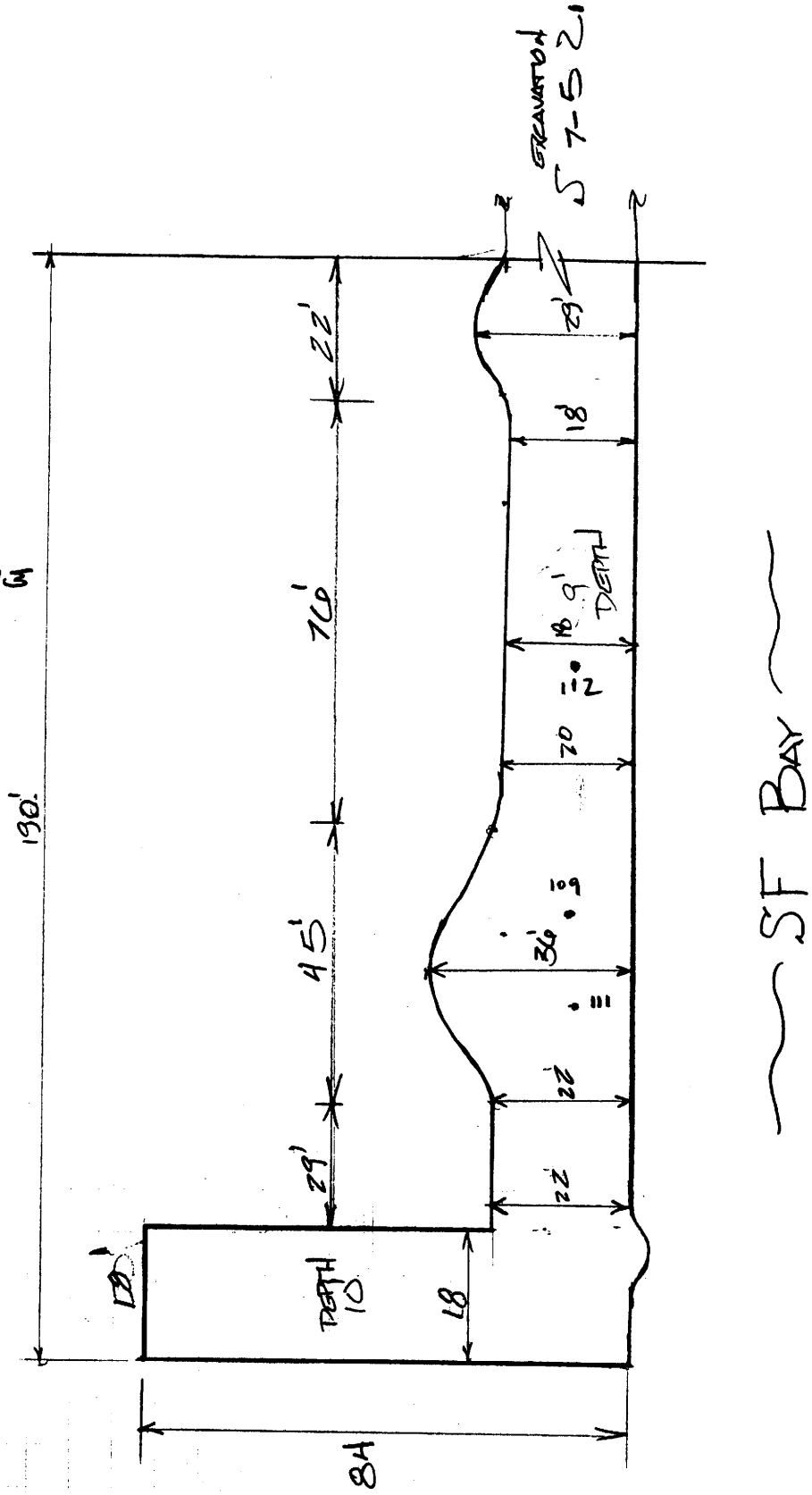
Chkd. By _____ Date _____ REVISED 7-6 Project No. _____

$23.5 \times \frac{190 \times 9}{27} = 1488$

REVISED VOLUME

TOTAL = 1888 cu yards

$18 \times \frac{140 \times 10}{27}$ 400



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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	03/08/01	1 OF 4

AREAS OF ATTENTION: 7-5

CONTRACTOR: ITSI (C CLYDE, 925 383 7604); 3 CREWMEN

EQUIPMENT WORKING: 1 JD 450G BULDOZER, 1 BOMAG ROLLER COMPACTOR, 1 JD 624 H LOADER.

CYME REPRESENTATIVE: JP. SETTEPANI **REQUESTED BY:** AS NEEDED BY JOB

840 - ARRIVED AT SITE. ITSI IS AT 7-5 PLACING FILTER FABRIC OVER DRAW ROCK, 3' BGS. BECAUSE OF THE PRESENCE OF A/C ON THE EAST BOUNDARY OF THE EXCAVATION, THE ISSUE THAT COMPACTION REQUIREMENTS MAY BE 95% FOR THE TOP 3' BGS, WITH THE TOP 1' BGS BEING CLASS 2AB IS BROUGHT UP. I CHECK THE SPECIFICATIONS. SECTION 6.1.3 "EXCEPTIONS" IN PAGE 6-2 IN SPECIFICATIONS LISTS "(...) EXCAVATIONS: 7-3, 7-4, 7-5, B 1324, B 1422, AND THE NORTHERN PORTION OF 7-1." THUS, THE DECISION IS MADE TO APPLY THE SPECIFIED STANDARD OF "90% OF THE MAXIMUM RELATIVE DENSITY" TO ALL OF EXCAVATION 7-5 BECAUSE IT IS SO SPECIFIED IN THE SPECIFICATIONS. [SPECIFICATION IS THE EDITION THAT CYME, INC., WAS PROVIDED, "M2\24FEB99\WESTDIV\PLANS\WPLN109.RV6"].
I AGREE TO BE BACK BETWEEN 1300 AND 1400 TO TEST THE BACKFILL - I INFORM STEVE AIOSA OF SPECS ISSUE + MY RETURN.
915 LEFT SITE.
1300 RETURNED TO SITE. BACKFILLING OF 7-5 IS COMPLETE. ITSI CUTS A RAMP FOR ME TO TEST THE MATERIAL'S COMPACTION. I TESTED 3 LOCATIONS AT 2' BGS, 1' BGS, + GROUND SURFACE W/ GOOD RESULTS. (113 → 115). I ALSO TEST GROUND SURFACE IN PORTION OF 7-5 COMPLETED YESTERDAY W/ GOOD RESULTS. (116).
1345 - ITSI IS STOCKPILING BACKFILL BY FUEL LINE "E" TRENCH, EAST OF 7-5. I AM INFORMED THAT THERE WILL BE WORK TOMORROW, BUT THAT MY PRESENCE WON'T BE REQUIRED

UNTIL MONDAY - I AGREE TO BE IN TOUCH W/ TSI TO DETERMINE THE TIME OF MY NEXT VISIT.

MR. MEET W/ E. SUPERINTENDENT AND AGREE TO CALL HIM TOMORROW TO VERIFY WHAT TIME I NEED TO BE BACK ON MONDAY TO FACILITATE NEW TESTING COMPANY TAKE OVER OF TESTING AT THE EXPIRATION OF CYNET CONTRACT.

1500. LEFT SITE.

SUMMARY

- T-5 - COMPLETE -
- FUEL LINE "F" - STARTING TODAY - WON'T REQUIRE TESTING UNTIL MONDAY.

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
03/08/01	113	7.5 (EXC. BF)	-2	122.4	6.297	#7	93	90	JP	NG
	114	SAME	-1	127.6	6.75	#7	97	90		
	115	SAME	0	129.2	7.362	#7	99	90		
	116	SAME	0	129.3	7.152	#7	99	90		

SOIL TYPE	CoC	%OM	MDD
#7. BACKFILL	572631	7	131

LABORATORY STANDARD: ASTM D698

Cyme, Inc.

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	03/08/01	3 of 4

By _____ Date _____ Subject EXCAVATION 7-5 AS OF 3-5 Sheet No. 4 of 4

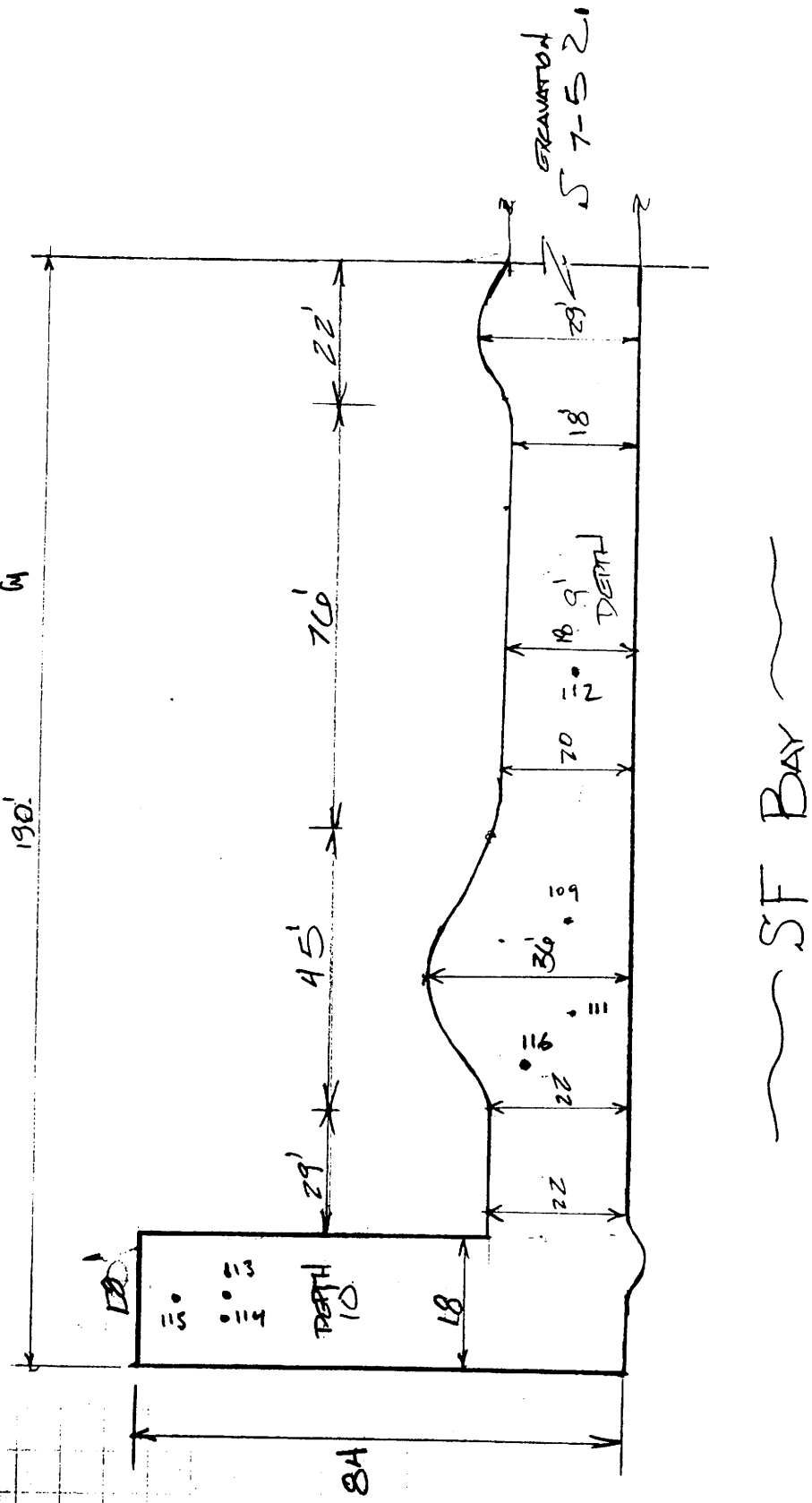
Chkd. By _____ Date _____ REVISED 7-6 Project No. _____

$\frac{23.5 \times 190 \times 9}{27} = 1488$

REVISED VOLUME

TOTAL = 1888 cuyds

$\frac{18 \times 40 \times 10}{27}$ 400



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FIELD DAILY REPORT

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date:	Page
307-1	03/12/01	1 OF 4

AREAS OF ATTENTION: 3622 ; 20-2/4220

CONTRACTOR: ITSI (C. CLYDE, 925 383 7604 ; 3 CREWMEN)

EQUIPMENT WORKING: 1 JD 450 G BULDOZER, 1 JD BACKHOE W/ VIBRAPLATE, 1 JD 624 H LOADER, 1 TRUCK

CYME REPRESENTATIVE: JP. SETTEPANI REQUESTED BY: AS NEEDED BY PROJECT.

955 ARRIVED AT SITE. ITSI HAS BACKFILLED 3622 TO 4' BGS W/ DRAINROCK (+1)+ IS NOW COMPACTING 1 LIFT AT 3' BGS. AT 20-2/4220, DRAINROCK IS BEING PLACED TO ~ 1.5' BGS.

(1) ACCORDING TO BRIAN, OPERATOR.

1025. TESTED 1 LOCATION AT 3' BGS AT 3622 W/ GOOD RESULTS. (117).

1050 MET W/ JD. LENZEN WHO TOLD ME THAT DATA FROM 6 SAMPLES ARE MISSING. I TOLD HIM THAT I WOULD LOOK INTO IT.

1125 TESTED 1 LOCATION AT 2' BGS AT 3622 W/ GOOD RESULTS. (118). ITSI CONTINUES PLACING DRAINROCK IN 20-2/4220.

1130 - I TALKED W/ LAB ABOUT THE SAMPLES. THEY SAID THAT BY A MIS-UNDERSTANDING THEY HAD NOT BEEN SENT BUT HAD BEEN KEPT IN STORAGE. I TALKED W/ E. MUHLENMEISTER ABOUT THIS WHO SAID THAT REGULAR TURNAROUND WOULD BE ok.

1220 TESTED 1 LOCATION AT 1' BGS AT 3622 W/ GOOD RESULTS (119). ITSI CONTINUES SPREADING DRAINROCK AT 20-2/4220.

1235. I RAN INTO JD. LENZEN AND APPRISED HIM OF THE SITUATION W/ THE LAB.

1340 TESTED 1 LOCATION AT 0' BGS AT 3622 W/ GOOD RESULTS (120).

1425 MET W/ K. STONESTREET TO SEE IF I WOULD BE NEEDED WHEN NEW COMPANY TAKES OVER TOMORROW. AGREED TO LEAVE PHONE # W/ HIM IN CASE THERE ARE ANY QUESTIONS.

1445 - LEFT SITE

SUMMARY

- 3622 - BACKFILLED TO GROUND SURFACE.
- 20-2/4420 - BACKFILLED W/ DRAINROCK TO APPROXIMATELY 1.5' BGS. TOP LAYERS REMAIN TO BE PLACED.
- FUEL LINE "F" - BACKFILLING TO RESUME AS SOON AS "OK" GIVEN BY IT, ONCE TETRATECH SAMPLES SIZE [C. CLYDE, TELEPHONE CONVERSATION, 1500, FRIDAY, MARCH 9, 2001]

LOCATION KEY			
BF-	Backfill	SD-	Storm Drain
BP-	Building Pad	SW-	Sewerline
ELC-	Electrical	TR-	Trench
EXC-	Excavation	WL-	Wall
FTG-	Footing	WTL-	Waterline

ELEVATION KEY			
SG-	Subgrade	FSG-	Finish Subgrade
FG-	Finish Grade	FAB-	Finish Aggregate Base
AB-	Aggregate Base	BTM-	Bottom

METHOD KEY	
SC-	Sandcone
NG-	Nuclear Gauge
DT-	Drive Tube

DATE	TEST No.	LOCATION	ELEV.	%M	DD	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
03/12/01	117	3622 (BF; EXC.)	-3	7.889	127.6	#7	97	85	JP	NG
	118	SAME	-2	5.929	133.6	#7	102	95		
	119	SAME	-1	9.051	131.7	#7	100	95		
	120	SAME	0	9.557	131.3	#4	98	95		

SOIL TYPE	COC #	%OM	MDD
#7 BACKFILL	572631	7	131
#4 CLASS 2 AB		8	134

LABORATORY STANDARD: ASTM D 698

Cyme, Inc.

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TABLE 1 - SOILS TESTING

Parcel B- Hunters Point Naval Shipyard
San Francisco, CA

Project	Date	Page
307-1	03/12/01	3 of 4

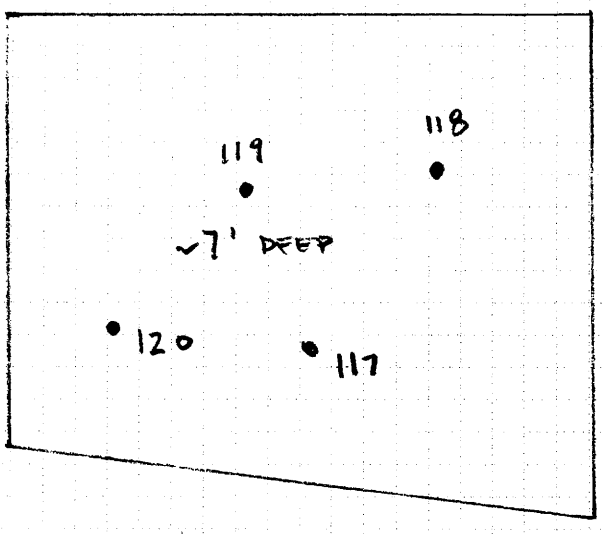
Cyme, Inc.
Professional Consulting Engineers

1485 Bayshore Boulevard, Suite 459
San Francisco, California 94124-3002
Phone: (415) 468-3522 Fax: (415) 468-4715

Project Name: HPS. PARCEL B. SITE 3622
Prepared by: JP
Date Prepared: 03/12/01
Checked by: —
Date Checked: —
Project Number: 307-1 **Page Number:** 4 of 4

N

SCALE: ~ 1/8" = 1'0"



307-1

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572906
Page 1 of 2

Project Name/No. [1] HUNTERS PT / 773247
Sample Team Members [2] RUST / BROWN
Profit Center No. [3] 3771110
Project Manager [4] Jim Robbins
Purchase Order No. [6] 773247-351-
Required Report Date [11] NORMAL

Samples Shipment Date [7] 10/2/00
Lab Destination [8] CYME
Lab Contact [9] J.P. SETTEPANI
Project Contact/Phone [12] WAYNE AKIYAMA 415 671 2408
Carrier/Waybill No. [13]

Bill to: [5] ANDY REDMOND
4005 PORT CHICAGO HWY
CONCORD CA
94520-1120

Report to: [10] WAYNE AKIYAMA
4005 PORT CHICAGO HWY
CONCORD CA
94520-1120

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
0039R016	SOIL 3-4FT 1R10UW01A	9/27/00 0925	SUBAUR	X1	NONE	SIZE COMPONENTS		Perm SPG
0039R017	SOIL 5-6FT 1R10UW01A	0950					FOR LAB USE ONLY	
0039R018	SOIL 6.5-7.5FT 1R10SG041	1020						
~~0039R019~~								
0039R020	SOIL 3-4FT 1R10SG041	11:00					FOR LAB USE ONLY	
0039R021	SOIL 4.5-5.5FT 1R10SG040	1130						
0039R022	SOIL 8.5-9.5FT 1R10SG040	1200						
0039R023	SOIL 4-5FT 1R10SG039	1330					DIST	

FAXED

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive ____ (mos.)

Turnaround Time Required: [26]
Normal ☒ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) D Bergen	Date: 10/2/00 Time: 1100	1. Received by [28] (Signature/Affiliation) JP. S/CYME	Date: 10/2/00 Time: 1100
2. Relinquished by (Signature/Affiliation) JP/CYME	Date: 10/2/00 Time: 1250	2. Received by (Signature/Affiliation) CTL	Date: 10/2/00 Time: 1250
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29] TEST BY METHODS ASTM D2937, ASTM D854, ASTM D2216
ASTM D5084 PERMEABILITY DENSITY SPECIFIC GRAVITY MOISTURE CONTENT

PLEASE FAX ALL COMMENTS AND RETURN

MCA 3/15/97

OCT-28-00 SAT 08:53 PM P.24

White: To accompany samples
Yellow: Field Copy
*See back of form for special instructions.

1012

the group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 572906
Page 2 of 2

Project Name HUNTERS PT

Project No. 773247

Samples Shipment Date

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
0039R024	SOIL 5-6 ft 1R10SG039	9/27/00 14:00	SLEEVE	X 1	NONE	SEE COMMENTS		Perc SPG
0039R025	SOIL 2.5-3.5 ft 1R10UW08A	1500					FOR LAB USE ONLY	
0039R026	SOIL 4.5-5.5 ft 1R10UW08A	1530						
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

9/27/00

PLEASE SAVE the SAMPLES FOR RETURN

White: To accompany samples
Yellow: Field copy

*See back of form for special instructions.

MCA 3/1/98

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015c	Boring:	1R105G040	Date:	10/06/00
Client:	Cyme	Sample:	0039R021	By:	DC
Project:	307-1	Depth:	4.4-5.5'		
Soil:	olive gray clayey SAND w/gravel				

Sample Pressures:
Cell: 53 PSI Bot. Cap: 48 PSI Top Cap: 47 PSI Max. Hydraulic Gradient: 15

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.92+
0	98.33	Start of Test	
123	93.53	1.0 X 10E-6	
282	89.13	8.8 X 10E-7	
313	87.92	8.9 X 10E-7	
366	85.73	9.4 X 10E-7	
409	84.23	9.5 X 10E-7	
507	80.93	9.7 X 10E-7	

Average Permeability: 1 X 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.46
Diameter, in	1.87	1.88
Area, in2	2.75	2.78
Volume in3	6.87	6.83
Total Volume, cc	112.52	111.90
Volume Solids, cc	66.17	66.17
Volume Voids, cc	46.34	45.73
Void Ratio	0.70	0.69
Porosity, %	41.19	40.87
Saturation, %	63.01	90.97
Specific Gravity	2.69	2.69
Wet Weight, gm	207.2	219.6
Dry Weight, gm	178.0	178.0
Tare, gm	0.00	0.00
Moisture, %	16.4	23.4
Dry Density, pcf	98.7	99.3

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015E	Boring:	1R1DSG041	Date:	10/06/00
Client:	Cyme	Sample:	0039R018	By:	DC
Project:	307-1	Depth:	6.5-7.5'		
Soil:	olive brown clayey SAND w/gravel				

Sample Pressures:

Cell:	73 psi	Bot. Cap:	68 psi	Top Cap:	68 psi	Max. Hydraulic Gradient:	4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	28.0	Start of Test	
14	25.7	1.7 x 10E-5	
0	28.0		
33	23.4	1.5 x 10E-5	
66	20.0	1.4 x 10E-5	
101	16.6	1.5 x 10E-5	

Average Permeability: 2 x 10E-5 cm/sec

Sample Data:	Initial		Final
Height, in	2.50		2.50
Diameter, in	1.92		1.93
Area, in2	2.89		2.92
Volume in3	7.22		7.29
Total Volume, cc	118.24		119.48
Volume Solids, cc	72.81		72.81
Volume Voids, cc	45.43		46.66
Void Ratio	0.62		0.64
Porosity, %	38.42		39.06
Saturation, %	80.13		95.36
Specific Gravity	2.70	Assumed	2.70
Wet Weight, gm	233.0		241.1
Dry Weight, gm	196.6		196.6
Tare, gm	0.00		0.00
Moisture, %	18.5		22.6
Dry Density, pcf	103.8		102.7

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015D	Boring:	1R10VW01A	Date:	10/06/00
Client:	Cyme	Sample:	0039R0017	By:	DC
Project:	307-1	Depth:	5-6'		
Soil:	olive gray clayey SAND w/gravel & shale				

Sample Pressures:
Cell: 63 psi Bot. Cap: 58 psi Top Cap: 58 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: ≈ DC
0	28.0	Start of Test	
8	26.6	1.6 X 10E-5	
36	22.9	1.4 X 10E-5	
77	18.2	1.4 X 10E-5	
161	12.2	1.4 X 10E-5	
0	28.0		
7	26.4	2.2 X 10E-5	
13	25.2	2.1 X 10E-5	
22	23.7	2.0 X 10E-5	
52	20.1	1.7 X 10E-5	
82	15.7	1.8 X 10E-5	

Average Permeability: 2 X 10E-5 cm/sec

Sample Data:	Initial		Final
Height, in	2.50		2.52
Diameter, in	1.89		1.89
Area, in2	2.80		2.81
Volume in3	6.99		7.07
Total Volume, cc	114.57		115.85
Volume Solids, cc	71.41		71.41
Volume Voids, cc	43.16		44.45
Void Ratio	0.60		0.62
Porosity, %	37.67		38.36
Saturation, %	90.82		105.07
Specific Gravity	2.70	Assumed	2.70
Wet Weight, gm	232.0		239.5
Dry Weight, gm	192.8		192.8
Tare, gm	0.00		0.00
Moisture, %	20.3		24.2
Dry Density, pcf	105.0		103.8

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015b	Boring:	1R10VW01A	Date:	10/06/00
Client:	Cyme	Sample:	0039R016	By:	DC
Project:	307-1	Depth:	3-4'		
Soil:	dark gray clayey SAND w/gravel				

Sample Pressures:
Cell: 53 psi Bot. Cap: 48 psi Top Cap: 47 psi Max. Hydraulic Gradient: 15

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	98.33	Start of Test	
24	97.33	1.0 x 10E-6	
46	96.13	1.2 x 10E-6	
83	94.33	1.2 x 10E-6	
124	92.33	1.3 x 10E-6	

Average Permeability: 1 x 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.51
Diameter, in	1.90	1.91
Area, in2	2.83	2.85
Volume in3	7.07	7.16
Total Volume, cc	115.79	117.36
Volume Solids, cc	82.52	82.52
Volume Voids, cc	33.27	34.84
Void Ratio	0.40	0.42
Porosity, %	28.73	29.69
Saturation, %	82.36	99.89
Specific Gravity	2.70	2.70
Wet Weight, gm	250.2	257.6
Dry Weight, gm	222.8	222.8
Tare, gm	0.00	0.00
Moisture, %	12.3	15.6
Dry Density, pcf	120.1	118.5

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-015
Client: Cyme
Project: 307-1

Date: 10/06/00
By: DC

Boring:	1R10V-		1R10S-		1R10S-G1	
Sample:	W01A	W01A	G041		G040	
Depth, ft.:	3-4	5-6	6.5-7.5	3-4	4.5-5.5	8.5-9.0
Soil Classification: (visual)	see perm					
	0039R016	0039R017	0039R018	0039R020	0039R021	0039R022
Wt. of Pycnometer Soil & Water, gm:	713	352.05	339.77	715.8	711.4	702
Temp. centigrade:	21	21	21	21	21	21
Wt. of Pycnometer & Water, gm:	671.45	316.14	302.22	675.6	671.87	662.77
Wt. Dry Soil, gm:	66.05	57.17	60.17	63.95	62.97	62.43
Temp. Correction Factor:	1	1	1	1	1	1
Specific Gravity:	2.70	2.69	2.66	2.69	2.69	2.69

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015h	Boring:	1R10SG041	Date:	10/09/00
Client:	Cyme	Sample:	0039R020	By:	DC
Project:	307-1	Depth:	3-4'		
Soil:	brown clayey SAND w/gravel				

Sample Pressures:

Cell:	53 psi	Bot. Cap:	48 psi	Top Cap:	48 psi	Max. Hydraulic Gradient:	15

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	98.33	Start of Test	
7	90.83	2.9 x 10E-5	
12	85.63	3.0 x 10E-5	
21	76.29	3.1 x 10E-5	
29	71.13	2.9 x 10E-5	

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.46
Diameter, in	1.89	1.91
Area, in2	2.81	2.87
Volume in3	7.01	7.05
Total Volume, cc	114.94	115.50
Volume Solids, cc	78.62	78.62
Volume Voids, cc	36.31	36.88
Void Ratio	0.46	0.47
Porosity, %	31.59	31.93
Saturation, %	74.08	96.81
Specific Gravity	2.69	2.69
Wet Weight, gm	238.4	247.2
Dry Weight, gm	211.5	211.5
Tare, gm	0.00	0.00
Moisture, %	12.7	16.9
Dry Density, pcf	114.8	114.3

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015f	Boring:	1R10SG039	Date:	10/09/00
Client:	Cyme	Sample:	0039R0024	By:	DC
Project:	307-1	Depth:	5-6'		
Soil:	olive gray clayey SAND w/gravel				

Sample Pressures:
Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 21

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: ≈ 0.98
0	24.0	Start of Test	
15	19.6	2.4 x 10E-5	
51	13.7	1.8 x 10E-5	
95	9.6	1.7 x 10E-5	
171	5.9	1.4 x 10E-5	
0	51.69		
11	42.69	3.0 x 10E-5	
54	22.69	2.7 x 10E-5	
70	17.69	2.7 x 10E-5	
99	11.74	2.7 x 10E-5	

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial		Final
Height, in	2.00		2.00
Diameter, in	1.80		1.80
Area, in2	2.54		2.54
Volume in3	5.09		5.09
Total Volume, cc	83.40		83.40
Volume Solids, cc	52.52		52.52
Volume Voids, cc	30.88		30.88
Void Ratio	0.59		0.59
Porosity, %	37.03		37.03
Saturation, %	97.79		111.72
Specific Gravity	2.70	Assumed	2.70
Wet Weight, gm	172.0		176.3
Dry Weight, gm	141.8		141.8
Tare, gm	0.00		0.00
Moisture, %	21.3		24.3
Dry Density, pcf	106.1		106.1

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015g	Boring:	1R10SG040	Date:	10/09/00
Client:	Cyme	Sample:	0039R022	By:	DC
Project:	307-1	Depth:	8.5-9.5'		
Soil:	gray clayey SAND w/gravel & shale				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 21

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: = 0.97
0	24.0	Start of Test	
19	23.1	4.1 x 10E-6	
61	21.9	3.3 x 10E-6	
104	20.7	2.9 x 10E-6	
182	18.9	2.7 x 10E-6	
506	13.5	2.5 x 10E-6	
0	51.69		
19	50.69	2.3 x 10E-6	
61	48.24	2.5 x 10E-6	
119	45.29	2.4 x 10E-6	
174	42.69	2.4 x 10E-6	
289	37.69	2.2 x 10E-6	

Average Permeability: 2 x 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.47
Diameter, in	1.82	1.81
Area, in2	2.60	2.58
Volume in3	6.50	6.38
Total Volume, cc	106.58	104.61
Volume Solids, cc	67.70	67.70
Volume Voids, cc	38.88	36.91
Void Ratio	0.57	0.55
Porosity, %	36.48	35.29
Saturation, %	83.07	99.43
Specific Gravity	2.69	2.69
Wet Weight, gm	214.4	218.8
Dry Weight, gm	182.1	182.1
Tare, gm	0.00	0.00
Moisture, %	17.7	20.2
Dry Density, pcf	106.6	108.6

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015J	Boring:	1R10VW08A	Date:	10/10/00
Client:	Cyme	Sample:	0039R026	By:	DC
Project:	307-1	Depth:	4.5-5.5'		
Soil:	brown clayey GRAVEL w/sand				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	28.0	Start of Test	
1	18.4	1.0 x 10E-3	
2	12.6	1.0 x 10E-3	
3	8.0	1.0 x 10E-3	
4	5.6	1.0 x 10E-3	
5	3.4	1.0 x 10E-3	

10E-3 is approaching the limits of the equipment.

Average Permeability: 1 x 10E-3 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.49
Diameter, in	1.90	1.89
Area, in2	2.84	2.81
Volume in3	7.09	6.99
Total Volume, cc	116.15	114.48
Volume Solids, cc	67.96	67.96
Volume Voids, cc	48.19	46.51
Void Ratio	0.71	0.68
Porosity, %	41.49	40.63
Saturation, %	58.52	95.67
Specific Gravity	2.75	2.75
Wet Weight, gm	215.1	231.4
Dry Weight, gm	186.9	186.9
Tare, gm	0.00	0.00
Moisture, %	15.1	23.8
Dry Density, pcf	100.4	101.9

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-015k	Boring:	1R10VW08A	Date:	10/10/00
Client:	Cyme	Sample:	0039R025	By:	DC
Project:	307-1	Depth:	2.5-3.5'		
Soil:	brown clayey SAND w/gravel				

Sample Pressures:
Cell: 63 psi Bot. Cap: 58 psi Top Cap: 58 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.96
0	28.0	Start of Test	
35	27.6	9.8 x 10E-7	
64	26.8	1.6 x 10E-6	
974	18.3	1.1 x 10E-6	
1027	18.0	1.1 x 10E-6	
1067	17.8	1.1 x 10E-6	
0	98.33		
9	97.73	1.7 x 10E-6	

Average Permeability: 1 x 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.47
Diameter, in	1.90	1.87
Area, in2	2.84	2.75
Volume in3	7.09	6.78
Total Volume, cc	116.15	111.17
Volume Solids, cc	79.79	79.79
Volume Voids, cc	36.37	31.38
Void Ratio	0.46	0.39
Porosity, %	31.31	28.23
Saturation, %	62.14	95.92
Specific Gravity	2.80	2.80
Wet Weight, gm	246.0	253.5
Dry Weight, gm	223.4	223.4
Tare, gm	0.00	0.00
Moisture, %	10.1	13.5
Dry Density, pcf	120.0	125.4

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-015i
Client: Cyme
Project: 307-1

Date: 10/10/00
By: DC

Boring:	1R10S-	1R10V-				
Sample:	G039	W08A				
Depth, ft.:	5-6	2.5-3.5	4.5-5.5			
Soil Classification: (visual)	SEE PERM					
	0039R024	0039R025	0039R026			
Wt. of Pycnometer Soil & Water, gm:	720.85	712.52	716.51			
Temp. centigrade:	20	20	20			
Wt. of Pycnometer & Water, gm:	675.7	662.89	671.55			
Wt. Dry Soil, gm:	72.71	77.17	70.62			
Temp. Correction Factor:	1	1	1			
Specific Gravity:	2.64	2.80	2.75	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

251-010 12 Request #

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No. 57290

Page 2 of 2

Project Name HUNTERS POINT

Project No. 773247

Samples Shipment Date 9/28/00

ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
0039R037	SOIL 6-7 ft 1R10SG047	9/28/00 1440	SS SCREW	X 1	NONE	SEE COMMENTS		SPG Perm
0039R038	SOIL 7.5-8.5 ft 1R10SG047	1500					FOR LAB USE ONLY	
0039R039	SOIL 6-7 ft 1R10VW14A	1520						
0039R040	SOIL 9-10 ft 1R10VW14A	1520						
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
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							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

9/28/00

FAXED 10/16

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*See back of form for special instructions.

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572907
Page 1 of 2

Project Name/No.[1] HUNTERS PT 773247
Sample Team Members[2] RUST / BROWN
Profit Center No.[3] 3771110
Project Manager[4] Jim Robbins
Purchase Order No.[6] 773247-351-154787
Required Report Date[11] NORMAL

Samples Shipment Date[7] 4/28/00 (10/2/00) (JD)
Lab Destination[8] CYMR
Lab Contact[9] JP SETTRPAN
Project Contact/Phone[12] WAYNE AKIYAMA 415 6712408
Carrier/Waybill No.[13]

Bill to:[5] ANDY REDMOND
4005 PORT CHICAGO HWY
CONCORD CA
94520-1120

Report to:[10] WAYNE AKIYAMA
4005 PORT CHICAGO HWY
CONCORD CA
94520-1120

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Preservative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
0039R027	SOIL 6.5-7.5FT 1R10SG043	4/28/00 0730	SS SLEEVE	X1	NONE	SEE COMMENTS		PERM SPL
0039R028	SOIL 8.5-9.5FT 1R10SG043	0800					FOR LAB USE ONLY	
0039R030	SOIL 6.5-7.5FT 1R10UW09A	0845						
0039R031	SOIL 8.5-9.5FT 1R10UW09A	0900						
0039R033	SOIL 4.5-5.5FT 1R10UW06A	1010						
0039R034	SOIL 9-10FT 1R10UW6A	1035					FOR LAB USE ONLY	
0039R035	SOIL DEPTH 4.5-5.5 1R10UW12A	1150						
0039R036	SOIL 8.5-9.5FT 1R10UW12A	1210						

Special Instructions:[23]

Possible Hazard Identification:[24] Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required:[26] Normal ☐ Rush ☐

QC Level:[27] I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) JD Conyers	Date: 10/2/00 Time: 1100	1. Received by[28] (Signature/Affiliation) JP.S / CYMR	Date: 10/2/00 Time: 1100
2. Relinquished by (Signature/Affiliation) JP/CYMR	Date: 10/2/00 Time: 12.50	2. Received by (Signature/Affiliation)	Date: 10/2 Time: 1250
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation) A.C. CTL	Date: Time:

Comments:[29] TEST BY METHODS, ASTM D2937 (DENSITY), ASTM D854 (SPECIFIC GRAVITY), ASTM D2216 (MOISTURE CONTENT), ASTM D5084 (PERMEABILITY)

PLEASE SAVE ALL SAMPLES FOR RETURN.

MCA 3/15/91

*See back of form for special instructions.

White: To accompany samples
Yellow: Field Copy

OCT-28-00 SAT 08:40 PM P.03

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-023	Boring:		Date:	10/19/00
Client:	Cyme	Sample:	0040R058	By:	DC
Project:	Hunters Point	Depth:	9-10'		
Soil:	brown sandy CLAY w/gravel				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.97
0	28.0	Start of Test	
7	22.0	8.9 x 10E-5	
0	28.0		
19	10.0	1.4 x 10E-4	
0	28.0		
2	25.1	1.6 x 10E-4	
4	23.0	1.4 x 10E-4	
7	19.8	1.4 x 10E-4	
11	16.4	1.4 x 10E-4	
16	13.1	1.4 x 10E-4	

Average Permeability: 1 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.50
Diameter, in	1.86	1.85
Area, in2	2.72	2.69
Volume in3	6.79	6.71
Total Volume, cc	111.32	109.90
Volume Solids, cc	65.31	65.31
Volume Voids, cc	46.00	44.59
Void Ratio	0.70	0.68
Porosity, %	41.33	40.57
Saturation, %	79.99	97.33
Specific Gravity	2.73	2.73
Wet Weight, gm	215.1	221.7
Dry Weight, gm	178.3	178.3
Tare, gm	0.00	0.00
Moisture, %	20.6	24.3
Dry Density, pcf	99.9	101.2

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017h	Boring:	1R10VW12A	Date:	10/11/00
Client:	Cyme	Sample:	0039R036	By:	DC
Project:	Hunters Point	Depth:	8.5-9.5'		
Soil:	olive gray clayey SAND w/gravel				

Sample Pressures:
Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.96
0	28.0	Start of Test	
1	19.8	8.9 x 10E-4	
2	14.4	8.6 x 10E-4	
3	10.6	8.9 x 10E-4	
4	8.0	8.1 x 10E-4	
5	6.2	7.8 x 10E-4	
0	28.0		
2	14.0	9.0 x 10E-4	
3	10.0	8.9 x 10E-4	
5	5.8	8.2 x 10E-4	
0	28.0		
2	13.4	9.6 x 10E-4	

Average Permeability: 9 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.47
Diameter, in	1.86	1.84
Area, in2	2.72	2.66
Volume in3	6.79	6.57
Total Volume, cc	111.32	107.63
Volume Solids, cc	67.81	67.81
Volume Voids, cc	43.50	39.82
Void Ratio	0.64	0.59
Porosity, %	39.08	36.99
Saturation, %	56.09	99.46
Specific Gravity	2.65	2.65
Wet Weight, gm	204.1	219.3
Dry Weight, gm	179.7	179.7
Tare, gm	0.00	0.00
Moisture, %	13.6	22.0
Dry Density, pcf	100.7	104.2

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017g	Boring:	1R10VW12A	Date:	10/11/00
Client:	Cyme	Sample:	0039R035	By:	DC
Project:	Hunters Point	Depth:	4.5-5.5'		
Soil:	olive brown clayey SAND w/gravel				

Sample Pressures:

Cell: 43 psi Bot. Cap: 38 psi Top Cap: 37 psi Max. Hydraulic Gradient: 21

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: = 0.97
0	24.0	Start of Test	
2	21.1	1.3 x 10E-4	
9	14.6	1.1 x 10E-4	
0	24.0		
3	19.0	1.6 x 10E-4	
5	16.6	1.5 x 10E-4	
9	12.8	1.4 x 10E-4	
0	51.69		
1	48.29	1.4 x 10E-4	

Average Permeability: 1 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.45
Diameter, in	1.86	1.85
Area, in2	2.72	2.70
Volume in3	6.79	6.61
Total Volume, cc	111.32	108.39
Volume Solids, cc	63.12	63.12
Volume Voids, cc	48.19	45.26
Void Ratio	0.76	0.72
Porosity, %	43.29	41.76
Saturation, %	70.55	95.89
Specific Gravity	2.72	2.72
Wet Weight, gm	205.7	215.1
Dry Weight, gm	171.7	171.7
Tare, gm	0.00	0.00
Moisture, %	19.8	25.3
Dry Density, pcf	96.2	98.9

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017f	Boring:	1R100WGA	Date:	10/11/00
Client:	Cyme	Sample:	0039R034	By:	DC
Project:	Hunters Point	Depth:	9-10'		
Soil:	olive brown clayey SAND				

Sample Pressures:

Cell:	53 psi	Bot. Cap:	48 psi	Top Cap:	47 psi	Max. Hydraulic Gradient:	21

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: = 1.0
0	24.0	Start of Test	
8	23.5	5.4 x 10E-6	
56	21.9	3.3 x 10E-6	
69	21.5	3.3 x 10E-6	
0	51.69		
21	49.29	4.6 x 10E-6	
38	48.09	4.1 x 10E-6	
53	47.29	3.4 x 10E-6	

Average Permeability: 4 x 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.47
Diameter, in	1.84	1.85
Area, in2	2.67	2.67
Volume in3	6.67	6.60
Total Volume, cc	109.29	108.21
Volume Solids, cc	66.02	66.02
Volume Voids, cc	43.27	42.20
Void Ratio	0.66	0.64
Porosity, %	39.60	39.00
Saturation, %	78.80	97.64
Specific Gravity	2.66	2.66
Wet Weight, gm	209.7	216.8
Dry Weight, gm	175.6	175.6
Tare, gm	0.00	0.00
Moisture, %	19.4	23.5
Dry Density, pcf	100.3	101.3

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017A	Boring:	1R10VW06A	Date:	10/11/00
Client:	Cyme	Sample:	0039R033	By:	DC
Project:	Hunters Point	Depth:	4.5-5.5'		
Soil:	brown clayey SAND w/gravel				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec *B: = 1.0
0	28.0	Start of Test
7	26.0	2.7 x 10E-5
14	24.9	2.2 x 10E-5
48	21.0	1.6 x 10E-5
0	28.0	
4	26.3	4.0 x 10E-5
10	25.8	2.1 x 10E-5
30	20.7	2.7 x 10E-5

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.48
Diameter, in	1.82	1.85
Area, in2	2.61	2.69
Volume in3	6.53	6.66
Total Volume, cc	107.05	109.06
Volume Solids, cc	69.35	69.35
Volume Voids, cc	37.69	39.71
Void Ratio	0.54	0.57
Porosity, %	35.21	36.41
Saturation, %	92.59	99.98
Specific Gravity	2.79	2.79
Wet Weight, gm	228.4	233.2
Dry Weight, gm	193.5	193.5
Tare, gm	0.00	0.00
Moisture, %	18.0	20.5
Dry Density, pcf	112.8	110.7

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017e	Boring:	1R10VW09A	Date:	10/11/00
Client:	Cyme	Sample:	0039R031	By:	DC
Project:	Hunters Point	Depth:	8.5-9.5'		
Soil:	olive brown clayey SAND w/serpentine				

Sample Pressures:
Cell: 43 psi Bot. Cap: 38 psi Top Cap: 38 psi Max. Hydraulic Gradient: 21

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: ≈ 0.96
0	24.0	Start of Test	
9	20.1	3.6 x 10E-5	
19	16.6	3.5 x 10E-5	
40	11.3	3.4 x 10E-5	
0	51.69		
9	43.99	3.3 x 10E-5	
27	31.39	3.4 x 10E-5	

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.48
Diameter, in	1.95	1.91
Area, in2	2.99	2.87
Volume in3	7.47	7.13
Total Volume, cc	122.35	116.81
Volume Solids, cc	73.95	73.95
Volume Voids, cc	48.39	42.85
Void Ratio	0.65	0.58
Porosity, %	39.55	36.69
Saturation, %	61.99	99.88
Specific Gravity	2.63	2.63
Wet Weight, gm	224.5	237.3
Dry Weight, gm	194.5	194.5
Tare, gm	0.00	0.00
Moisture, %	15.4	22.0
Dry Density, pcf	99.2	103.9

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017d	Boring:	1R10VW09A	Date:	10/11/00
Client:	Cyme	Sample:	0039R030	By:	DC
Project:	Hunters Point	Depth:	6.5-7.5'		
Soil:	olive brown clayey SAND w/weathered serpentine				

Sample Pressures:
Cell: 43 psi Bot. Cap: 38 psi Top Cap: 38 psi Max. Hydraulic Gradient: 10

Elapsed Time (min)	Head, (in)	K, cm/sec	*B: = 0.96
0	24.0	Start of Test	
2	19.6	2.0 x 10E-4	
5	14.8	1.9 x 10E-4	
7	12.5	1.8 x 10E-4	
0	24.0		
2	19.6	2.1 x 10E-4	

Average Permeability: 2 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.42
Diameter, in	1.85	1.83
Area, in2	2.69	2.63
Volume in3	6.72	6.37
Total Volume, cc	110.12	104.31
Volume Solids, cc	63.55	63.55
Volume Voids, cc	46.57	40.76
Void Ratio	0.73	0.64
Porosity, %	42.29	39.08
Saturation, %	64.63	96.91
Specific Gravity	2.65	2.65
Wet Weight, gm	198.5	207.9
Dry Weight, gm	168.4	168.4
Tare, gm	0.00	0.00
Moisture, %	17.9	23.5
Dry Density, pcf	95.4	100.7

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017b	Boring:	1R10SG043	Date:	10/11/00
Client:	Cyme	Sample:	0039R028	By:	DC
Project:	Hunters Point	Depth:	8.5-9.5'		
Soil:	olive brown clayey SAND				

Sample Pressures:
Cell: 63 psi Bot. Cap: 58 psi Top Cap: 58 psi Max. Hydraulic Gradient: 15

Elapsed Time (min)	Head, (cm)	K, cm/sec *B: = 0.95
0	98.33	Start of Test
75	96.93	4.7 x 10E-7
954	87.23	3.1 x 10E-7
0	168.68	
4	168.28	1.5 x 10E-6
22	167.83	5.4 x 10E-7
42	167.28	4.9 x 10E-7
87	166.28	4.0 x 10E-7
107	166.08	3.6 x 10E-7
138	165.18	3.9 x 10E-7

Average Permeability: 4 x 10E-7 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.51
Diameter, in	1.91	1.92
Area, in2	2.87	2.90
Volume in3	7.16	7.27
Total Volume, cc	117.38	119.09
Volume Solids, cc	78.31	78.31
Volume Voids, cc	39.07	40.77
Void Ratio	0.50	0.52
Porosity, %	33.28	34.24
Saturation, %	77.05	97.37
Specific Gravity	2.67	2.67
Wet Weight, gm	239.2	248.8
Dry Weight, gm	209.1	209.1
Tare, gm	0.00	0.00
Moisture, %	14.4	19.0
Dry Density, pcf	111.2	109.6

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-017c	Boring:	1R10SG043	Date:	10/11/00
Client:	Cyme	Sample:	0039R027	By:	DC
Project:	Hunters Point	Depth:	6.5-7.5'		
Soil:	olive brown clayey SAND				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 15

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	28.0	Start of Test	
13	27.0	7.6 x 10E-6	
39	25.0	7.9 x 10E-6	
85	21.9	7.8 x 10E-6	
0	28.0		
18	26.8	6.6 x 10E-6	
33	26.0	6.1 x 10E-6	
0	98.33		
3	96.93	7.4 x 10E-6	
6	91.53	6.5 x 10E-6	
24	88.03	8.1 x 10E-6	
45	79.63	6.4 x 10E-6	

Average Permeability: 7 x 10E-6 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.51
Diameter, in	1.82	1.82
Area, in2	2.60	2.60
Volume in3	6.50	6.53
Total Volume, cc	106.58	107.01
Volume Solids, cc	64.66	64.66
Volume Voids, cc	41.92	42.35
Void Ratio	0.65	0.65
Porosity, %	39.33	39.57
Saturation, %	76.10	94.93
Specific Gravity	2.64	2.64
Wet Weight, gm	202.6	210.9
Dry Weight, gm	170.7	170.7
Tare, gm	0.00	0.00
Moisture, %	18.7	23.6
Dry Density, pcf	99.9	99.5

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-017 Date: 10/11/00
Client: Cyme By: DC
Project: Hunters Point

Boring:	1R10S-G043		1R10V-W09A		1R10V-W06A	
Sample:						
Depth, ft.:	6.5-7.5	8.5-9.5	6.5-7.5	8.5-9.5	4.5-5.5	9-10
Soil Classification: (visual)	SEE PERM					
	0039R027	0039R028	0039R030	0039R031	0039R033	0039R034
Wt. of Pycnometer Soil & Water, gm:	357.85	343.65	707.5	691.2	722.3	710.7
Temp. centigrade:	19	19	19	19	19	19
Wt. of Pycnometer & Water, gm:	316.23	302.31	662.99	671.67	675.8	672.06
Wt. Dry Soil, gm:	67.01	66.16	71.52	31.54	72.44	61.85
Temp. Correction Factor:	1	1	1	1	1	1
Specific Gravity:	2.64	2.67	2.65	2.63	2.79	2.66

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-018a	Boring:		Date:	10/13/00
Client:	Cyme	Sample:	0039R037	By:	DC
Project:	Hunters Point	Depth:	6-7'		
Soil:	olive brown clayey SAND w/serpentine				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.99
0	28.0	Start of Test	
2	27.0	4.8 x 10E-5	
7	25.7	3.2 x 10E-5	
15	23.2	3.3 x 10E-5	
25	20.2	3.4 x 10E-5	
114	7.3	3.1 x 10E-5	

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.49
Diameter, in	1.85	1.86
Area, in2	2.69	2.72
Volume in3	6.72	6.77
Total Volume, cc	110.12	110.87
Volume Solids, cc	69.70	69.70
Volume Voids, cc	40.42	41.17
Void Ratio	0.58	0.59
Porosity, %	36.71	37.13
Saturation, %	77.19	96.43
Specific Gravity	2.67	2.67
Wet Weight, gm	217.3	225.8
Dry Weight, gm	186.1	186.1
Tare, gm	0.00	0.00
Moisture, %	16.8	21.3
Dry Density, pcf	105.5	104.7

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-018 Date: 10/13/00
Client: CYME By: DC
Project: 307-1 Hunters Point

Boring:	0039R037	0039R038	0039R039	0039R040		
Sample:						
Depth, ft.:	6-7	7.5-8.5	6-7	9-10		
Soil Classification: (visual)	see perm					
Wt. of Pycnometer Soil & Water, gm:	715.2	716.1	353.91	342.68		
Temp. centigrade:	18	18	18	18		
Wt. of Pycnometer & Water, gm:	675.9	672.13	316.27	302.36		
Wt. Dry Soil, gm:	62.87	69.25	60.19	63.9		
Temp. Correction Factor:	1	1	1	1		
Specific Gravity:	2.67	2.74	2.67	2.71	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-017I			Date: 10/13/00			
Client: Cyme			By: DC			
Project: Hunters Point						
Boring:	1R10V-					
Sample:	W12A					
Depth, ft.:	4.5-5.5	8.5-9.5				
Soil Classification: (visual)	SEE PERM					
	0039R035	0039R036				
Wt. of Pycnometer Soil & Water, gm:	705.7	716.1				
Temp. centigrade:	18	18				
Wt. of Pycnometer & Water, gm:	663.1	671.78				
Wt. Dry Soil, gm:	67.41	71.25				
Temp. Correction Factor:	1	1				
Specific Gravity:	2.72	2.65	ERR	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-018c	Boring:		Date:	10/16/00
Client:	Cyme	Sample:	0039R040	By:	DC
Project:	Hunters Point	Depth:	9-10'		
Soil:	gray clayey SAND w/serpentine				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	28.0	Start of Test	
11	23.4	4.1 x 10E-5	
25	18.1	4.4 x 10E-5	
67	9.2	4.2 x 10E-5	
76	8.2	4.0 x 10E-5	

Average Permeability: 4 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.50
Diameter, in	1.89	1.90
Area, in2	2.82	2.84
Volume in3	7.04	7.07
Total Volume, cc	115.42	115.92
Volume Solids, cc	70.30	70.30
Volume Voids, cc	45.13	45.63
Void Ratio	0.64	0.65
Porosity, %	39.10	39.36
Saturation, %	75.56	96.00
Specific Gravity	2.71	2.71
Wet Weight, gm	224.6	234.3
Dry Weight, gm	190.5	190.5
Tare, gm	0.00	0.00
Moisture, %	17.9	23.0
Dry Density, pcf	103.0	102.5

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-018b	Boring:		Date:	10/16/00
Client:	Cyme	Sample:	0039R039	By:	DC
Project:	Hunters Point	Depth:	6-7'		
Soil:	olive gray clayey SAND w/serpentine				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 6

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	28.0	Start of Test	
9	12.8	1.9 x 10E-4	
0	28.0		
2	18.6	4.4 x 10E-4	
3	15.0	4.5 x 10E-4	
4	12.2	4.5 x 10E-4	
5	10.0	4.4 x 10E-4	
6	8.0	4.5 x 10E-4	

Average Permeability: 4 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in	2.00	2.03
Diameter, in	1.83	1.85
Area, in2	2.63	2.69
Volume in3	5.26	5.46
Total Volume, cc	86.20	89.42
Volume Solids, cc	51.87	51.87
Volume Voids, cc	34.33	37.55
Void Ratio	0.66	0.72
Porosity, %	39.82	41.99
Saturation, %	74.28	96.41
Specific Gravity	2.67	2.67
Wet Weight, gm	164.0	174.7
Dry Weight, gm	138.5	138.5
Tare, gm	0.00	0.00
Moisture, %	18.4	26.1
Dry Density, pcf	100.3	96.7

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-018d	Boring:		Date:	10/16/00
Client:	Cyme	Sample:	0039R038	By:	DC
Project:	Hunters Point	Depth:	7.5-8.5'		
Soil:	brown clayey SAND w/gravel				

Sample Pressures:
Cell: 62 psi Bot. Cap: 58 psi Top Cap: 56 psi Max. Hydraulic Gradient: 27

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: ≈ 0.95
0	168.68	Start of Test	
444	166.08	9.6 x 10E-8	
841	163.58	9.7 x 10E-8	
1010	162.77	9.4 x 10E-8	
1206	162.28	8.6 x 10E-8	
1529	160.08	9.2 x 10E-8	

Average Permeability: 9 x 10E-8 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.49
Diameter, in	1.90	1.90
Area, in2	2.84	2.84
Volume in3	7.09	7.06
Total Volume, cc	116.15	115.69
Volume Solids, cc	75.26	75.26
Volume Voids, cc	40.90	40.43
Void Ratio	0.54	0.54
Porosity, %	35.21	34.95
Saturation, %	97.56	98.68
Specific Gravity	2.74 Assumed	2.74
Wet Weight, gm	246.1	246.1
Dry Weight, gm	206.2	206.2
Tare, gm	0.00	0.00
Moisture, %	19.4	19.4
Dry Density, pcf	110.8	111.2

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

257-CMY REPLACEMENTS FOR DISTURBED SAMPLES Request E

the group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 572911
Page 1 of ____

Project Name/No. 1 HUNTERS POINT 773247
Sample Team Members 2 RUST
Profit Center No. 3 3771110
Project Manager 4 Jim Robbins
Purchase Order No. 6 773247-429
Required Report Date 11 NORMAL

Samples Shipment Date 7
Lab Destination 8 ~~GP~~ CYME
Lab Contact 9 JP SIRTIRANI
Project Contact/Phone 12 WAYNE AKIYAMA 415 6712468
Carrier/Waybill No. 13

Bill to: 5 ANDY RICHMOND
4005 PORT CHICAGO HWY
CONCORD CA
94520-1120

Report to: 10 WAYNE AKIYAMA
4005 PORT CHICAGO
CONCORD CA
94520-1120

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
DUPLICATE OF (JP) 0039 R005	SOIL 8-8.5 ft 1R10UW07A	9/26/00 0725	SS SLEEVE	X1	NONE	SIZE COMPONENTS	FOR LAB USE ONLY	Perm SAS
DUPLICATE OF 0039 R005	SOIL 3.5-4 ft 1R10UW11A	0945						
DUPLICATE OF 0039 R006	SOIL 7.5-8 ft 1R10UW11A	1005						DISP
							FOR LAB USE ONLY	

Special Instructions: 23

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☐ Archive ____ (mos.)

Turnaround Time Required: 26
Normal ☒ Rush ☐

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify): ____

1. Relinquished by 28 (Signature/Affiliation) D Lemon	Date: 10/5/00 Time: 1515	1. Received by 28 (Signature/Affiliation) JP/CYME	Date: 5 OCT 00 Time: 1515
2. Relinquished by (Signature/Affiliation) JPS./CYME	Date: 10/5/00 Time: 1720	2. Received by (Signature/Affiliation) DRC/CTL	Date: ~~TBD~~ 10/5/00 Time: 1900
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29 TEST BY METHODS ASTM D2937 (DENSITY), ASTM D854 (SG), ASTM D2216 (MC), D5084 (PERMEABILITY)
(SAVE ALL SAMPLES FOR RETURN)

*See back of form for special instructions.

MCA 3/15/91

OCT-28-00 SAT 08:50 PM

P.20

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-019b	Boring:		Date:	10/16/00
Client:	Cyme	Sample:	0039R005	By:	DC
Project:	Hunters Point	Depth:	3.5-4'		
Soil:	dark gray weathered Shale w/clay & sand				

Sample Pressures:
Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi

Max. Hydraulic Gradient: 12

*B: = 0.95

Elapsed Time (min)	Head, (in)	K, cm/sec
0	24.0	Start of Test
44	15.0	1.7 x 10E-5
111	8.4	1.5 x 10E-5
136	6.8	1.5 x 10E-5
151	6.0	1.5 x 10E-5
159	5.6	1.5 x 10E-5

Average Permeability: 2 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.00	1.98
Diameter, in	1.91	1.90
Area, in2	2.87	2.84
Volume in3	5.73	5.61
Total Volume, cc	93.90	91.99
Volume Solids, cc	59.51	59.51
Volume Voids, cc	34.39	32.48
Void Ratio	0.58	0.55
Porosity, %	36.62	35.31
Saturation, %	61.06	95.44
Specific Gravity	2.67	2.67
Wet Weight, gm	179.9	189.9
Dry Weight, gm	158.9	158.9
Tare, gm	0.00	0.00
Moisture, %	13.2	19.5
Dry Density, pcf	105.6	107.8

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-019a	Boring:		Date:	10/16/00
Client:	Cyme	Sample:	0039R002	By:	DC
Project:	Hunters Point	Depth:	8-8.5'		
Soil:	olive brown clayey SAND w/serpentine				

Sample Pressures:

Cell: 53 psi Bot. Cap: 48 psi Top Cap: 48 psi Max. Hydraulic Gradient: 10

Elapsed Time (min)	Head, (cm)	K, cm/sec	*B: = 0.95
0	24.0	Start of Test	
115	2.4	4.1 x 10E-5	
0	24.0		
14	18.0	4.2 x 10E-5	
22	15.8	3.9 x 10E-5	
59	9.0	3.4 x 10E-5	
0	24.0		
4	22.0	4.4 x 10E-5	

Average Permeability: 4 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.48
Diameter, in	1.89	1.89
Area, in2	2.81	2.81
Volume in3	7.03	6.96
Total Volume, cc	115.18	114.02
Volume Solids, cc	69.93	69.93
Volume Voids, cc	45.25	44.09
Void Ratio	0.65	0.63
Porosity, %	39.29	38.67
Saturation, %	75.35	91.86
Specific Gravity	2.68	2.68
Wet Weight, gm	221.5	227.9
Dry Weight, gm	187.4	187.4
Tare, gm	0.00	0.00
Moisture, %	18.2	21.6
Dry Density, pcf	101.5	102.6

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-019 Date: 10/16/00
Client: Cyme By: DC
Project: Hunters Point

Boring:	0039R002	0039R005				
Sample:						
Depth, ft.:	8-8.5	3.5-4				
Soil Classification: (visual)	see perm					
Wt. of Pycnometer Soil & Water, gm:	706.5	719.6				
Temp. centigrade:	17.5	17.5				
Wt. of Pycnometer & Water, gm:	663.15	671.83				
Wt. Dry Soil, gm:	69.09	76.3				
Temp. Correction Factor:	1	1				
Specific Gravity:	2.68	2.67	ERR	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

igroup

ANALYSIS REQUES(ND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 57(115
Page 2 of 2

ject Name HUNTERS POINT Project No. 773247 Samples Shipment Date

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
40R057	SOIL 7-8FT IR10SG056	10/4/00 1500	SS SLEEVE	X2	NONE	SEE COMMENTS	?	
40R058	SOIL 9-10FT IR10SG056	↓ 1515	↓	↓	↓		FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

10/4/00

FAXED

White: To accompany samples Yellow: Field copy *See back of form for special instructions.

Hydraulic Conductivity
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	257-023a	Boring:		Date:	10/19/00
Client:	Cyme	Sample:	0040R057	By:	DC
Project:	Hunters Point	Depth:	7-8'		
Soil:	dark brown clayey SAND				

Sample Pressures:
Cell: 43 psi Bot. Cap: 38 psi Top Cap: 38 psi Max. Hydraulic Gradient: 4

Elapsed Time (min)	Head, (cm)	K, cm/sec *B: = 1.0
0	28.0	Start of Test
9	25.7	2.6 x 10E-5
0	28.0	
3	27.0	3.6 x 10E-5
5	26.4	3.5 x 10E-5
8	25.5	3.5 x 10E-5
12	24.7	3.1 x 10E-5
18	23.5	2.9 x 10E-5
41	19.5	2.6 x 10E-5
65	16.3	2.5 x 10E-5

Average Permeability: 3 x 10E-5 cm/sec

Sample Data:	Initial	Final
Height, in	2.50	2.47
Diameter, in	1.82	1.82
Area, in2	2.60	2.60
Volume in3	6.50	6.43
Total Volume, cc	106.58	105.30
Volume Solids, cc	71.03	71.03
Volume Voids, cc	35.55	34.27
Void Ratio	0.50	0.48
Porosity, %	33.35	32.54
Saturation, %	88.05	96.01
Specific Gravity	2.81	2.81
Wet Weight, gm	230.9	232.5
Dry Weight, gm	199.6	199.6
Tare, gm	0.00	0.00
Moisture, %	15.7	16.5
Dry Density, pcf	116.9	118.3

Remarks: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 257-023b
Client: Cyme
Project: Hunters Point

Date: 10/19/00
By: DC

Boring: Sample: Depth, ft.:	0040R057	0040R058				
Soil Classification: (visual)	see perm					
Wt. of Pycnometer Soil & Water, gm:	712.9	721.3				
Temp. centigrade:	20	20				
Wt. of Pycnometer & Water, gm:	662.89	671.55				
Wt. Dry Soil, gm:	77.61	78.45				
Temp. Correction Factor:	1	1				
Specific Gravity:	2.81	2.73	ERR	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	3-19-01
NO.	R#167
SHEET 1 OF 1	

MON

FIELD ACTIVITY DAILY LOG

E-8.4.

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

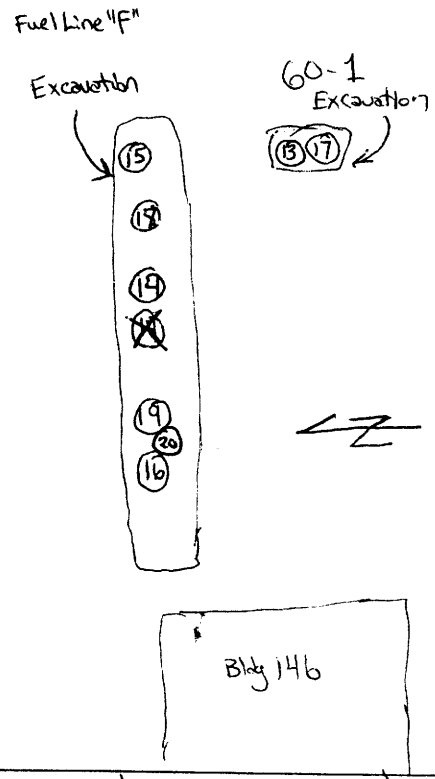
Company Name: ERRG, Inc. 925-969-0750

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	6.5
Rowan "Goose" Tucker	Supervisor	4.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F-150 EX	3-19-01	6.5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6.5



Today's Activities:

Met with Site Health & Safety Specialist, participated in orientation (with Goose).

Met with CQC, participated in Preparatory Meeting (with Goose).

Handed in copies of: calibration logs, employee certificates, ~~equ~~ nuke gauge manuals, leak test results, vehicle inspection sheet, and "fit-for-duty" sheets.

Met with Chuck (Super) and Mike (foreman) of ITSI, conducted FDT's 13 through 20. (Note: FDT's 1 through 12 performed on previous dates by Smith Emery).

FDT's conducted on Fuel Line "F" backfill and 60-1 backfill (see Plan View, above).

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

scattered high clouds, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 3-19-01

Engineering/Remediation Resources Group, Inc.
4070 Nelson Avenue
Suite B
Concord, CA 94520
Main: (925) 969-0750
Fax: (925) 969-0751

ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.O.4.

R#167

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.
MC-3 (5871)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
3-19-01	773247	Fuel Line "F" and "60-1"	Pilarcitos Quarry	31,740	0.83
INSPECTOR		**PROJECT ENGINEER**	**OTHER**	**MOISTURE STD**	**Moist. Xi**
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17,662	1.11

CURVE NO.	MAX DEN	MIN DEN (95%)	OPT%H2O	EQUIPMENT IN USE
SE Co. # 1	127.5	120.5	8.2	DEERE 624 H Loader, DEERE Backhoe w/ vibroplate attachment, DEERE 450G Bulldozer, BOMAG 5ft Smooth Drum Compactor
SPECIFIED % COMP.		**SPECIFIED % H2O**	**LAB TEST METHOD**	**FIELD TEST METHOD**
90% or 95% in upper 3 ft.		+/- 5% (3.2 to 13.2)	ASTM D1557	ASTM D2922-96e1

Gray Silty Sand with Gravel

	TEST NO. (1-12 by SEC)	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	** LOCATION		ELEVATION
	13		8"	134.9	14.3	120.6	11.9	95	60-1	~~200'~~	-1.0
*	14	12	9"	137.2	14.7	122.5	12.0	96	"F"	180'	-2.0
	15		9"	134.8	13.9	120.9	11.5	95	"F"	200'	-1.0
	16		9"	135.5	14.2	121.3	11.7	95	"F"	60'	-1.5
			AVERAGE								

REMARKS:

* NOTE: FDT #14 is a re-test of FDT #12 (aka. Smith Emery test 3/15/01, #04)

** Locations given in feet East of Bldg. 146 (see FADL for plan view)

INSPECTOR: Bret D. McIntyre

REVIEWED: _____

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4.

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (#5871)	
3-19-01	773247	Fuel Line "F" and 60-1	Class II AB	DENSITY STD 31,740	Dense Xi 0.83
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp)	OTHER Kevin S. (Superintendent)	MOISTURE STD 17,662	Moist. Xi 1.11

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Cyme #7	134	126.7	8.0	DEERE 624 H Loader, DEER Backhoe w/ vibro, DEERE 450G Bulldozer, BOMAG 5ft. Smooth Drum

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95%	+/- 5% (3-13)	ASTM D698-91 C	ASTM D 2922-96e1

Class II AB

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	** LOCATION	ELEVATION
*	17		8"	136.5	10.1	126.4	8.0	94	60-1	FG
	18		8"	139.5	10.8	128.7	8.4	96	"F" 195	FG
	19	Retested, see #20	8"	136.3	9.7	126.6	7.7	94	"F" 80	FG
*	20	(19)	8"	139.4	10.1	129.3	7.8	96	"F" 80	FG
			AVERAGE							

REMARKS:

* NOTE: FDT's ~~of~~ 17 and 19 okay with re-roll.
~~Sary~~ FDT 19 retested (see FDT #20) for confirmation.
** Locations given in feet East of Bldg. 146

INSPECTOR: Bret D. McIntyre

REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	3-20-01
NO.	R#168
SHEET 1 OF 1	

Tues.

E.8.4.

FIELD ACTIVITY DAILY LOG

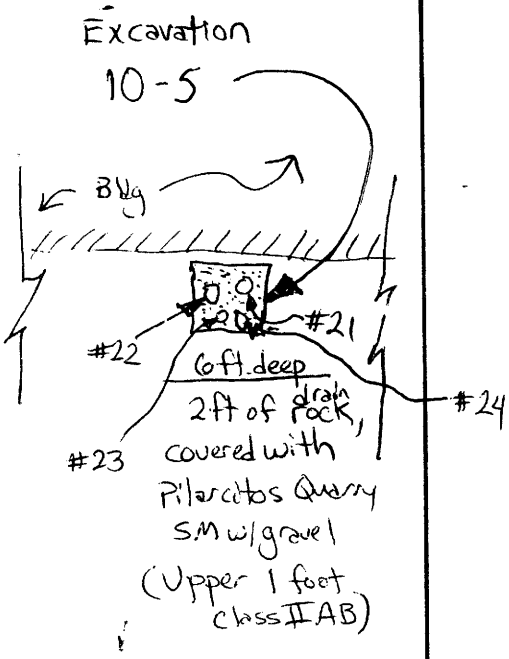
Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: ERRG, Inc.

Personnel on Site		
Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	4.5

Equipment on site		
Type of Equipment	Mob Date	Hours Worked
Ford F-150 EX	3-19-01	4.5
CPN MC-3 PortaProbe (Nuke Gauge)	3-19-01	4.5



Today's Activities:

Signed tailgate safety meeting form. (0800 hrs)

Met with ITSI superintendent, Chuck. Excavation nearly backfilled with 2 ft. of 3/4-in. drainrock (over orange fencing liner) but not ready for testing upon arrival.

Once backfilling began, conducted FDTs #21 → #24. (10-5 backfilled completely).

Completed paperwork and submitted FADL and FDT data to QC and to Kevin.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Skattered high clouds, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 3-20-01

Engineering/Remediation Resources Group, Inc.
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4.2

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (5871)	
DATE/TIME 3-20-01	JOB NO. 773247	PROJECT/LOCATION ~~Fuel~~ Exc. 10-5	SOURCE/MATERIAL Pilarcitos Quarry	DENSITY STD ~~31,740~~ 31,480	Xi 0.95
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S. (Superintendent)	MOISTURE STD 17,300	Xi 1.08

CURVE NO. SE Co. #1	MAX DEN 127.5	MIN DEN (95%) 120.5	OPT%H2O 8.2	EQUIPMENT IN USE Deere 624H Loader w/ vibro plate attachment, BOMAG 5ft. Smooth Drum Compactor (in upper 3 ft.)	
SPECIFIED % COMP. 95% in upper 3 ft.		SPECIFIED % H2O 3.2% → 13.2%		LAB TEST METHOD ASTM D1557	FIELD TEST METHOD ASTM D2922-96e1

Gray Silty Sand w/ Gravel (-4.0 ft → -1.0 ft.)

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	ELEVATION
21		4 in.	133.9	12.1	121.8	9.9	96	10-5	-3.5 ft.
22		9 in.	136.0	11.7	124.4	9.4	98	10-5	-1.5 ft.
23		6 in	135.5	12.0	123.5	9.7	97	10-5	-1.0 ft
		AVERAGE	135.1	11.9	123.2	9.7	97		

REMARKS:

INSPECTOR: [signature] 3-20-01

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Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

E.8.4.2

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (5871)	
DATE/TIME 3-20-01	JOB NO. 773247	PROJECT/LOCATION Excav. 10-5	SOURCE/MATERIAL Class II AB	DENSITY STD ~~31,740~~ 31,480	Xi. 0.95
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT)	OTHER Kevin S. (Super)	MOISTURE STD 17,300	Xi 1.08

CURVE NO. Cyme #7	MAX DEN 134	MIN DEN 126.7	OPT%H2O 8.0	EQUIPMENT IN USE Deere 624H loader w/vibro plate, BOMAG 5 ft smooth drum compactor	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 3% to 13%		LAB TEST METHOD ASTM D698-91 C	FIELD TEST METHOD ASTM D2922-96e1

Class II AB (Upper 1.0 ft of excavation)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	ELEVATION
24		6 in.	133.7 ~~132.8~~ BDM	BDM 6.9	126.8	5.4	95	10-5	FG
		AVERAGE	133.7	6.9	126.8	5.4	95		

REMARKS:

INSPECTOR: 3-20-01

REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	4-11-01
NO.	R#186
SHEET 1	OF 1

Tues.

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0
Honda CRV SUV	4-11-01	7.0

Today's Activities:

On-site at 1000 hrs., met with Kevin, signed Tailgate, submitted Veh. Insp. Report and updated 8-hr. refresher certificate.
Drove over to "Fuel Cell C" location, crew still applying first lift.
Crew achieved 90% compaction in soils below 3ft bgs.
Crew achieved 95% compaction in thin lift above 3ft bgs only after track-rolling soil with fully loaded dump truck. (Soil wet, compactor-small)
I recommended thinner lifts to Chris.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Overcast, low clouds, misty

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 4-11-01

Engineering/Remediation
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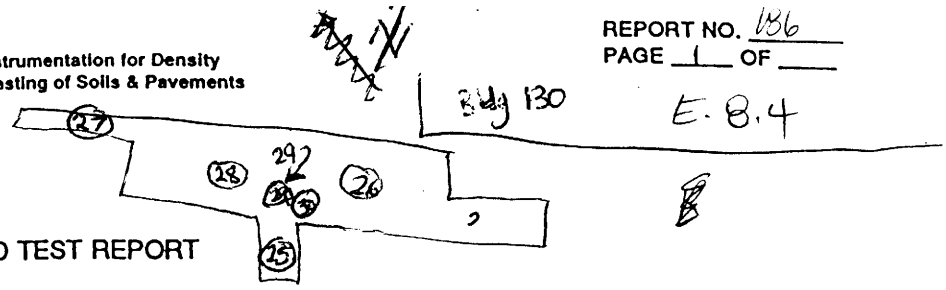
ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 186
PAGE 1 OF ___



ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31430	Dens. Xi 0.94
MOISTURE STD 17393	Moist. Xi 0.99

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	OTHER
4-11-01	773247	Fuel Line "C"		
INSPECTOR: Bret D. McIntyre		PROJECT ENGINEER: Wayne Akiyama (IT Corp.)		Kevin S., Superintendent

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
SE Co #1	127.5	120.5	8.2	BOMAG SM. COMPACTOR (BW 142 PDB-2 5511 lbs); Volvo A35C off-road dump; 450 H 6P Bulldozer

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
90%, but 95% in upper 3ft.	3.2% → 13.2%	ASTM D1557	ASTM D2922-96e1

Gray Silty Sand w/ Gravel

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
25		6"	126.5	11.5	115.0	10.0	90	24-6 / Fuel Line C	-4.5
26		6"	126.3	11.8	114.5	10.3	90	24-6 / Fuel Line C	-4.5
27		8"	129.9	12.5	117.4	10.6	92	24-6 / Fuel Line "C"	-3.0
28		11"	125.7	10.6	115.1	9.1	90	24-6 / Fuel Line C	-3.0
29		12"	130.2	12.6	117.6	10.7	92	24-6 / Fuel Line C	-2.8
30		3"	139.2	13.1	126.1	10.4	99	24-6 / Fuel Line C	-2.8
		AVERAGE							

REMARKS:

INSPECTOR: [signature] 4-11-01

REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	4-12-01
NO.	RH187
SHEET 1	OF 1

Thurs.

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG # 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

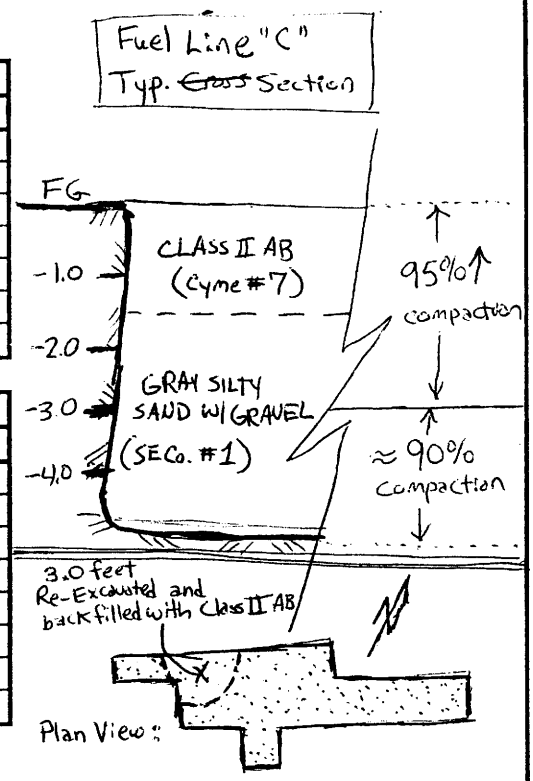
Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	6

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6
Honda CRV	4-10-01	6



Today's Activities:

On-site at 0900 hrs., signed TSM.
Crew working on backfill of fuel line "C", at approx. -2.5 ft ~~bgs~~.
Conducted tests at approx. -2.25 ft, some areas undercompacted. Recommended thinner lifts (6-8 inches). Also recommended thicker Class II AB for uppermost soil unit. (Current plans call for 10 inches). (Note: SECo #1 soil too wet)
Chris returned shortly after the above-mentioned recommendation and stated that he had received authority to backfill the remaining 2.25 ft. of fuel line C with Class II AB, however he already had enough subgrade soil dumped onto the pad that he decided to emplace one final lift of the subgrade soil before switching over to Class II AB. (see drawing, above).
Tests in the NW corner of the excavation showed that compaction of SECo. #1 soil in the upper 3 ft was not meeting minimum requirements, therefore, Chris excavated soil to 3 ft bgs and backfilled with Class II AB (Cyme #7 soil) instead. (See sketch)
Ran out of Class II AB before acheiving Final Grade, therefore Chris agreed to call ERRG when ready to resume testing. (Approx. Mid-day on Monday, 4-16-01).

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Sunny, moderate

IMPORTANT TELEPHONE CALLS:

SIGNATURE: (BDM) **DATE:** 4-12-01

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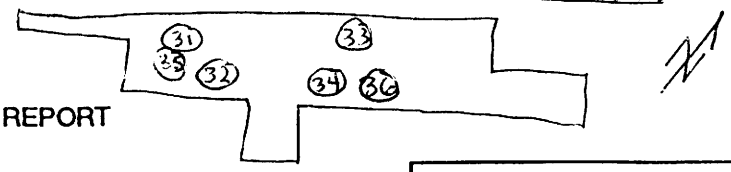
FRRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 187
PAGE 1 OF 2 E 8-4

E Bldg. 130



ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.					
MC-3 (S/N -5871)					
DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
4-12-01	773247	Hunter's Point (Fuel Line "C")	On-site stockpile	31251	0.96
INSPECTOR		PROJECT ENGINEER	OTHER	MOISTURE STD	Moist. Xi
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	16567	0.91

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
SE Co. # 1	127.5	120.5	8.2	BOMAG SM. COMPACTOR (SN 142 PDB2 5511 lbs) Volvo A35C off-road dump, 450HLGP Bulldozer; BOMAG SM STEAMR

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95% in upper 3.0 ft.	3.2% → 13.2%	ASTM D1557	ASTM D2922-96e1

Gray Silty Sand w/ Gravel

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
*	31	Reworked Recompact. see 35	7"	128.1	10.9	117.2	9.3	92	24-6 / (Fuel Line "C")	-2.25
	32		8"	135.8	10.8	125.0	8.6	98	24-6 / Fuel line C	-2.25
*	33	Reworked Recomp. see 36	11"	126.3	10.8	115.5	9.4	90	24-6 / Fuel line C	-2.25
	34		3"	137.9	10.2	127.7	8.0	100+	24-6 / Fuel line C	-2.25
*	35	Reworked Recompact. see 37	8"	120.5	7.9	112.5	7.1	88	24-6 / Fuel line "C"	-1.75
**	36	Okay with reroll	8"	127.5	8.2	119.3	6.9	94	24-6 / Fuel line "C"	-1.75
		AVERAGE		133.7	9.7	124.0	7.8 ~~23.4~~ BDM ~~23.5~~	97		

REMARKS:

* NOTE: Tests 31 and 33 reworked and retested, see tests 35 and 36, resp.

** Test 36 okay with reroll.

Test 35 excavated, backfilled with Class II AB, recompacted, and retested, see Test 37

INSPECTOR: 4-12-01

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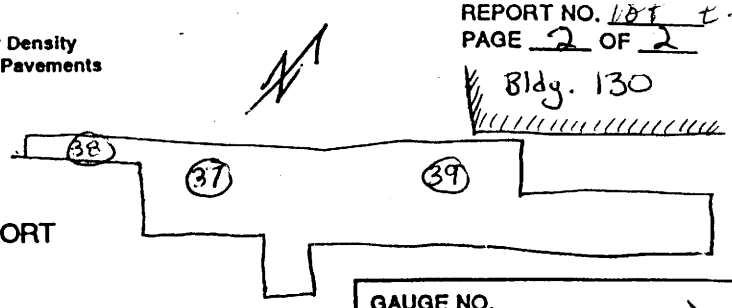
Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements



ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 4-12-01	JOB NO. 773247	PROJECT/LOCATION Hunter's Point (Fuel Line "C")	SOURCE/MATERIAL On-site stockpile	DENSITY STD 31251	Dens. Xi 0.96
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16567	Moist. Xi 0.91

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Cyme #7	134	126.7	8.0	BOMAG SM. COMPACTOR; BOMAG SM. STEAM ROLLE VOLVO L150C Loader; 450 H LGP Bulldozer

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95%	3% → 13%	ASTM D698-91 C	ASTM D2922-96e1

Class II AB

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
	37		6"	135.3	8.5	126.8	6.7	95	24-6 Fuel line "C"	-2.0ft.
**	38	okay with reroll	5"	133.2	7.6	125.6	6.1	94	24-6 Fuel line "C"	-1.0ft.
	39		8"	140.1	9.1	131.0	6.9	98	24-6 Fuel line "C"	-1.0ft.
		AVERAGE		136.2	8.4	~~383.~~ 127.8	6.6	96		

REMARKS:

NOTE:

** ~~OK~~ Test 38 okay with reroll.

INSPECTOR: 4-12-01

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TECHNOLOGY CORPORATION

NO. R#192
SHEET 1 OF 1

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FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG#21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247
Field Activity Subject: Compaction Testing
Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.5
Honda CRV	4-10-01	7.5

Today's Activities: @ 0945

Onsite at 0945 hrs., signed TSM form., Reported to Kevin S.

Crew backfilling 18-4 upon arrival.

Conducted FDT's 40 & 41, then crew left 10-4 unfinished with 3 ft. still to backfill.

Crew moved over to 18-1 (on the slope), layed down orange fencing, and backfilled to -4.0 ft.

Conducted FDT #42, waited for crew to backfill to -3.0 ft, then conducted FDT #43.

Drove to office.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS: Scattered high clouds, breezy, moderate.

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 4-19-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

(42) (43) E.B.4 R# 192

762

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

(40) (41)

GAUGE NO. MC-3 (S/N -5871)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
4-19-01	773247	IT-Hunter's Point	BART-WEST STOCKPILE	31,263	0.99
INSPECTOR		PROJECT ENGINEER	OTHER	MOISTURE STD	Moist. Xi
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17,384	0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-WEST	120	101.5/113.5	11.0	DEERE 624 C LOADER; BOMAG SM. COMPACTOR; SM. BULLDOZER; UNIO OFFROAD DUMP; SM. STEAMROLLER
SPECIFIED % COMP.		SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
% below 3ft, 95% in upper 3ft.		6 – 16%	ASTM D698	ASTM D2922-96e1

LT. BROWN SILTY SAND

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
40		8"	119.3	16.0	103.3	15.5	86	18-4	-4.0ft.
41		9"	123.2	15.2	108.0	14.1	90	18-4	-3.0ft
42		7"	118.5	16.3	102.2	16.0	85	18-1 (slope)	-4.0ft.
43		11"	121.1	16.7	104.4	16.0	87	18-1 (slope)	-3.0ft
		AVERAGE	120.5	16.1	104.4	15.4	87		

REMARKS: NOTE: BART soil is very wet (95% compaction in upper 3.0 ft will be difficult to acheive).

INSPECTOR: 4-19-01 REVIEWED:

TECHNOLOGY CORPORATION

NO.	R# 195
SHEET 1	OF 1

Tues.

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	4.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~ BDM	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	4.0
Honda CRV	4-10-01	4.0

Today's Activities:

On-site at 1230 hrs., signed Tailgate Safety Meeting form, reported to Kevin S. Kevin requested another copy of most recent selve analyses (PTS Labs.)

Crew had ~~over~~ excavated uppermost lift in excavation 18-4 due to saturating rains over the weekend. Crew had, then, backfilled to -3.0 ft. with drier soil. Conducted FDT 45 on that lift (18-4, -3.0ft).

Crew had built up Excav. 18-1 (Slope) up to -3.0 ft. Conducted ~~Test~~ FDT 44 on that lift (18-1, -3.0ft).

The BART-WEST Stockpile still wet of optimum by about 5%, therefore, crew decided to backfill the upper 3 ft. of 18-4 with the remaining Class II AB (CYME #7). Conducted remaining FDT's on 18-4. (FDT 46, 47, & 48)

Submitted Daily and compaction test results to Kevin S.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
Switched to Class II AB for upper 3.0 ft. of 18-4.

WEATHER CONDITIONS:
Sunny, breezy, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] 4-24-01 **DATE:**

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4
R#195

FRRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 4-24-01	JOB NO. 773247	PROJECT/LOCATION Hunter's Pt. (Excav. 18-18-4)	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,459	Dens. Xi 0.95
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,279	Moist. Xi 0.96

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 101.4	OPT%H2O 11.0	EQUIPMENT IN USE S.M. BOMAG COMPACTOR, S.M. BOMAG STEAM ROLLER; DEERE 450H Bulldozer, VOLVO A35C Dump	
SPECIFIED % COMP. 85%		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

LT. BROWN SILTY SAND

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
	44		5"	126.5	17.1	109.3	15.7	91	18-1/Slope	-3.0ft.
*	45		8"	122.9	16.3	106.6	15.3	89	18-4	-3.0ft
									~~18-4~~	~~-3.0ft~~ BDM
*			AVERAGE	124.7	16.7	108.0	15.5	90		

REMARKS: NOTE:
After rain had saturated uppermost lift in 18-4, Chris elected to excavate saturated soil and backfill with dry soil. Therefore, Test No. 41 is invalid, Test No. 45 is valid.

INSPECTOR: [signature] 4-24-01 REVIEWED: _____

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.B.4
K#195

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 4-24-01	JOB NO. 773247	PROJECT/LOCATION Hunter's Pt. (Excav. 18-4)	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,459	Dens. Xi 0.95
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,279	Moist. Xi 0.96

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Cyma #7	134	126.7	8.0	S.M. BomAG Compactor; BomAG SM. Steel roller; VOLVO ~~450E~~ Off-road dump; DEERE 450H Bulldozer

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95%	3 → 13%	ASTM D698-91C	ASTM D2922-96e1

Class II AB

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
46		5 in.	136.7	7.4 BDM	129.3	5.7	96	18-4	-2.0 ft.
47		4 in.	137.9	7.8	130.1	6.0	97	18-4	-1.0 ft.
* 48		9 in.	138.5	8.0	130.5	6.1	97	18-4	FG (±0)
		AVERAGE							

*

REMARKS: NOTE: Ran out of material with a couple of inches to go.
Chris stated he would backfill to FG in immediate future.

INSPECTOR: [signature] 4-24-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

Kevin

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 4-25-01	JOB NO. 773247	PROJECT/LOCATION IT - Hunter's Point	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,249	Dens. X 0.96
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,452	Moist. X 1.03

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 113.4	OPT%H2O 11.0	EQUIPMENT IN USE VOLVO off-road dump DEERE 450H Bulldozer, Sn. BOMAG C	
SPECIFIED % COMP. 95% (upper 3 ft.)		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

Lt. Brown Silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
52		5 in	127.8	14.3	113.5	12.6	95	18-1/Slope	~~-3.0~~ -2.5
55		8 in	131.9	17.7	114.2	15.5	95	18-1/Slope	-2.0
		AVERAGE	129.8	16.0	113.8	14.0	95		

REMARKS:

INSPECTOR: [signature] 4-25-01

REVIEWED: _____

AMF OR LAS Approved

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	4-26-01
NO.	R#197
SHEET 1	OF 1

Thurs.

FIELD ACTIVITY DAILY LOG

E.B.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 1030 hrs., signed TSM.

Drove to 18-1/Slope, conducted FDT 57.

Drove to other project location

Drove back to 18-1/Slope, conducted FDT's 62 and 63 near the top of the slope.

FDT 62 (at the top of slope) did not meet min. requirements. Area needs to be reworked, recompacted, and retested.

Chris stated that crew intended to work on slope on Monday, 4-30-01.

Submitted paperwork to Kevin S's new trailer.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS: Overcast, moderate, lt. breeze

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 4-26-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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E.8.4
R#197

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 4-26-01	JOB NO. 820238	PROJECT/LOCATION IT-Hunters Point	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,293	Dens. Xi 0.93
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Rick Dressel (IT Corp.)	OTHER Norm, Superintendent	MOISTURE STD 17,318	Moist. Xi 0.91

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE DEERE 450H Bulldozer, S/N: BOMAG Com Volvo off-road dump
BART-WEST	120	113.4	11.0	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 6 → 16%	LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

Lt. Brown Silty Sand

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
	57		8 in.	133.9	17.8	116.1	15.3	97	18-1/Slope	-1.0 ft.
*	62	!	4 in.	127.3	16.5	110.8	14.9	92 *	18-1/Slope (near top)	F.G.
	63		4 in.	130.7	17.0	113.7	15.0	95	18-1/Slope (3/4 way up)	F.G.
			AVERAGE	130.6	17.1	113.5	15.1	95		

REMARKS: * NOTE:
FDT 62 does not meet minimum requirements.
To be reworked and retested on Monday, 4-30-01.

INSPECTOR: [signature] 4-26-01

REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	4-30-01
NO.	R#199
SHEET 1 OF 1	

Mon.

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	6.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6.0
Honda CRV	4-10-01	6.0

Today's Activities:

On-site at 1030 hrs. signed TSM, reported to Kevin S.

Kevin stated that new Class II AB (virgin) material was being delivered to Hunter's Point from Pilarcitos quarry in Half Moon Bay. He stated that a Laboratory compaction curve already exists for this material, and he intended to receive a fax with the data in the immediate future.

Crew busy backfilling a new excavation in AM.

(Norm's crew not ready for testing today, however Peter requested New compaction curve on above-mentioned quarry, along with new sieve analysis) (Kevin's crew also using this material — Pilarcitos Virgin Class II AB) (Delivered sample to SE Co) *

Conducted EDT's 64→67.

Submitted Paperwork to Kevin S.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

Pilarcitos Virgin Class II AB to SE Co. *

1076 excav. needs test at depth (CQC & Peter decision)

WEATHER CONDITIONS:

Clear, sunny, windy, moderate temp.

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature]

DATE: 4-30-01

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REPORT NO. _____
PAGE 1 OF 1

E.8.4

R#199

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 4-30-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL Half Moon Bay Pilarcitos Virgin	DENSITY STD 31,394 ~~31293~~ ~~3971~~	Dens. Xi 0.95
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,257	Moist. Xi 1.04

CURVE NO. Pilarcitos Virgin AB	MAX DEN 140*	MIN DEN 132.3	OPT%H2O *6.5	EQUIPMENT IN USE V. small BOMAG Smoothdrum compactor, vibroplate attachment on DEERE	
SPECIFIED % COMP. 95% in upper 3ft.		SPECIFIED % H2O		LAB TEST METHOD ASTM D1557-91 (4" mold)	FIELD TEST METHOD ASTM D2922-96e1

CLASS II AB ⟷ LT. GRAY SANDY GRAVEL with minor SILT (GP) (Virgin AB)

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
64		6 in.	141.6	8.9	132.7	6.7	95	Bldg. 364 Peanut	-1.5 ft
66		6 in.	140.2	7.7	132.4	5.9	95	Bldg. 364 Peanut	
		AVERAGE	140.9	8.3	132.6	6.3	95		

REMARKS:

* NOTE: (6.5% moisture and 140 PCF max. dry density) from an old curve dated 3/4/99, by BAGeotech.

INSPECTOR: 4-30-01

REVIEWED: _____

JP/FORMS.xdl.test.doc

Engineering/Remediation
Resources Group, Inc.
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F.RRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

R#199

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31,394	Dens. Xi 0.95
MOISTURE STD 17,257	Moist. Xi 1.04

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL
4-30-01	773247	IT - Hunter's Pt.	On-site Stockpile
INSPECTOR		PROJECT ENGINEER	OTHER
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-WEST	120	101.4	11%	Vibroplate attachment on ~~DEERE~~ Backhoe CAT 416C

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
3+A.yr=85%	6 → 16%		ASTM D2922-96e1

LT BROWN SILTY SAND w/ some SILT (SM)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
65		6 in	132.5	17.0	115.5	14.7	96	Bldg. 364 SUMP	-4.5
67		6 in.	132.2	15.5	116.7	13.3	97	Bldg 364 SUMP	-3.5
		AVERAGE	132.4	16.3	116.1	14.0	97		

REMARKS:

INSPECTOR: 4-30-01

REVIEWED:

JRVFORMS acdfeel.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	5-2-01
NO.	R#201
SHEET 1	OF 1

Wed.

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 1000hrs., signed TSM.

Drove over to recompaction effort at Fuel Line "C". Crew just getting ready to put 1st new lift on (in place of "recycled" Class II AB).

Conducted FDT 78.

Drove over to other project area.

Drove back and conducted FDT 80. (Final Grade at 24-6/Fuel Line "C" needs to be re-rolled with smooth-drum)

Filled in "summary" Weekly Subcontractor Production Report (Start through today)

Submitted paperwork to Kevin.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, very windy, moderate temp.

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 5-2-01

Engineering/Remediation
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
PAGE 1 OF ____

E-8.4
R# 201

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 5-2-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,386	Dens. Xi 0.96
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,385	Moist. Xi 1.01

CURVE NO. Pilarcitos Virgin AB ~~BART-WEST~~	MAX DEN 135*	MIN DEN	OPT%H2O 8.5*	EQUIPMENT IN USE Sm. Bomag Compactor
SPECIFIED % COMP. 95%	SPECIFIED % H2O	LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1	

Pilarcitos Virgin Class II AB (LT. GRAY SANDY GRAVEL)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
78		6in.	138.0	8.7	129.3	6.7	96*	24-6 / Fuel line "C"	-0.5
~~80~~ BDM		~~6in~~	~~112.8~~	~~10.5~~	~~122.1~~	~~7.9~~	~~98~~ *	~~24-6 / Fuel line "C"~~	~~F.G.~~
80	**	6in.	135.5	8.9	126.6	7.0	94	24-6 / Fuel line "C"	F.G.
		AVERAGE							

REMARKS: Max density and optimum moisture listed above are (conservative) estimates by SE Co Laboratory — exact numbers to follow.

** To be re-rolled and retested tomorrow, 5-3-01.

INSPECTOR: [signature] 5-2-01 REVIEWED: _____

JAVFORM3 soilrest.doc

TECHNOLOGY CORPORATION

NO.	R#202
SHEET 1	OF 1

Thurs.

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG#21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	2.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 5x4 Pickup~~	~~3-19-01~~	~~2.5~~
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	2.5
Honda CRV	4-10-01	2.5

Today's Activities:

On-site at 1100hrs., signed TSM.

Drove over to Fuel Line "C" and conducted re-test at F.G. (retest of No. 80)

Submitted paperwork to Kevin.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

SE Co Lab. called in with Pilarcitos Virgin LT. GRAY SANDY GRAVEL MAX (134 pcf @ 8.7%)

WEATHER CONDITIONS:

Sunny, very windy, moderate temp.

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 5-3-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
PAGE 1 OF 1

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
Thursday DATE/TIME 5-3-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,517	Dens. Xi 0.93
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,058	Moist. Xi 0.94

* CURVE NO. Pilarcitos Virgin	MAX DEN 134	MIN DEN 126.7 ~~127.6~~ BDM	OPT%H2O 8.7	EQUIPMENT IN USE S.M. BoMAG Compactor and smooth drum	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 3.7 → 13.7%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

PILARCITOS VIRGIN LT. GRAY SANDY GRAVEL

** TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
85	80	6in.	136.4	8.5	127.9	6.6	95	24-6 / Fuel line "K"	F.G.
		AVERAGE							

REMARKS:

* SE Co official max. reported at 134 pcf / 8.7% moisture

** Test 85 is a re-test of test 80.

INSPECTOR: _____ 5-3-01 REVIEWED: _____

JRVFORM3 pdf Reel.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	5-8-01
NO.	R#204
SHEET 1 OF 1	

Tues

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG#21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	~~3.5~~
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 1030 hrs., signed TSM, reported to Kevin S.

Drove over to Fuel Line "B", conducted FDTs 94, 96, 97, 98, and 99.

Submitted paperwork to Kevin S.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS: Warm, Sunny, lt. breeze.

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature]

DATE: 5-8-01

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F·RRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Tuesday 5-8-01	JOB NO. 773247	PROJECT/LOCATION IT - Hunter's Point	SOURCE/MATERIAL Onsite Stockpile	DENSITY STD 31,625	Dens. Xi 0.97
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,330	Moist. Xi 0.95

CURVE NO. BART-WEST	MAX DEN 120 pcf.	MIN DEN 113.4 (95%)	OPT%H2O 11%	EQUIPMENT IN USE SM. BOMAG COMPACTOR	
SPECIFIED % COMP. 95% upper 3ft. 85% when deeper than 3ft.		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

LT. GRAY SILTY SAND (SM) with GRAVEL

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
94		6in.	126.7	13.4	113.3	11.8	94	Fuel Line "B" Sec. 4	-5.0
96		6in.	134.2	13.7	120.5	11.4	100	Fuel Line "B" Sec. 4	-4.0
97		6in	129.9	11.4	118.5	9.6	99	Fuel Line "B" (Trench) Sec.	-6.0
98		6in.	128.1	13.3	114.8	11.6	96	Fuel Line "B" Sec 4	-3.0
99		6in	126.9	13.6	113.3	12.0	94	Fuel Line "B" (Trench) Sec.	-5.0
		AVERAGE							

REMARKS:

INSPECTOR: 5-8-01

REVIEWED: _____

JRVFORMS.xdl.test.doc

TECHNOLOGY CORPORATION

NO. 1 KHP 205 Wed.
SHEET 1 OF 1

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard | **Project No** 773247
Field Activity Subject: Compaction Testing
Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site		
Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.0

Equipment on site		
Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0
Honda CRV	4-10-01	7.0

Today's Activities:

On-site at 0900 hrs., procured HPNS badge, signed TSM.

Drove over to Fuel Line "B" location.

Conducted Std. Count

Conducted FDT's 100 → 104

Submitted paperwork to Kevin S.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Sunny, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 5-9-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Wednesday 5-9-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,489	Dens. Xi 0.90
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Aiiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,459	Moist. Xi 1.03

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 113.4 (95%)	OPT%H2O 11	EQUIPMENT IN USE S.M. BOMAG COMPACTOR	
SPECIFIED % COMP. 95% in upper 3ft, otherwise 85%		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
100		6in	124.9	11.3	113.6	10.0	95	Fuel Line "B"	Sec. 4	-2.0
101		6in.	126.9	12.6	114.3	11.0	95	Fuel Line "B"	Trench Sec.	-4.0
102		6in	127.5	13.0	114.5	11.4	95	Fuel Line "B"	Trench Sec.	-3.0
103		6in	125.7	11.6	114.1	10.2	95	Fuel Line B	Sec. 4	-1.0
104		6in	129.5	13.7	115.8	11.8	97	Fuel Line "B"	Trench Sec.	-2.0
		AVERAGE	126.9	12.4	114.5	10.9	95			

REMARKS:

INSPECTOR: 5-9-01

REVIEWED:

JR/FORMS/odfleet.doc

TECHNOLOGY CORPORATION

#206

NO.
SHEET 1 OF 1

Thurs

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard | **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	7.0
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0

Today's Activities:

On-site at 0900 hrs, signed TSM.

Drove over to Fuel Line "B" Area.

Conducted std. count.

Conducted FDTs 105 → 109.

Completed paperwork.

Submitted paperwork to Kevin S.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, Warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 5-10-01

Resources Group, Inc.
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

#206

REPORT NO. ____ PAGE 1 OF 1

(Prev. Tests in Here) 108 107 109 105 106

These sections filled in today

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Thursday 5-10-01	JOB NO. 773247	PROJECT/LOCATION IT- Hunter's Point	SOURCE/MATERIAL On-site stockpile	DENSITY STD 31,448	Dens. Xi 0.97
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,415	Moist. Xi 1.06

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 113.4 (95%)	OPT%H2O 11	EQUIPMENT IN USE SM. BOMAG COMPACTOR	
SPECIFIED % COMP. 95% in upper 3 ft.		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

LT. BROWN SILTY SAND with GRAVEL (SM)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
105		6in.	128.0	13.8	114.2	12.1	95	Fuel Line "B" / Trench sec	-4.5
106		6in.	129.0	14.1	114.9	12.3	96	Fuel Line "B" / Trench sec	-3.5
107		6in	129.7	14.4	115.3	12.5	96	Fuel Line "B" / Trench sec	-4.0
108		6in.	127.7	13.7	114.0	12.0	95	Fuel Line "B" / Trench sec	-3.0
109		6in.	127.5	13.4	114.1	11.7	95	Fuel Line "B" / Trench Sec.	-2.5
		AVERAGE	128.4	13.9	114.5	12.1	95		

REMARKS:

INSPECTOR: [signature] 5-10-01

REVIEWED: ____

JRVFORM3 soil test.doc

TECHNOLOGY CORPORATION

NO. 1 KF208 Mon.
SHEET 1 OF 1

E.8.4 (ERRG#21-015)

FIELD ACTIVITY DAILY LOG

Project Name: Hunter's Point Naval Shipyard **Project No** 773247
Field Activity Subject: Compaction Testing
Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex-Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0
Honda CRV	4-10-01	7.0

Today's Activities:

On-site at 0930 hrs., signed TSM, reported to Kevin S.

Drove over to Fuel Line "B" location, crew busy backfilling and compacting.

Conducted FDT's 110 → 113.

Completed Paperwork

(Faxed results on Tues. 5-15-01).

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 5-14-01

Resources Group, Inc.
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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PAGE 1 OF 2

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Monday 5-14-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,477	Dens. Xi 0.92
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,237	Moist. Xi 1.02

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 113.4	OPTXH2O 11%	EQUIPMENT IN USE 450H Bulldozer, Sm. BOMAG COMPACTOR	
SPECIFIED % COMP. 95% in upper 3ft.		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
110		6 in.	133.8	15.4	118.4	13.0	99	Fuel Line "B" / Trench Sec.	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: 5-14-01

REVIEWED:

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4070 Nelson Avenue
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E-8.4

ERRG #21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 5-14-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,477	Dens. Xi 0.92
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,237	Moist. Xi 1.02

CURVE NO. Pilarcitos Virgin AB	MAX DEN 134	MIN DEN 126.7	OPT%H2O 8.6%	EQUIPMENT IN USE 450 H Bulldozer, Sm BOMAG Compactor, Sm. drum steamroller	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 3.6 → 13.6 %		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

LT. GRAY GRAVELLY SAND (SP)

			GAUGE READINGS							
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
111		6in.	134.4	7.1	127.3	5.6	95	Fuel Line "B"	Trench Sec	-0.5
112		6in.	135.6	7.5	128.1	5.9	96	Fuel Line "B"	Trench Sec.	F.G.
113		6in.	269.4	6.8	127.0	5.4	95	Fuel Line "B"	Trench Sec.	F.G.
		AVERAGE								

REMARKS:

INSPECTOR: 5-14-01

REVIEWED:

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	5-21-01
NO.	R# 212
SHEET 1 OF 1	

MON

E.8.4 (ERRG# 21-015)

FIELD ACTIVITY DAILY LOG

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 1000 hrs, signed TSM, met with Kevin.

Drove over to excavation near fuel line "B" that was the ramp used to access the well [excavation]. Crew busy backfilling that area.

Conducted FDT's 114, 115, 117, and 119. after performing Std. Count.

Completed paperwork and drove home.

(Submitted paperwork on Tues. AM).

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, windy, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 5-21-01

Engineering Remediation
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
PAGE 1 OF 1

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871)	
Monday 5-21-01	773247	IT- Hunter's Point	On-site Stockpile	DENSITY STD 31,406	Dens. Xi 0.89
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,327	Moist. Xi 0.91

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-WEST	120	101.4 / 113.4	11%	SM. BOMAG COMPACTOR, SM. SMOOTH DRUM STEAMROLLER RW 120 AD-3

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85% (or 95% in upper 3 ft.)	6 → 16%	ASTM D698	ASTM D2922-96e1

LT BROWN SILTY SAND w/ GRAVEL (SM)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
114		6 in.	131.1	14.8	116.3	12.7	97	Well Ramp at Fuel Line B	-4.0
115		6 in	138.7	13.7	125.0	11.0	100+	Well Ramp at Fuel Line B	-3.0
117		6 in	132.9	16.7	116.2	14.4	97	Well Ramp at Fuel Line B	-2.0
119		6 in.	133.2	15.6	117.6	13.3	98	Well Ramp at Fuel Line B	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: 5-21-01

REVIEWED:

JR/FORM3 scl Reel.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	5-14-01
NO.	
SHEET 1	OF 1

Mon.

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	7.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0
Honda CRV	4-10-01	7.0

Today's Activities:

On-site at 0930 hrs., signed TSM, reported to Kevin S.

Drove over to Fuel Line "B" location, crew busy backfilling and compacting.

Conducted FDT's 110 → 113.

Completed Paperwork

(Faxed results on Tues. 5-15-01).

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 5-14-01

Engineering/Remediation
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

Monday				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 5-14-01	JOB NO. 773247	PROJECT/LOCATION IT - Hunter's Point	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,477	Dens. Xi 0.92
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,237	Moist. Xi 1.02

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 113.4	OPT%H2O 11%	EQUIPMENT IN USE 450A Bulldozer, Sm. BOMAG COMPACTOR	
SPECIFIED % COMP. 95% in upper 3ft.		SPECIFIED % H2O 6 → 16%		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
110		6 in.	133.8	15.4	118.4	13.0	99	Fuel Line "B" Trench Sec.	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: [signature] 5-14-01

REVIEWED: _____

JP/FORMS/ndtest.doc

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

Mon

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871) DENSITY STD	Dens. Xi
5-14-01	773247	IT - Hunter's Pt.	On-site Stockpile	31,477	0.92
INSPECTOR		PROJECT ENGINEER	OTHER	MOISTURE STD	Moist. Xi
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17,237	1.02

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcitos Virgin AB	134	126.7	8.6%	450 H Bulldozer, SM BOMAG Compactor, Sm. drum steamroller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95%	3.6 → 13.6 %	ASTM D698	ASTM D2922-96e1

LT. GRAY GRAVELLY SAND (SP)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
111		6in.	134.4	7.1	127.3	5.6	95	Fuel Line "B" / Trench Sec	-0.5
112		6in.	135.6	7.5	128.1	5.9	96	Fuel Line "B" / Trench Sec.	F.G.
113		6in.	269.4	6.8	127.0	5.4	95	Fuel Line "B" / Trench Sec.	F.G.
		AVERAGE							

REMARKS:

INSPECTOR: 5-14-01

REVIEWED:

JFVFORM3 soil test.doc

INTERNATIONAL TECHNOLOGY CORPORATION

E. 8.4
#213

DATE	5-22-01
NO.	
SHEET 1	OF 1

Tues

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	8.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	8.0
Honda CRV	4-10-01	8.0

Today's Activities:

On-site at 0830 hrs., signed TSM, submitted yesterdays paperwork.

Conducted FDT 121 on Final Grade of area at former ramp for well near Fuel Line "B".

Conducted FDT 122 on Final Grade at (adjacent) Fuel Line "B". (Note: Previous F.G. test(s) at Fuel Line "B" at different location laterally along former Fuel Line "B" trench).

Completed paperwork, drove home. (1630hrs.)

(Submitted paperwork on following day). (5/23/01)

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Foggy AM, Sunny PM
Breezy, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 5-22-01

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FRRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
PAGE 1 OF 1

E. 8.4
#213

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Tuesday 5-22-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Point	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,406	Dens. Xi 0.89
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,327	Moist. Xi 0.91

CURVE NO. Pilarcitos Virgin AB	MAX DEN 134	MIN DEN 126.7	OPT%H2O 8.6%	EQUIPMENT IN USE SMOOTH DRUM "STEAM ROLLER"	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 3.6 → 13.6%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

LT. GRAY GRAVELLY SAND (SP)

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
121		6in.	133.8	6.9	126.9	5.4	95	Former Ramp near Fuel Line B well	F.G.
122		6in	134.0	7.0	127.0	5.5	95	Fuel Line "B"	F.G.
		AVERAGE							

REMARKS:

INSPECTOR: 5-22-01

REVIEWED:

JRVFORMS sdltest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6-1-01
NO.	RH 219
SHEET 1	OF 1

Fri.

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 0900 hrs, signed TSM. (Tyson on-site for training, signed Visitor's Log).

Crew busy backfilling 48-18.

Conducted EDT's 162, 163, and 164. (Note: 164 is a re-test of 163).

Submitted paperwork to Brad, drove to office.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Foggy, windy

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6-1-01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 219
PAGE 1 OF 1

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/01/01	JOB NO. 773247	PROJECT/LOCATION IT - Hunter's Point	SOURCE/MATERIAL On Site Stockpile	DENSITY STD 31517	Dens. Xi .98
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (I.T Corp.)	OTHER Kevin S, Superintendent	MOISTURE STD 17332	Moist. Xi 1.01

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-WEST	120	101.4/113.4	11%	SM. Bomag Compactor, CAT Bulldoze

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85%, upper 3ft 95%	6 - 16%	ASTM D698	ASTM D2922-96e1

LT. Brown SILTY SAND (SM)

	TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
	162		6in	126.1	12.0	114.1	10.5	95	48-18	~~-2~~ TA -3
*	163	Retested See 164	6in	116.8	10.7	106.1	10.1	88	48-18	-2
	164	Retest of 163	6in	126.2	11.1	115.1	9.6	96	48-18	-2
			AVERAGE							

* REMARKS: 163 Failed to meet Min req, Area Reworked and retested See # 164

INSPECTOR: 6-1-01

REVIEWED:

JP/FORM3.pd/test.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6-4-01
NO.	~~Kt~~ 220
SHEET 1 OF 1	

Mon.

E-8.4 (ERRG# 21-015)

FIELD ACTIVITY DAILY LOG

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Bret D. McIntyre	Staff Geologist	3.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5
Honda CRV	4-10-01	3.5

Today's Activities:

On-site at 0930 hrs, signed TSM, checked in with Chris (foreman)

Conducted FDT.s 175 → 180.

Chris stated that FDT's would be needed tomorrow, Tues. 6-5-01.

Submitted paperwork, drove home.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, warm, breezy

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 6-4-01

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FRRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 220
PAGE 1 OF 2

E.8.4

FRRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Monday 6-4-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31,369	Dens. Xi 0.96
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,248	Moist. Xi 1.06

CURVE NO. BART-WEST	MAX DEN 120	MIN DEN 101.4/113.4	OPT%H2O 11%	EQUIPMENT IN USE SM. BOMAG COMPACTOR	
SPECIFIED % COMP. 85%, but 95% in upper 3 ft.		SPECIFIED % H2O 6% → 16%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

LT. BROWN SILTY SAND (SM)

TEST NO.	TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
[redacted]	175	6 in.	126.3	11.6	114.7	10.1	96	48-8	-1.0
[redacted]	176	6 in.	130.3	12.2	118.1	10.3	98	Fuel Line A Sec 8	-4.0
[redacted]	178	6 in	126.8	11.9	114.9	10.4	96	Fuel Line A Sec. 8	-3.0
[redacted]	179	6 in.	128.1	12.1	116.0	10.4	97	Fuel Line A Sec. 8	-2.0
[redacted]	180	6 in.	127.4	12.0	115.4	10.4	96	Fuel Line A Sec. 8	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: 6-4-01

REVIEWED:

JR/FORMS:adtest.doc

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F.RRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME Monday 6-4-01	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31,369.	Dens. Xi 0.86
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17,248	Moist. Xi 1.06

CURVE NO. Pt Hercules AB	MAX DEN 134.	MIN DEN 126.7	OPT%H2O 8.6	EQUIPMENT IN USE SM. BOMAG COMPACTOR, CAT DOZER and smooth drum (Sm. BOMAG)	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.6 → 13.6%		LAB TEST METHOD ASTM D698	FIELD TEST METHOD ASTM D2922-96e1

LT. GRAY GRAVELLY SAND (SP)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
1707		6in.	138.3	11.3	127.0	8.9	95	48-8	F.G.
		AVERAGE							

REMARKS:

INSPECTOR: 6-4-01

REVIEWED:

JR/FORMS/soilrept.doc

INTERNATIONAL TECHNOLOGY CORPORATION

NO.	R#221
SHEET 1	OF 1

DAY: TUE

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		6

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Honda CRV	4/10/01	6
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6

Today's Activities:

on site 0930, signed TSM, checked in with chris (foreman)

conducted STD count

conducted field Density test 194 — 198

Check with chris come back tomorrow 6/6/01 0900

submitted paper work

Left site 1530

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS: Clear — Cool — late wind

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/5/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 221
PAGE 1 OF 2

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Tue

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/5/01 0930	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL on site stockpile	DENSITY STD 31292	Dens. Xi 0.94
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17319	Moist. Xi 0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120.0	101.4/113.4	11.0	Bomag sheepsfoot small

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16	ASTM D 698	ASTM D2922-96e1

Brown silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
194		6"	119.9	10.7	109.1	9.8	91	Fuel line A	Section 7	-4.0
196		6"	127.5	12.0	115.0	10.5	96	Fuel line A	Section 7	-3.0
197		6"	126.5	11.6	114.8	10.1	96	Fuel line A	Section 7	-2.0
198		6"	124.8	10.8	113.9	9.5	95	Fuel line A	Section 7	-1.0
		AVERAGE								

REMARKS:

INSPECTOR: 6-5-01

REVIEWED:

JRVFORMS 2ndTest.doc

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Tue

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/5/01 0930	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL	DENSITY STD 31292	Dens. Xi 0.94
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17319	Moist. Xi 0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE	
Pilar Citus AB	134.0	126.7	8.6	BW 120 AD-3 Smooth Drum roller	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.6 - 13.6		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

Lite gray gravely sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(FT.) ELEVATION
195		6"	136.3	9.5	126.8	7.5	95	Fwl line A	Sedim B	FG
		AVERAGE								

REMARKS:

INSPECTOR: 6-5-01

REVIEWED:

JRVFORMS soilkeet.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	
NO.	R#222
SHEET 1	OF 1

DAY: Wed

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		6

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford Taurus	6/6/01	6
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6

Today's Activities:

on site at 0930, signed TSM check in with chris (foreman)

Conducted FTD 199 – 204

~~Superintendent~~ Super said no test till Monday training on this for IT crew

Submitted paper work left site 1530

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, warm,

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/6/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E-B.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

GAUGE NO.	
MC-3 (S/N -5871)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
6/6/01 0930	773247	IT-Hunter's Pt.	on site stockpile	31432	1.0
INSPECTOR		PROJECT ENGINEER	OTHER	MOISTURE STD	Moist. Xi
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17444	0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4/113.4	11.0	Bomag Sheepsfoot Small
SPECIFIED % COMP.		SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95		6-16	ASTM D 698	ASTM D2922-96e1

Lt. Brown silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
199		6"	122.2	10.5	111.7	9.4	93	Fuel line A	Section 6	-5.0
200		6"	125.7	10.7	115.0	9.3	96	Fuel line A	Section 6	-4.0
201		6"	124.6	12.2	112.4	10.9	94	Fuel line A	Section 6	-3.0
202		6"	126.1	11.4	114.7	9.9	96	Fuel line A	Section 6	-2.0
204		6"	128.3	11.0	117.2	9.4	98	Fuel line A	Section 6	-1.0
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED:

JR/FORMS/soilrect.doc

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

GAUGE NO.	
MC-3 (S/N -5871)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
6/6/01 0930	773247	IT-Hunter's Pt.	onsite stockpile	31432	1.0
INSPECTOR		**PROJECT ENGINEER**	**OTHER**	**MOISTURE STD**	**Moist. Xi**
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17444	.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcitos AB	134	126.7	8.7	Bomag BW 120 AD-3

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.7 - 13.7	ASTM D 698	ASTM D2922-96e1

Light Gray Gravelly Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
203		6"	136.0	8.3	127.7	6.5	95	Fuel line A / Section 7	FG
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED:

JR/FORMS/soiltest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/11/01
NO.	R# 224
SHEET 1	OF 1

DAY: Mond.

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sandersan		

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250 PU	6/11/01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	

Today's Activities:

On site at 0610, signed TSM, Check in with Chris (Foreman)

Conducted FDT 205 – 207

Foreman said tests Tuesday

Submitted paper work left site 1520

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

overcast, cool; windy in afternoon

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/11/01

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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 267
PAGE 1 OF 2

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Monday

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871)	
6/11/01 0900	773247	IT-Hunter's Pt.	on site stockpile	DENSITY STD 31224	Dens. Xi 0.97
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17354	Moist. Xi 0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE	
Pilarcitos AB	134	126.7	8.7		
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.7 - 13.7		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

Light Gray Gravelly Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
205		6"	135.7	9.5	126.2	7.5	94	Fuel Line A	Section 6	FG
206	X	6"	142.7	8.9	133.8	6.7	100	Fuel Line A	Section 6	FG
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED:

JRVFORMS soilrept.doc

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Monday

GAUGE NO.	
MC-3 (S/N -5871)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
6/11/01 0900	773247	IT-Hunter's Pt.	on site stockpile	31224	0.97
INSPECTOR		**PROJECT ENGINEER**	**OTHER**	**MOISTURE STD**	**Moist. Xi**
Bret D. McIntyre		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17354	0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4 / 113.4	11.0	

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85 / 95	6-16	ASTM D698	ASTM D2922-96e1

Light Brown Silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
207		6"	117.3	10.8	106.4	10.1	89	Fwd 1M' A / Sector 4/3	-4.0
		AVERAGE							

REMARKS:

INSPECTOR: Leah A. [illegible]

REVIEWED:

JAVFORMS 2dtest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/12/01
NO.	R# 225
SHEET 1	OF 1

DAY: TUE

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250	6/11/01	5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5

Today's Activities:

On site at 0810, signed TSM, checked with Chris (Foreman)

conducted FDT 208 – 211

Kevin stonestreet requested another compaction curve

~~left site~~ Submitted paper work, left site

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny,

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/12/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. CCT
PAGE 1 OF 1

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Tuesday

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31346	Dens. Xi 0.94
MOISTURE STD 17540	Moist. Xi 0.98

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL
6/12/01 0930	773247	IT-Hunter's Pt.	on site stockpile

INSPECTOR	PROJECT ENGINEER	OTHER
Les Sanderson ~~Bret D. McIntyre~~	Wayne Akiyama (IT Corp.)	Kevin S., Superintendent

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4/113.4	11.0	Bomag Sheepsfoot Small

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16	ASTM D 698	ASTM D2922-96e1

Fuel Imp A Section 4/3
4 X 21 X 87 ÷ 27 = 270.67 yds

Light Brown Silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
208		6"	125.2	12.5	112.7	11.0	94	Fuel Imp A / Section 4/3	-3.0
209	X	6"	133.3	11.7	121.7	9.6	101.4	Fuel Imp A / Section 4/3	-3.0
210		6"	132.6	12.1	120.5	10	100	Fuel Imp A / Section 4/3	-2.0
211		6"	129.1	11.7	117.4	10	98	Fuel Imp A / Section 4/3	-1.0
		AVERAGE							

REMARKS:

31602 .91
17454 .99

INSPECTOR: Les Sanderson

REVIEWED:

JRVFORM3 adlbeet.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/13/01
NO.	RD 226
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		8

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250	6/11/01	8
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	8

Today's Activities:

On site at 0725, signed TSM, checked with Chris (Foreman)

Conducted FDT's 212 – 215

Submitted Bmt South Bnst to Lab for sieve & curve

Submitted paper work left site 1530

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/13/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

R#226

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

GAUGE NO.	
MC-3 (S/N -5871)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
6/13/01 0730	773247	IT-Hunter's Pt.	on site stockpile	31403	0.91
INSPECTOR Les Sanderson ~~Brad D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17450	Moist. Xi 1.01

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Placentos AB	134	126.7	8.6	Bomag Smooth Drum Small

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.6 - 13.6	ASTM D 698	ASTM D2922-96e1

707 A 25X51X2 ÷ 27 = 94.4 yd
707 B 25X25X2 ÷ 27 = 47.2 yd

Light Gray Gravelly Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(FT.) ELEVATION
212		6"	140.3	7	133.3	5.2	99	Fwd line A	Section 413	FG
213		6"	138.8	8.1	130.6	6.2	98	707	A	-1.0
214		6"	138.9	8.0	131.0	6.0	98	707	A	FG
215		6"	142.2	8.8	133.3	6.6	99	707	B	-1.0
		AVERAGE								

REMARKS:

INSPECTOR: Leslie A. Sith

REVIEWED:

JR/FORMS/ndtest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/20/01
NO.	R# 231
SHEET 1 OF 1	

DAY: Wed

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		9

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford E250	6/11/01	9
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	9

Today's Activities:

on site at 0630, signed TSM, checked with Kevin (Superintendent)

Conducted FDT's 216 – 218

Chris (Foreman) request back tomorrow 0900-1000

Turn in logs left site 1600

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, clear, Hot

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/20/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 621
PAGE 3 OF 3

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/20/01 0630	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL on site stockpile	DENSITY STD 31275	Dens. Xi .94
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17 4/05	Moist. Xi .95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4 / 108.0	11	Bomag Sheepsfoot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16	ASTM D 698	ASTM D2922-96e1

			GAUGE READINGS							
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
218		6"	124.8	11.2	113.6	9.9	94.7	18	2	-3.0
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED:

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871)	
6/20/01 0630	773247	IT-Hunter's Pt.	on site Stockpile	DENSITY STD 31275	Dens. Xi .94
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17405	Moist. Xi .95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart South East	127.9	108.7 / 115.1	8.4	Bomag Sheepsfoot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85 / 90	6-16	ASTM D 698	ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(FT.) ELEVATION
216		6"	125.4	14.5	110.9	13.1	86.7	14	2	-4.0
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED:

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Wed

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/20/01 0630	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL onsite stockpile	DENSITY STD 31275	Dens. Xi 0.94
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17405	Moist. Xi 0.95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcitos AB	134	126.7	8.6	Bomag Smooth Drum roller small

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.6 - 13.6	ASTM D 698	ASTM D2922-96e1

Light Gray Gravelly Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(FT.) ELEVATION
217		6"	135.5	5.9	129.6	4.6	96.7	Bldg 707	B	FG
		AVERAGE								

REMARKS:

INSPECTOR: Les A. Sanderson

REVIEWED:

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. 232
PAGE 1 OF 1

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Thur

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871) DENSITY STD	Dens. Xi
6/21/01 1100	773247	IT-Hunter's Pt.	onsite stockpile	31208	.87
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17406	Moist. Xi .94

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bard West	120	101.4 / 108.0	11	Bomag sheepsfoot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16	ASTM D 698	ASTM D2922-96e1

Light Brown Silty Sand

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
219		6"	130.7	12.5	118.2	10.6	98.5	18 2	-2.0
220		6"	118.0	12.2	105.7	11.6	88.1	Fue line	-4.0
221		6"	126.8	11.8	115.0	10.3	95.8	18 2	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED:

JR/FORMS/ndtest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	RH232
NO.	
SHEET 1 OF 1	

DAY: Thur

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG#21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		3

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F-250	4/11/01	3
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3

Today's Activities:

on site at 1100, signed TSM, checked with Chris (Foreman)

Conducted FDT's 219-221

Chris (Foreman) will have someone call for tests Fri. 6/22/01

turn in logs left site 1520

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/21/01

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/25/01
NO.	234
SHEET 1 OF 1	

DAY: Mond.

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250	6/11/01	5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5

Today's Activities:

On site at 1050, signed TSM, checked with Chris (Foreman)

Conducted FDT's 222-232

Submitted Pilarcitos #3 sample for sieve tests as per Wayne

Submitted paper work, left site 1600

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

overcast, windy, light rain late afternoon

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/25/01

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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Monday

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/25/01 1100	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL on site stockpile	DENSITY STD 31299	Dens. Xi .99
INSPECTOR Les Sanderson ~~Bret D McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17318	Moist. Xi .92

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	104.4/108.0/113.4	11	Bomag sheepsfoot
SPECIFIED % COMP. 85/90/95		SPECIFIED % H2O 6-16	LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS							
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
222		6"	129.6	13.2	116.4	11.3	97	71	W	-4.0
223		6"	130.4	10.8	119.6	9.0	99.7	Fuel line	D	-4.0
224		6"	129.0	12.1	116.9	10.4	97.4	71	W	-3.0
225		6"	130.4	11.9	118.5	10.1	98.7	71	W	-2.0
226		6"	126.2	13.2	113.0	11.7	94.2	Fuel line	D	-4.0
227		6"	121.0	10.2	110.7	9.3	92.3	71	W	-1.0
228	X	6"	126.1	11.3	114.7	9.9	95.6	71	W	-1.0
229		6"	121.3	11.5	109.8	10.5	91.5	71	N	-4.0
		AVERAGE								

REMARKS:

INSPECTOR: Leslie A. Sh

REVIEWED:

JR/FORM3 adf test.doc

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ERRG

Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

E-8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Monday

GAUGE NO.					
MC-3 (S/N -5871)					
DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
6/25/01 1100	773247	IT-Hunter's Pt.	onsite stockpile	31299	.99
INSPECTOR		PROJECT ENGINEER	OTHER	MOISTURE STD	Moist. Xi
Les Sanderson ~~Bret D. McIntyre~~		Wayne Akiyama (IT Corp.)	Kevin S., Superintendent	17318	.92

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4/108.0/113.4	11	Bomag sheepsfoot
SPECIFIED % COMP.		SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90/95		6-16	ASTM D 698	ASTM D2922-96e1

			GAUGE READINGS							
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(FT.) ELEVATION
230		6"	125.4	10.4	115.0	9.1	95.8	Fuel line	D	-3.0
231		6"	126.6	10.1	116.6	8.7	97.1	71	N	-3.0
232		6"	127.1	12.2	114.9	10.6	95.7	71	N	-2.0
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED:

JR/FORMS soilest.doc

INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	6/28/01
NO.	237
SHEET 1	OF 1

DAY: Thur

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		0.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250	6/11/01	0.5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	0.5

Today's Activities:

on site 0800, signed TSM, Check with Chris (Foreman)
only 1 area ready for FDT, conducted FDT 245,
left site 0930 — returned to Norm's job site

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

clear, cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/28/01

Engineering/Remediation
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. ____
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Thur

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 6/20/01 0800	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL on site Stockpile	DENSITY STD 31171	Dens. Xi 1.02
INSPECTOR Les Sandera ~~Brad D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17230	Moist. Xi 1.01

CURVE NO. Polarcoles AB	MAX DEN 134	MIN DEN 126.7	OPT%H2O 8.6	EQUIPMENT IN USE Smooth Drum roller Small	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.6 - 13.6		LAB TEST METHOD ASTM D 698	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
245		6"	141.0	8.6	132.4	6.5	110.3	Fuel Line 0	FG
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED: ____

JRVFORMS.xdl.test.doc

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	6/26/01
NO.	#235
SHEET 1	OF 1

DAY: Tue

F.8.4 (ERRG# 21-015)

FIELD ACTIVITY DAILY LOG

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		6.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F250	6/11/01	6.5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	6.5

Today's Activities:

On site 0900, signed TSM, checked with

Conducted FDT's 233 – 241

Gave Lab Notes on sieve test to QC & Geo

Submitted paper work, left site 1630

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Cloudy

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 6/26/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Tue

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 6/26/01 0800	JOB NO. 773247	PROJECT/LOCATION IT-Hunter's Pt.	SOURCE/MATERIAL onsite stockpile	DENSITY STD 31581	Dens. Xi .99
INSPECTOR Les Sanderson ~~Bret D McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17422	Moist. Xi .98

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4 / 113.4	11	Bomag Sheepsfoot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16	ASTM D 698	ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
233		6"	126.0	10.0	116.0	8.6	96.7	Fuel line D	-2.0
234		6"	132.4	12.7	119.7	10.6	99.8	71 N	-1.0
235		6"	128.3	13.9	114.4	12.1	95.4	Fuel line D	-2.0
236		6"	135.9	16.7	119.3	14.0	99.4	71 W 2	-4.0
237		6"	136.1	16.9	119.2	14.2	99.3	71 W 2	-3.0
238		6"	135.3	18.1	117.1	15.5	97.6	71 W 2	-2.0
239		6"	127.4	12.3	115.1	10.7	95.9	71 W 2	-1.0
240		6"	128.4	12.8	115.6	11.0	96.4	Fuel line D	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED: ____

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Tue

GAUGE NO.
MC-3 (S/N -5871)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
1/26/01 0900	773247	IT-Hunter's Pt.	on site stockpile	31581	.99
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17422	Moist. Xi .98

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4/113.4	11	Bomag sheepsfoot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16	ASTM D 698	ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
241		6"	136.5	14.8	121.7	12.2	101.4	Fuel line D	-1.0
		AVERAGE							

REMARKS:

INSPECTOR: Les A Sa

REVIEWED: ____

JRVFORMS acl test.doc

INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	7/9/01
NO.	243
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		2.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 Ex Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	2.5

Today's Activities:

On site 2:30, Signed TSM, Check with Stonix

Conducted FDT's 252-253

Submitted paper work, left site 1600

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, Cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 7/9/01

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& Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/9/01	JOB NO. 773247	PROJECT/LOCATION IT - H.P.	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 13352	Dens. Xi .91
INSPECTOR Tyson Apel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17194	Moist. Xi .96

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bait-West	120	101.4/113.4	11	Roller with Vibro Plate
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD / FIELD TEST METHOD ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
252		6"	114.5	9.2	116.4	7.9	97.0%	EE / OS	-4
253		6"	123.7	12.2	111.5	10.9	92.9%	EE / OS	-3
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	7/10/01
NO.	244
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FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG#21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
TYSON Appel		2.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	—
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	3.5

Today's Activities:

On site 1130, signed TSM, Looked for Kevin

Conducted FDT's 254-256 AT FEOS

Left site 1420

*Chris told me to be here near noon for the 4 foot Lift tests

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, Cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 7/10/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
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SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/10/01	JOB NO. 773247	PROJECT/LOCATION IT-H.P.N.S	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31535	Dens. Xi 0.96
INSPECTOR Tysaw Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17422	Moist. Xi 1.01

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-west	120	101.4/113.4	11	Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
254		6"	129.0	11.7	117.3	10.0	97.9	EE OS	-2
255		6"	128.0	13.2	114.8	11.5	95.7	EE OS	-2
256	For 253	6"	126.1	10.9	115.2	9.5	96.0	EE OS	-3
		AVERAGE							

REMARKS: #253 on 7/9/01 did not meet 95% compaction, Re Test is Test # 256

INSPECTOR: _____

REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	7/11/01
NO.	254
SHEET 1 OF 1	

E. 8.4 (ERRG# 21-015)

FIELD ACTIVITY DAILY LOG

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		1.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	1.0

Today's Activities:

On site At 13:15, Signed TSM.

Conducted FDT's 257, 258

Left Site @ 1420

* Chris said come back Fri. Near noon for PG tests on EEOS

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, Cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 7/11/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/11/01	JOB NO. 773247	PROJECT/LOCATION FT-H.P.N.S	SOURCE/MATERIAL ON-site stockpile	DENSITY STD 31251	Dens. Xi .93
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17304	Moist. Xi .91

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-West	120	101.4/113.4	11	Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
257		6"	129.5	13.6	115.9	11.73	96.59	EE 05	-1
258		6"	129.5	13.7	115.8	11.82	96.49	FE 05	-1
		AVERAGE							

REMARKS:

INSPECTOR: REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	7/16/01
NO.	
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

#248 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson APPEL		1.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	1.0

Today's Activities:

On Site 1250, Signed TSM.

Conducted Tests #259, 260

Left Site 1400

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Overcast, Cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 7/16/0

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Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

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#248

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME	JOB NO. 773247	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD 31193	Dens. Xi .93
INSPECTOR Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17301	Moist. Xi 1.08

CURVE NO. Pilarcitos	MAX DEN 134	MIN DEN 127.3	OPT%H2O 8.7	EQUIPMENT IN USE Smooth Drum Roller	
SPECIFIED % COMP. 95%		SPECIFIED % H2O 3.7-13.7		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
259		6"	136.1	7.3	128.8	5.7	96.1	EE 05	FG
260		6"	136.1	7.5	128.6	5.8	96.0	EE 05	FG
		AVERAGE							

REMARKS:

INSPECTOR: REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	7/17/01
NO.	249
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
TYSON APPEL		

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	

Today's Activities:

On Site 0700, Signed TSM

Conducted Test 261, Left Site 0800

Back on Site 0900. Conducted Test 262-264

Left Site 1200

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

SUNNY, COOL

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 7/17/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. ____
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/17/01	JOB NO. 773247	PROJECT/LOCATION IT - HPNS	SOURCE/MATERIAL ON-SITE Stockpile	DENSITY STD 30970	Dens. Xi 0.96
INSPECTOR Tyson APPEL ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 13011	Moist. Xi 1.07

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART-WEST	120	101.4/113.4	11	Smooth Drum Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
261		6"	124.6	11.8	112.8	10.5	94.0	24-A	-4
262		6"	129.3	14.1	115.2	12.2	96.0	24-A	-3
263		6"	128.6	14.2	114.4	12.4	95.3	24-A	-2
264		6"	131.0	15.0	116.0	12.9	96.7	24-A	-1
		AVERAGE							

REMARKS:

INSPECTOR: ____ REVIEWED: ____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	
NO.	255
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

E-8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		2.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	2.5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	

Today's Activities: On Site 1330, Signed TSM

Conducted tests 265 - 269. Left Site

1600

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 3/25/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/25	JOB NO. 773247	PROJECT/LOCATION H.P. N.S.	SOURCE/MATERIAL on-site	DENSITY STD 30476	Dens. Xi 0.93
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17371	Moist. Xi 1.02

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
120	120	101.4/113.4	11	Roller
SPECIFIED % COMP. 85/90		SPECIFIED % H2O 6-16		LAB TEST METHOD / FIELD TEST METHOD ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
265		6"	126.0	11.7	114.3	10.2	95.3	18-1	FG
266		6"	128.6	13.1	115.5	11.3	96.2	18-1	-1
267		6"	129.1	11.6	117.5	9.9	97.9	18-1	-2
268		6"	127.7	13.6	114.1	11.9	95.1	18-1	-3
269		6"	122.2 ~~122.5~~	13.7	108.5	12.6	90.4	18-1	-4
		AVERAGE							

REMARKS: When I arrived They were At FG So I had then pot hole to get all five tests.

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	7/25/01
NO.	256
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FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		5.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 EX Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5.0

Today's Activities:

On Site At 0730, Signed TSM.

Conducted FDT's 270-287

Left 1230.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Cloudy, cool

IMPORTANT TELEPHONE CALLS:

SIGNATURE: **DATE:** 7/25/01

Engineering/Remediation
Resources Group, Inc.
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.
MC-3 (S/N -5871)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
7/25/01	773247	HPNS	ON SITE	31248	1.00
INSPECTOR Tyson Apple / Bret D. McIntyre		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17121	Moist. Xi 0.93

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcitos	134	127.3	8.7	Smooth drum roller
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.7 - 13.7		LAB TEST METHOD / FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
270		6"	135.5	6.2	129.3	4.8	96.5	24-8	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

JP/FORMS sd lest.doc

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/21/01	JOB NO. 773247	PROJECT/LOCATION HPNS	SOURCE/MATERIAL ON-Site stockpile	DENSITY STD 31248	Dens. Xi 1.00
INSPECTOR TYSON APPEL ~~Brad D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S, Superintendent	MOISTURE STD 17121	Moist. Xi 0.93

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
~~120~~ Bart-west	120			Loader with Vibro Plate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
271		6"	126.3	14.0	112.3	12.5	93.6	7-1-1	-4
272		6"	118.4	12.7	105.6	12.0	88.0	7-1-2	-4
273		6"	122.7	13.2	109.5	12.1	91.2	7-1-3	-4
274		6"	120.8	12.0	108.7	11.1	90.6	7-1-4	-4
275		6"	130.8	15.8	115.0	13.8	95.8	7-1-1	-3
276		6"	127.9	13.6	114.3	11.9	95.3	7-1-2	-3
278		6"	134.3	14.4	119.9	12.1	99.9	7-1-3	-3
279		6"	130.3	15.3	115.0	13.3	95.8	7-1-4	-3
		AVERAGE							

REMARKS:

INSPECTOR: _____

REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31248	Dens. Xi 1.00
MOISTURE STD 17121	Moist. Xi 0.93

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
7/26/01	773247	H.P.N.S	On-site Stockpile	31248	1.00
INSPECTOR Tyson APPd ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17121	Moist. Xi 0.93

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-west	120	102/114	11	Loader with Vibroplate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
280		6"	130.9	11.6	118.9	9.76	99.1	7-1-1	-2
281		6"	131.8	17.4	114.4	15.3	95.3	7-1-2	-2
282		6"	130.3	15.7	114.6	13.7	95.9	7-1-3	-2
283		6"	129.5	13.3	116.2	11.5	96.9	7-1-4	-2
284		6"	128.4	12.5	115.9	10.8	96.6	7-1-11	-1
285		6"	130.7	15.3	115.4	13.3	96.2	7-1-12	-1
286		6"	127.8	13.3	114.5	11.6	95.4	7-1+3	-1
287		6"	129.6	14.4	115.2	12.5	96.0	7-1-14	-1
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

E. 8.4

DATE	7/27/01
NO.	257
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Apple		5.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~Ford F150 Ex Pickup~~	~~3-19-01~~	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5.0

Today's Activities:

On Site 1030, Signed TSM.

Conducted Tests 289 - 317

Left Site 3:30

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny - Windy

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 7/27/01

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PAGE 1 OF 4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/27/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL ON-Site Stock pile	DENSITY STD 3/440	Dens. Xi 0.94
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17/51	Moist. Xi 0.95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-West	128	113.4/101.4	11	Roller / Ladder with Vibro Plate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
289		6"	119.6	11.7	107.5	10.9	89.6	4420 20-2 1	-4
290		6"	130.7	12.6	118.2	10.7	98.5	4420 20-2 1	-3
291		6"	136.0	13.6	122.4	11.1	102.0	4420 20-2 2	-4
292		6"	130.3	15.1	115.1	13.1	96.0	4420 20-2 2	-3
293		6"	133.1	15.8	117.3	13.5	97.7	4420 20-2 2	-2
294		6"	134.0	14.3	119.6	12.0	99.7	~~[illegible]~~ Fuel Line D 7	-3
295		6"	131.6	13.0	116.6	12.0	97.2	Fuel Line D 8	-3
296		6"	130.9	13.9	117.8	11.9	97.5	Fuel Line D 9	-3
		AVERAGE							

REMARKS:

INSPECTOR: REVIEWED:

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E.8.4

REPORT NO. 257
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.					
				MC-3 (S/N -5871)	
DATE/TIME 7/27/01	JOB NO. 773247	PROJECT/LOCATION HPNS	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31440	Dens. Xi 0.94
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17151	Moist. Xi 0.95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-West	120	101.4/113.4	11	Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/98	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
297		6"	129.2	14.8	114.48	12.9	95.4	4420 20-2 3	-4
298		6"	134.8	15.7	119.1	13.7	99.2	4420 20-2 1	-2
299		6"	137.3	15.2	122.1	12.4	101.8	4420 20-2 2	-1
300		6"	131.9	14.9	117.1	12.7	97.6	36-14	-1
305		6"	126.5	12.4	114.1	10.9	95.1	4420 20-2 3	-3
306		6"	128.6	14.8	115.8	12.8	96.5	4420 20-2 3	-2
307		6"	126.5	13.1	113.4	11.6	94.5	4420 20-2 3	-1
308		6"	127.2	13.5	113.7	11.9	94.8	4420 20-2 1	-1
		AVERAGE							

REMARKS:

INSPECTOR: REVIEWED:

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E.8.4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL CN Silo Stockpile	DENSITY STD 31440	Dens. Xi 0.94
INSPECTOR Tyson Apfel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17151	Moist. Xi 0.95

CURVE NO. ~~[illegible]~~ TA PILARPIT03	MAX DEN 134	MIN DEN 127.3	OPT%H2O 8.7	EQUIPMENT IN USE Smooth Drum Roller	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.7 - 13.7		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
301		6"	135.4	5.5	129.8	4.2	96.9	7-1-1	FG
302		6"	134.2	5.6	128.6	4.4	96.0	7-1-2	FG
303		6"	134.6	5.6	129.0	4.3	96.3	7-1-3	FG
304		6"	136.7	6.3	130.4	4.8	97.3	7-1-4	FG
		AVERAGE							

REMARKS:

INSPECTOR: REVIEWED:

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E.8.4

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/27/01	JOB NO. 773247	PROJECT/LOCATION H.P. N.S	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 2.1440	Dens. Xi 0.94
INSPECTOR Tyson Arnold ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17151	Moist. Xi 0.95

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Berr-west	120	101.4/113.4	11	Roller / Loader with Vibroplate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/90	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
309		6"	133.7	15.6	118.1	13.2	98.4	Fuel Line D 7	-2
310		6"	131.0	14.1	116.9	12.1	97.4	Fuel Line D 8	-2
311		6"	134.8	15.1	119.7	12.6	99.8	Fuel Line D 9	-2
312		6"	133.5	16.8	116.7	14.4	97.2	Fuel Line D 7	-1
313		6"	129.7	15.8	113.8	13.9	94.9	Fuel Line D 8	-1
314		6"	130.6	14.6	116.6	12.6	96.7	Fuel Line D 9	-1
315		6"	129.9	14.1	115.8	12.2	96.5	24-17	-2
316		6"	128.8	13.6	115.2	11.8	96.0	24-17	-2
317		6" AVERAGE	130.7	14.4	116.3	12.4	96.9	24-	-1

REMARKS:

INSPECTOR: [signature]

REVIEWED:

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E.8.4 REPORT NO. ____ PAGE 4 OF 5

CORRECTED COPY 7/27/01 # 257

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

Added % Compact

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	GAUGE NO. MC-3 (S/N -5871)	
7/27/01	973247	H.P.N.S	On-site Stockpile	DENSITY STD 31314	Dens 0.
INSPECTOR Tyson Allred ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17123	Mois 0.

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcibos	134	127.3	11	Smooth drum Roller
SPECIFIED % COMP. 95		SPECIFIED % H2O 6-16		LAB TEST METHOD / FIELD TEST METHOD ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(F ELEV.
343		6"	137.3	7.3	130.0	5.6	97	B-1 NE	FG
344		6"	134.0	6.2	127.8	4.9	95	A-6	FG
345		6"	133.8	6.4	127.4	5.0	95	B-1 SW	FG
346		6"	134.5	6.4	128.1	5.0	96	B2 NE	FG
347	349	6"	131.2	6.8	124.5	5.4	93	B3 SE	F
349		6"	143.2	7.9	133.3	5.8	101	B3 SE ~~B4 NW~~	FG
								~~B4 SE~~	
AVERAGE									

REMARKS:
#347 did not meet compaction standards
#349 is a retest for #347

INSPECTOR: ____ REVIEWED: ____

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INTERNATIONAL TECHNOLOGY CORPORATION

E. 8.4

DATE	7/30/01
NO.	259
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Arrel		7 hrs

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7 hrs

Today's Activities:

ON Site at 1045, Signed TSM

Conducted FDT's 348 – 349

Left site 1745

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny - Warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 7/30/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 7/30/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31314	Dens. Xi 0.95
INSPECTOR Tyson Appel, ~~Brad D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17123	Moist. Xi 0.97

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart	120	1134 / 101.4	11	Roller / Loader with Vibroplate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
318		6"	133.9	16.7	116.9	14	97	27-14	-2
319		6"	131.7	15.8	116.0	14	97	27-14	-3
320		6"	119.5	12.7	105.8	12	88	27-14	-4
321		6"	126.7	14.8	111.9	13.3	93	24-17	-4
323		6"	126.8	14.6	112.2	13.0	94	EE-02	-4
331		6"	127.9	12.8	113.1 [redacted] TA	11.1 [redacted] TA	96	EE-02	-4
332		6"	136.7	15.5	121.2	12.8	101	EE-02	-3
333		6"	128.7	15.3	113.5	13.4	95	EE-02	-3
		AVERAGE							

REMARKS: Tests 315, 316, And 317 were called Location 24-7 incorrectly
Tests 315, 316, And 317 were really 24-2

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31314	Dens. Xi 0.99
MOISTURE STD 17123	Moist. Xi 0.97

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL
7/30/01	773247	H.P.N.S.	On-site Stockpile

INSPECTOR	PROJECT ENGINEER	OTHER
Tyson Appel ~~Brad D. McIntyre~~	Wayne Akiyama (IT Corp.)	Kevin S., Superintendent

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcitos	134	127.3	8.7	Smooth drum Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.7 – 13.7		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
322		6"	133.9	6.6	127.3	5.2	95	24-2	FG
324		6"	134.4	5.8	128.6	4.5	96	36-14	FG
325		6"	133.0	6.1	126.9	4.8	95	4420 20-2 1	FG
326		6"	136.3	7.0	129.3	5.4	97	4420 20-2 2	FG
327		6"	135.9	5.5	130.4	4.2	97	4420 20-2 3	FG
328		6"	136.6	6.7	129.8	5.2	97	Fuel Line D 7	FG
329		6"	136.7	6.8	129.9	5.2	97	Fuel Line D 8	FG
330		6"	133.6	5.4	128.2	TA 4.2	96	Fuel Line D 9	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)	
DENSITY STD 31314	Dens. Xi 0.95
MOISTURE STD 17123	Moist. Xi 0.97

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL
7/30/01	773247	H.P.NS	On-Site Stockpile

INSPECTOR	PROJECT ENGINEER	OTHER
Tyson Appel ~~Bret D McIntyre~~	Wayne Akiyama (IT Corp.)	Kevin S., Superintendent

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
BART	120	113.4/101.4	11	Roller / Loader with Vibroplate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
334		6"	135.1	17.1	118.0	14.5	98	27-14	-1
335	307	6"	126.2	12.7	113.5	11.2	95	4420 20-2 3	-1
336	~~308~~	6"	128.4	13.5	114.9	11.7	96	4420 20-2 1	-1
337		6"	132.6	16.7	115.9	14.4	97	EE 02	-2
338		6"	132.7	13.9	118.8	11.7	99	EE 02	-2
339		6"	129.5	13.4	116.8	11.6	97	EE 02	-1
340		6"	129.4	13.9	115.5	12.0	96	24-17	-3
341		6"	128.7	13.7	115.0	11.9	96	24-17	-2
		AVERAGE							

REMARKS:

335 + 336 are Retests from 5/27/01 of 307 + 308

INSPECTOR: [signature]

REVIEWED: ____

JP/FORMS/soilsest.doc

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ERRG

Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/30/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31314	Dens. Xi 0.95
INSPECTOR Tyson Allred ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17123	Moist. Xi 0.97

CURVE NO. Bart	MAX DEN 120	MIN DEN 113.4 \ 101.4	OPT%H2O 11	EQUIPMENT IN USE Roller / Loader with Vibro Plate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
342 ~~349~~ TA		6"	133.9	14.5	118.9	12.2	99	EE 02	-1
248		6"	129.9	14.1	115.4	12.3	96	24-7	-1
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED: ____

JPVFORMS.sdl.test.doc

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N —5871)	
DATE/TIME 7/22/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL Off-site Stockpile	DENSITY STD 31314	Dens. Xi 0.95
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17123	Moist. Xi 0.97

CURVE NO. Pilarcibos	MAX DEN 134	MIN DEN 127.3	OPT%H2O 11	EQUIPMENT IN USE Smooth drum Roller	
SPECIFIED % COMP. 95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
343		6"	137.3	7.3	130.0	5.6	~~GOOD~~	B-1 NE	FG
344		6"	134.0	6.2	127.8	4.9	~~GOOD~~	A-6	FG
345		6"	133.8	6.4	127.4	5.0	~~GOOD~~	B-1 SW	FG
346		6"	134.9	6.4	128.1	5.0	~~GOOD~~	B2 NE	FG
347	349	6"	131.2	6.8	124.5	5.4		B3 SE	FG
349		6"	143.2	7.9	133.3	5.8	~~GOOD~~	B3 SE ~~B4 NW~~	FG
								~~B4 SE~~	
		AVERAGE							

REMARKS:

#347 did not meet compaction standards
#349 is a retest for #347

INSPECTOR: _____ REVIEWED: _____

JP/FORMS acl test.doc

INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	7/31/01
NO.	260
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

(ERRG # 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		7.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	7.0

Today's Activities:

On-Site 0815. Signed TSM.

Conducted Tests 378 - 379

Left site 1500

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Warm, Sunny

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 7/31/01

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/31/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL	DENSITY STD 31292	Dens. Xi 0.92
INSPECTOR Tyson Alpred ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16950	Moist. Xi 0.96

CURVE NO. 120-BART	MAX DEN 120	MIN DEN 113.4/101.4	OPT%H2O 11	EQUIPMENT IN USE Roller / Loader with Vibro Plate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
350		6"	132.0	15.3	116.7	13.1	97	FUEL LINE A	-4
351		6"	132.9	17.3	115.7	14.9	96	B4	-4
352		6"	125.4	14.5	110.9	13.0	92	B4	-4
353		6"	125.2	11.6	113.6	10.2	95	C1	-4
354		6"	133.1	15.3	117.8	13.1	98	B4	-3
355		6"	133.5	18.4	115.1	16.0	96	B4	-3
356		6"	132.5	16.1	116.4	13.8	97	Fuel Line A	-3
358		6"	127.2	15.0	112.3	13.3	94	60-2	-4
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/31/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31292	Dens. Xi 0.92
INSPECTOR Tyson Appel ~~Brad D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16950	Moist. Xi 0.96

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pikarictos	134	127.3	8.7	Smooth Drum Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.7-13.7		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
357		6"	140.7	9.6	131.1	7.3	98	27-14	FG
377		6"	135.6	6.6	129.0	5.1 TA	96	EE 03	FG
378		6"	138.6	5.9	132.7	4.42	99	EE 02	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/31/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-site stockpile	DENSITY STD 31292	Dens. Xi 0.92
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16950	Moist. Xi 0.96

CURVE NO. 120-Bart	MAX DEN 120	MIN DEN 113.4/101.4	OPT%H2O 11	EQUIPMENT IN USE Roller / Loader with vibroplate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
359		6"	134.9	17.1	117.3	14.5	98	B4	-2
360		6"	129.5	15.6	113.9	13.7	95	B4	-2
361	363	6"	129.9	17.3	112.6	15.4	94	C1	-3
362		6"	131.8	16.5	115.3	14.3	96	60-1	-2
363		6"	132.1	17.0	115.0	14.8	96	C1	-3
364		6"	128.8	13.5	115.3	11.7	96	B4	-1
365		6"	133.3	17.9	115.4	15.5	96	B4	-1
366		6"	131.2	15.5	115.7	15.4	96	60-2	-3
		AVERAGE							

REMARKS: Test 361 Did not meet Compaction Standards
↳ Test 363 is the retest for test 361

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/31/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31292	Dens. Xi 0.92
INSPECTOR Tyson Appel ~~Bret D McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16950	Moist. Xi 0.96

CURVE NO. 120-Bart	MAX DEN 120	MIN DEN 101.4/113.9	OPT%H2O 11	EQUIPMENT IN USE Roller / loader with vibroplate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
367		6"	129.7	17.5	112.2	15.6	94	23-2	-4
368		6"	129.9	15.6	114.3	13.7	95	60-1	-1
369		6"	131.8	15.9	115.	13.8	97	Fuel Line A	-2
370		6"	137.1	16.3	120.8	13.5	101	23-2	-3
371		6	133.8	16.3	117.5	13.9	98	60-2	-2
372		6	129.8	16.0	113.8	14.1	95	C1	-2
373		6"	130.1	15.0	115.1	13.0	96	60-2	-1
374		6	131.4	15.3	116.1	13.2	97	Fuel Line A	-1
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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Advanced Instrumentation for Density
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.
MC-3 (S/N -5871)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
7/31/01	773247	H.P.N.S	On-Site Stockpile	31 292	0.92
INSPECTOR Tyson Allred ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 16950	Moist. Xi 0.96

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
120-Bart	120	101.4/113.4	11	Roller / loader with vibroplate
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6/16		LAB TEST METHOD / FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
375		6"	136.1	16.3	119.8	13.6	100	23-2	-2
376		6"	131.9	15.6	116.3	13.4	97	C1	-1
~~377~~		~~6"~~						~~FE 02~~	~~F6~~
~~378~~		~~6"~~						~~FE 02~~	~~F6~~
379		6"	133.9	15.7	118.2	13.3	99	23-2	-1
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	8/1/01
NO.	261
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		5.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 Ex Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5.5

Today's Activities:

On Site 0900, Signed TSM.

Conducted Tests 388 – 401

Left Site 1130

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE: **DATE:** 8/1/01

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REPORT NO. _____
PAGE 1 OF 4

ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 8/1/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S.	SOURCE/MATERIAL On-site stockpile	DENSITY STD 31388	Dens. Xi 0.98
INSPECTOR Tyson Appel ~~Bret D McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17290	Moist. Xi 0.92

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
120-~~BART~~	120	101.3/113.4	11	Roller / Loader with Vibroplate

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
380		6"	126.2	14.1	112.0	12.6	93%	Fuel Line A-5	-4
381		6"	132.7	16.6	116.2	14.3	97	24-4	-2
382		6"	117.1	15.0	102.1	14.7	85	A-9	-4
383		6"	134.3	15.8	118.5	13.4	99	A-5	-3
384		6"	128.4	13.2	115.3	11.4	96	A5	-2
385		6"	131.1	16.1	115.8	14.0	96	24-4	-1
386		6"	132.8	16.6	116.2	14.3	97	A-9	-3
387		6"	136.5	16.3	120.3	13.6	100	A-9	-2
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 7/01/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.G	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31388	Dens. Xi 0.98
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17290	Moist. Xi 0.92

CURVE NO. Pleiridos	MAX DEN 134	MIN DEN 127.3	OPT%H2O 8.7	EQUIPMENT IN USE Smooth Drum roller	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.7 - 13.7		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
388		6"	132.6	5.2	127.4	4.1	95	24-7	FG
389 ~~398~~		6"	136.9	7.0	129.4	5.4	97	C1	FG
390 ~~399~~		6"	134.9	7.2	127.3	5.7	95	B4	FG
391 ~~400~~		6"	136.6	7.2	129.4	5.6	97	B4	FG
392 ~~401~~		6"	136.6	5.9	130.6	4.6	97	Fuel Line A	FG
393 ~~402~~		6"	134.3	6.3	128.0	4.9	96	60-2	FG
394 ~~403~~		6"	132.7	5.2	127.9	4.1	95	60-1	FG
395 ~~404~~		6"	138.6	7.7	130.9	5.9	98	24-2	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N —5871)					
DATE/TIME 8/1/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL ON-Site Stockpile	DENSITY STD 31388	Dens. Xi 0.98
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17290	Moist. Xi 0.92

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE	
120-Bart	130	101.9/112.4	11	Roller / Loader with VibroPlate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
396 ~~405~~		6"	129.3	15.0	114.3	13.1	95	A-5	-1
397 ~~406~~		6"	129.2	14.8	114.4	12.9	95	A-9	-1
398 ~~407~~		6"	131.4	16.2	113.2	14.1	96	18-2	-4
399 ~~408~~		6"	132.1	16.4	115.7	14.2	96	18-2	-3
~~409~~		6"		9.1	127.3		95	~~A-4~~	~~FG~~
~~410~~		6"					96	~~A-9~~	~~FG~~
AVERAGE									

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FA

AB

REMARKS:

INSPECTOR: _____ REVIEWED: _____

JP/FORMS.xls/Test Data

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 8/1/01	JOB NO. 773247	PROJECT/LOCATION H.P. N.S	SOURCE/MATERIAL On-site Stockpile	DENSITY STD 31388	Dens. Xi 0.98
INSPECTOR Tyson Appel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17290	Moist. Xi 0.92

CURVE NO. 120 - BART	MAX DEN 120	MIN DEN 101.3/113.4	OPT%H2O 11	EQUIPMENT IN USE Roller / Loader with Vibroplate	
SPECIFIED % COMP. 85/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
400 ~~409~~			134.4	7.1	127.3	5.6	99	24-4	FG
401 ~~410~~			134.9	6.8	128.1	5.3	96	A-4	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

E. 8.4

DATE	
NO.	262
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Apple		2.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	2.0

Today's Activities:

On site 0730. Signed TSM's

Conducted test 402, 403

Left site 0945

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Cool, cloudy

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 8/2/01

Engineering/Remediation
Resources Group, Inc.
4070 Nelson Avenue
Suite B
Concord, CA 94520
Main: (925) 969-0750
Fax: (925) 969-0751

ERRG

Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME 8/2/01	JOB NO. 773247	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD 31243	Dens. Xi 0.92
INSPECTOR Tyson APPA ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17065	Moist. Xi 1.03

CURVE NO. 120 Bart	MAX DEN 120	MIN DEN 101.4 / 113.4	OPT%H2O 11	EQUIPMENT IN USE Roller / Loader with vibrs plate	
SPECIFIED % COMP. 89/95		SPECIFIED % H2O 6-16		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
402		6"	131.4	14.2	117.2	12.1	98	18-2	-2
403		6"	132.7	14.8	117.9	12.5	98	18-1	-1
		AVERAGE							

REMARKS:

INSPECTOR: _____

REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	8/3/01
NO.	263
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Apple		~~3.0~~ 2.9

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	~~3.0~~ 2.5

Today's Activities:

On site 1015, signed TSM

Conducted tests 404-409

Left site ~~1215~~ 1245

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Cool, cloudy

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [redacted]

DATE: 8/ 3/01

E.84

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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 8/3	JOB NO. 773247	PROJECT/LOCATION H.P. N.S	SOURCE/MATERIAL On Site Stockpile	DENSITY STD 3140S	Dens 0.2
INSPECTOR Tyson Apple		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17212	Moist 0.9

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilarcytes	134	127.3	8.7	Smooth Drum Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.7 to 13.7		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FI ELEVAT
404		6"	135.0	4.1	130.8	~~98~~ 3.1	98	18-2 W1	FG
405		6"	138.3	7.8	130.5	~~97~~ 6.0	97	18-2	FG
406		6"	133.0	4.3	128.7	~~96~~ 3.3	96	7-1 W2	FG
407		6"	123.0	5.4	127.6	~~95~~ 4.2	95	7-1 W1	FG
408		6"	131.5	4.1	127.4	~~95~~ 3.2	95	7-1 N	FG
409		6"	138.4	8.4	130.0	~~97~~ 6.5	97	Fuel Line AS	FG
		AVERAGE							

REMARKS:

INSPECTOR:

REVIEWED:

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	8/6
NO.	264
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FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appel		2.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	2.5

Today's Activities:

ON SITE 0700, Signed TSM

Conducted FDT's 410-114.

[redacted] Left Site 0945

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

SUNNY, WARM

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [redacted]

DATE: 8/6

ERRG
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4070 Nelson Avenue
Suite B
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO.	
MC-3 (S/N -5871)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. %
8/6	773247	H.P.N.S	On-Site Stockpile	31189	0.96
INSPECTOR Tyson APPL		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17212	Moist. % 0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart / Pilarcitos	120 / 134	101.4/113.4/126.6	11 / 8.7	Loader with Vibro Plate / Smooth drum

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95 / 95	6-10 / 3.7-13.7		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATIO
410		6"	131.2	13.3	117.9	11.3	98	18-4	-4
411		6"	132.8	14.1	117.9	12.0	98	18-4	-3
412		6"	131.8	12.5	118.5	10.5	99	18-4	-2
413		6"	125.8	12.4	113.4	10.9	95	18-4	-1
414		6"	142.8	11.3	131.5	8.6	98	18-4	FG
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED:

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INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	8/10/01
NO.	268
SHEET 1	OF 1

DAY: Fri

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name: Hunter's Point Naval Shipyard | **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Leo Sandertn		4 hrs

Equipment on site

Type of Equipment	Mob Date	Hours Worked
~~CPN MC-3 Portaprobe (Nuke Gauge)~~	~~3-19-01~~	
CPN MC2 Portaprobe (Nuke Gauge)	8/10/01	4 hrs
Ford F250	8/10/01	4 hrs

Today's Activities:

Onsite 1030 hrs, Signed TSM, Check with Chris (Foreman)

Conducte FDT's 415-422

Submitted paper work left site

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 8/10/01

Engineering/Remediation
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ERRG

Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Fri

GAUGE NO. MC-2 (S/N ~~5877~~ M23024755)

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
8/10/01 0815	773247	IT-Hunter's Pt.	on site stockpile	3610.0	
INSPECTOR Les Sanderson ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 2616.0	Moist. Xi

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart West	120	101.4 / 113.4	11%	Hoe Pac NPK

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85% / 95% in upper 3ft	6-16	ASTM D 698	ASTM D2922-96e1

Lt. Brown Silty Sand (SM)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
415		6"	125.0		~~94.3~~ 113.2	10.3	94.3	18 4	-4
416		6"	119.7		103.3	15.7	86.1	Fuel line F	-4
417		6"	124.7		114.0	9.2	95.0	Fuel line F	-3
418		6"	124.5		114.3	8.8	95.3	18 4	-3
419		6"	126.9		115.0	10.2	95.8	18 4	-2
420		6"	127.3		115.6	10.0	96.3	18 4	-1
421		6"	129.4		117.5	10.0	97.9	Fuel line F	-2
422		6"	132.1		119.2	10.7	99.3	Fuel line F	-1
		AVERAGE							

REMARKS:

INSPECTOR: [signature]

REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

E.8.4

DATE	8/13/01
NO.	269
SHEET 1 OF 1	

DAY: Mon

FIELD ACTIVITY DAILY LOG

(ERRG # 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Les Sanderson		2 hrs

Equipment on site

Type of Equipment	Mob Date	Hours Worked
	8/10/01	
CPN ~~MC3~~ MC2 Portaprobe (Nuke Gauge)	~~3-19-01~~	2 hrs

Today's Activities:

Onsite 1430 hrs Signed TSM, Check with Brad

Conducted FDT's 423 - 424

Submitted paperwork left site

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny

IMPORTANT TELEPHONE CALLS:

SIGNATURE: [signature] **DATE:** 8/13/01

Engineering/Remediation
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

DAY: Monday

GAUGE NO.	
MC-3 (S/N ~~5871~~ M23024755)	

DATE/TIME	JOB NO.	PROJECT/LOCATION	SOURCE/MATERIAL	DENSITY STD	Dens. Xi
8/10/01 1430	773247	IT-Hunter's Pt.	onsite stockpile	3640.0	
INSPECTOR Les Sandersen ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 2623.0	Moist. Xi

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Dilarcdoc AB	134	126.7	8.6	Smooth Drum roller Small

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95	3.6 — 13.6	ASTM D698	ASTM D2922-96e1

Lt. Gray Gravelly Sand (SP)

TEST NO.	RE-TEST	TEST DEPTH	GAUGE READINGS: TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION		(Ft.) ELEVATION
423		6"	137.0		130.5	4.9	97.4	18	4	FG
424		6"	134.2		127.7	5.0	95.3	Fwl	Imp P	FG
		AVERAGE								

REMARKS:

INSPECTOR: [signature]

REVIEWED: _____

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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 9/6/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL ON-Site Stockpile	DENSITY STD 031212	Dens. Xi 0.98
INSPECTOR Tyson Lopez ~~Bret D McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD TA X17191	Moist. Xi 1.05

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-120	120	101.4/113.4	11	Sheeps foot Roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
426		6"	131.9	15.4	116.5	13.2	97	42-17	-1
427		6"	129.0	14.5	114.5	12.7	95	42-17	-2
428		6"	130.4	16.5	113.9	14.4	95	42-17	-3
429		6"	129.0	14.4	114.6	12.0	96	42-17	-4
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

				GAUGE NO. MC-3 (S/N -5871)	
DATE/TIME	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL On-Site Stockpile	DENSITY STD 31252	Dens. Xi 0.98
INSPECTOR Tyson Aard ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17191	Moist. Xi 1.06

CURVE NO. Pilerciltos	MAX DEN 134	MIN DEN 126.6	OPT%H2O 8.7	EQUIPMENT IN USE Smooth drum Roller	
SPECIFIED % COMP. 95		SPECIFIED % H2O 3.7-13.7		LAB TEST METHOD	FIELD TEST METHOD ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
437		6"	142.2	9.9	132.7	7.2	99	42-17	FG
		AVERAGE							

REMARKS:

INSPECTOR: ____ REVIEWED: ____

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E 281 002 ~~9434~~ 9233

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	9/6
NO.	285
SHEET 1 OF 1	

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Appd		5.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	5.0

Today's Activities: ON Site 0700, Signed TSM, Left Site 1100
Back on Site 1330 Left Site 1430

Conducted FDT's 426-438 (426-429, 437) For this Project

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Sunny and warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 9/6/01

INTERNATIONAL TECHNOLOGY CORPORATION

DATE	
NO.	287
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

E.8.4 (ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
TYSON APPLD		2.0

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	2.0

Today's Activities:

Arrived on Site 0815, signed TSM

Conducted tests 442-449

Left site 1015

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Cloudy, warm

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 9/10/01

Engineering/Remediation Resources Group, Inc.
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Advanced Instrumentation for Density & Moisture Testing of Soils & Pavements

REPORT NO. _____
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 9/10/01	JOB NO. 773247	PROJECT/LOCATION H.F. N.S	SOURCE/MATERIAL ON-Site Stockpile	DENSITY STD 31311	Dens. Xi 0.94
INSPECTOR Tyson Apple ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17276	Moist. Xi 0.94

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Bart-120	120	101.4/113.4	11	Roller / Sheeps foot

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
85/95	6-16		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(FT.) ELEVATION
442		6"	132	13.0	119.3	10.9	99	37-18	-1
443		6"	133.3	13.2	120.0	11.0	100	37-18	-2
444		6"	128.4	12.4	116.0	10.7	97	37-18	-3
449		6"	127.0	16.3	110.8	14.7	92	37-18	-4
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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INTERNATIONAL TECHNOLOGY CORPORATION

DATE	9/13
NO.	
SHEET 1	OF 1

FIELD ACTIVITY DAILY LOG

(ERRG# 21-015)

Project Name; Hunter's Point Naval Shipyard **Project No** 773247

Field Activity Subject: Compaction Testing

Company Name: Engineering/Remediation Resources Group, Inc. (ERRG)

Personnel on Site

Name	Title	Hours Worked
Tyson Apted		7.5

Equipment on site

Type of Equipment	Mob Date	Hours Worked
Ford F150 EX Pickup	3-19-01	2.5
CPN MC-3 Portaprobe (Nuke Gauge)	3-19-01	

Today's Activities:

On site 0930, signed TSM

Conducted FDT's 453-458 (only Test 458 for this project)

Left site 1200

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:

Cool-Cloudy

IMPORTANT TELEPHONE CALLS:

SIGNATURE:

DATE: 9/13/01

Engineering/Remediation
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4070 Nelson Avenue
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Advanced Instrumentation for Density
& Moisture Testing of Soils & Pavements

REPORT NO. _____
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ERRG # 21-015

SOILS TESTING
NUCLEAR DENSITY/MOISTURE GAUGE FIELD TEST REPORT

GAUGE NO. MC-3 (S/N -5871)					
DATE/TIME 9/13/01	JOB NO. 773247	PROJECT/LOCATION H.P.N.S	SOURCE/MATERIAL ON-SITE Stockpile	DENSITY STD 31210	Dens. Xi 0.93
INSPECTOR Tyson Apfel ~~Bret D. McIntyre~~		PROJECT ENGINEER Wayne Akiyama (IT Corp.)	OTHER Kevin S., Superintendent	MOISTURE STD 17431	Moist. Xi 0.99

CURVE NO.	MAX DEN	MIN DEN	OPT%H2O	EQUIPMENT IN USE
Pilerc, tos	134	126.6	8.7	Smooth drum roller

SPECIFIED % COMP.	SPECIFIED % H2O	LAB TEST METHOD	FIELD TEST METHOD
95%	3.7 / 13.7		ASTM D2922-96e1

			GAUGE READINGS						
TEST NO.	RE-TEST	TEST DEPTH	TOTAL DENSITY	TOTAL WATER	DRY DENSITY	% WATER	% PROCTOR (% COMPACT.)	LOCATION	(Ft.) ELEVATION
458		6"	135.2 ~~128.6~~	6.0 ~~5.6~~	129.2 ~~129.2~~	4.6 ~~3.8~~	97	37-18	FG
		AVERAGE							

REMARKS:

INSPECTOR: _____ REVIEWED: _____

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DUTRA MATERIALS

Main Office: 1000 Point San Pedro Road San Rafael, CA 94901 Tel: (415) 459-7740 Fax: (415) 459-072

October 20, 1998
Mendelian Construction, Inc.
Attn: Miguel
Re: Hunter's Point Project

In reference to the Hunter's Point Backfill & Compaction Project in San Francisco.

To Whom It May Concern:

Dutra Materials certifies that the material to be supplied to the above referenced project is free from contamination of regulated, hazardous, or deleterious materials.
Dutra Materials has a long history of supplying materials to the San Francisco area.
Should you have any further questions feel free to contact me.

Sincereley,

Robert Woodbury
General Manager

Post-it® Fax Note 7671	Date 7/14/00	# of pages ▶ 4
To CHUCK CLYDE	From DAVE TONKA	
Co./Dept. ITSI	Co. ITSI	
Phone # 925-383-7604	Phone # 925-256-8998	
Fax # 415-671-2009	Fax # X118	

V.

ITSI
BACKFILL (DRAIN ROCK)
DO 109 QB

#100

Fax Transmittal

Pilarcitos Quarry
11700 Hwy 92
Half Moon Bay, Ca. 94019
(650) 726 5286
(650) 726 8732 Fax

To:

Company: ITSI

Fax: 925·256·8998

Re: VIRGINS

From: EDD T. RIALS

No. of Pages: 1

Comments: OUR MATERIAL THAT WE REMOVE FROM THE MOUNTAIN SIDE IS VIRGIN MATERIAL. THIS MATERIAL IS 1 1/2" 3/4" DRAIN ROCK 5/16 CHIPS, CLASS II BASE ROCK; AND PG&E SAND WE ALSO PROVIDE FOR YOUR CONVENCE RECYCLE CLASS II 3/4 DRAIN AND 5/16 CHIPS

MATERIALS TO WEIGHT CONVERSION

¾ class II AB	.66 yards/ton	1.52 tons/yards
¾ drain rock	.81 yards/ton	1.25 tons/yards
PG&E sand	.77 yards/ton	1.31 tons/yards
Gold track	.82 yards/tons	1.15 tons/yards
1 ½ drain rock	.88 yards/ton	1.15 tons/yards
Class IV ASB	.70 yards/ton	1.45 tons/yards
Bank run	.72 yards/ton	1.38 tons/yards

TESTING ENGINEERS, INCORPORATED
827 Arnold Dr. Ste. 4 - Martinez, CA 94553
(925) 370-7000

Oakland
San Jose
Martinez

Laboratory Number L-0152 **REPORT OF AGGREGATE TESTS** Date 3/13/00

Proj. No.: 50991 SC695
Job Data West Coast Aggregates

Sample Data:
Sampled 3/7/00 by R. Gainor, West Coast Agg.
Source: Pilarcitos Quarry
Sample Rec'd 3/8/00 @ TEI-SJ

GRADING ANALYSIS

Sample : Gray sandy gravel
Method : Cal 202

Specification : Not Specified
Material Type : 1 1/2" Drain Rock

Sieve Size Inches	Sieve Size Millimeters	Percent Passing
3	75.0	100%
2½	63.0	100%
2	50.0	100%
1½	37.5	91%
1	25.0	64%
3/4	19.0	38%
1/2	12.5	26%
3/8	9.5	22%
#4	4.75	20%
#8	2.36	17%
#16	1.18	15%
#30	0.60	12%
#50	0.30	8%
#100	0.15	6%
#200	0.075	3.3%

Warren Benson

Reviewed by, Warren Benson
Soils/Asphalt Lab Supervisor

c: West Coast Aggregates

[illegible] FIELD DAILY REPORT

Job No. 73134-3 Report No. _____ Date 3/14/01 SECO Representative: Ed Madison

PROJECT I.D.: HPNS DO#109 Excavation Backfill

The following services were provided this date: Backfill Observation
Density Testing

Equipment Working: (1) backhoe w/vibratory plate attachment, (1) Bomag smooth drum roller, (1) rubber tire loader, (1) dozer, (1) water truck

6:30 **Description of Work:** On site in the a.m. as requested and met with Dan Brennan of IT Corp who provided overview of backfill operations and specification requirements, work plan and applicable spec sections along with max density/optimum moisture reports from previous testing firm (Cyme). SECO & PM certs and documentation required given to IT/ITSI. Dennis Rich w/ITSI gave me H&S orientation.

8:30am Backfill of Fuel Line "F" excavation being performed by ITSI using import fill from Pilarcitos placed in lifts compacted at slightly over optimum moisture content by vibratory plate and smooth drum roller. Completed to w/in 1ft of finish grade to ~100ft east of Bldg 146 and to w/in 2ft of finish grade to ~200ft east of Bldg 146. Density tests confirmed project requirements were achieved, based on Cyme

10:30am Backfill operation moved to Excavation 20-2. Backfill completed to finish subgrade prior to my arrival. Instructed by Alex w/ IT QC to observe placement of ~12" AB section and perform tests at finish AB. ITSI compacting AB from Pilarcitos at near optimum w/smooth drum roller. Filter fabric placed over FSG prior to placing AB section. Density tests confirmed project requirements had been met, based on Cyme M/D. See Table I for results and locations (available upon completion of SECO M/D). Collect bulk sample of Pilarcitos Backfill material for M/D curve confirmation

14:30 - Finished for Today. 8hrs/8 tests

(✓) Work was conducted in accordance with project requirements.
( ) Work was NOT conducted in accordance with project requirements.

PAGE 1 of 1

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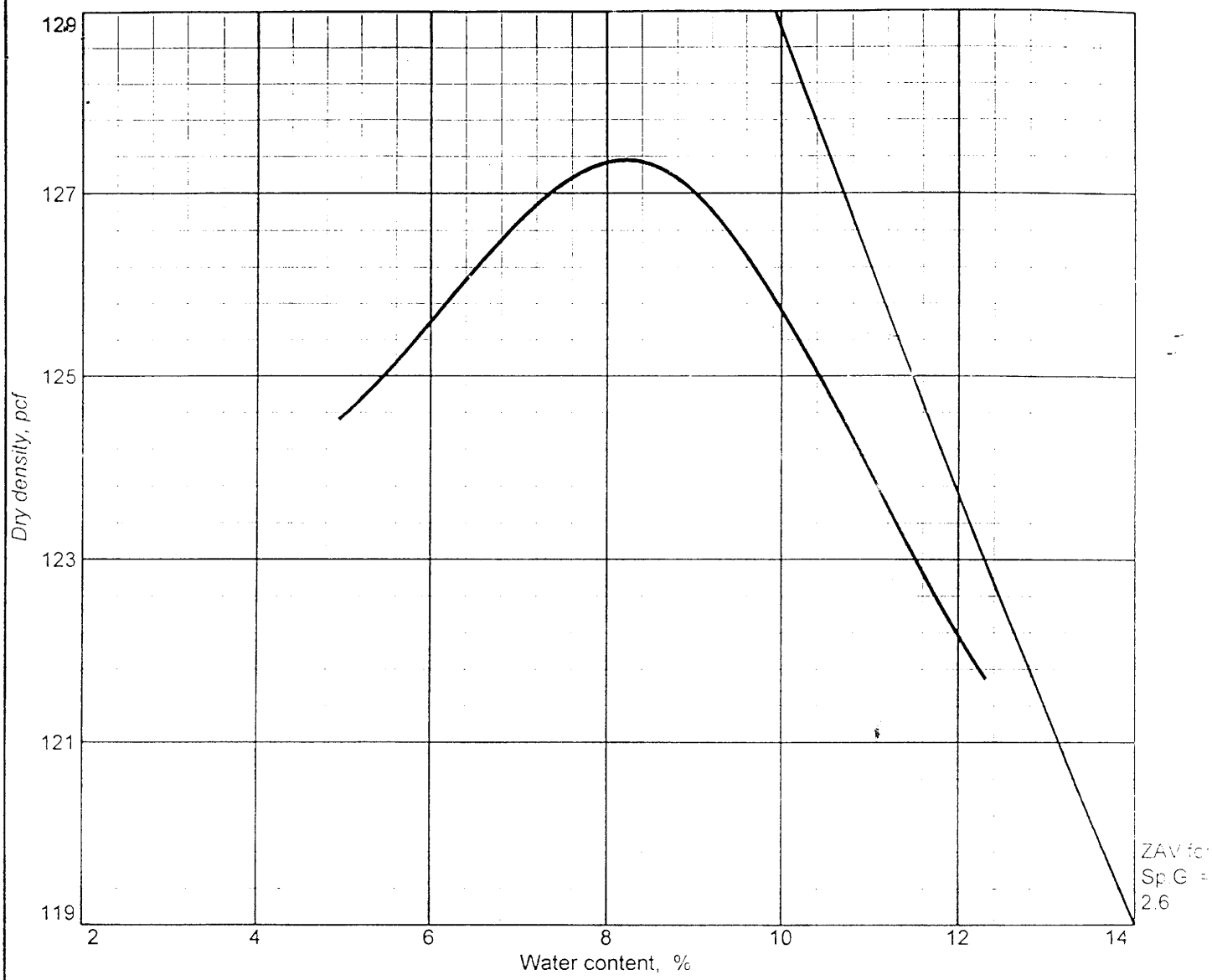
COMPACTION TEST REPORT



Test specification: ASTM D 698-91 Procedure C Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
N/A	SM	N/A	N/A	2.6	N/A	Non-Plastic	2.4	

TEST RESULTS

Maximum dry density = 127.4 pcf

Optimum moisture = 8.2 %

MATERIAL DESCRIPTION

Gray silty Sand with gra

Project No. 93134-4 **Client:** IT Corporation

Project: Hunters Point Naval Shipyard

D. O. #109

- **Location:** Stockpile @ Fuel Line "F"

Remarks:

COMPACTION TEST REPORT

Smith-Emery Company

Plate 1

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Anaheim, California 92807
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West Sacramento, California 9
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TABLE I ~ SOILS TESTING

PROJECT: HPNS DO#109 Excavation Backfill PROJECT NO. 93134-3 OFFICE REPORT NO.

NG# 9624
Dstd 33233 x_i=0.95
Mstd 9774 x_i=0.94

LOCATION KEY
SD -Storm Drain
SW -Sewerline
TR -Trench
WL -Wall
WTL -Waterline

ELEVATION KEY
SG - Subgrade
FG - Finish Grade
AB - Aggregate Base
FSG - Finish Subgrade
FAB - Finish Agg. Base
BTM - Bottom

METHOD KEY
SC - Sandcone
NG - Nuclear Gage
DT - Drive Tube

DATE	TEST NO.	LOCATION	ELEV.	% MOIST.	DRY DENSITY	SOIL TYPE	% REL. COMPACTION FIELD	% REL. COMPACTION SPECIFIED	TECH	METHOD
		Fuel Line "F" Exc BF 100' E of Bldg 146	-3.1'	10.3	127.0	SECo#1	99	85	PM	NG
		" " 50' " "	-3.1'	12.0	123.5		97	85		
		" " 40' " "	-2.0'	12.5	117.2		*92*	95		
		Retest # 3, 3-14-01	-2.0'	10.6	126.3		99	95		
		Fuel Line "F" Exc BF 150' E of Bldg 146	-2.0'	10.2	124.9		98	95		
		" " 50' E of Bldg 146	-1.0'	9.1	124.6	SECo#1	98	95		
		Exc 20-2 BF, East Side	FAB	6.2	127.8	Cyme#7	95	95		
		Exc 20-2 BF, West Side	FAB	6.5	128.8	Cyme#7	96	95	PM	NG
		Fuel Line "F" Exc BF 210' E of Bldg 146	-4.0	10.8	116.4	SECo#1	91	85	PM	NG
		" 165' " "	-3.0	12.5	115.3	SECo#1	90	85	PM	NG
		" 200' " "	-2.5	9.9	122.0	SECo#1	96	95	PM	NG
		" 190' " "	-2.0	10.1	115.0	SECo#1	*90*	95	PM	NG
		Test # 4 of 3/15/01 Did not pass and no passing retest by SECo Dan Brennan w/IT								

ASTM D698

SOIL TYPE	% OPTIMUM MOISTURE	MAXIMUM DRY DENSITY PCF
SECo #1 - Gray silty Sand w/gravel	8.2	127.4
Cyme #7 - Gray Gravel w/Sand (CIIAB)	8.0	134.0

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Established 1904

CPN

SERIAL NO: MD0069624 DATE: 02/02/01

DENSITY STANDARD COUNT: 33,095

DEPTH	-----COUNT AT-------- 107.2 ------ lb/ft^3 ------	133.6	164.3	--- A ---	--- B ---	--- C ---
BS	21,171	15,560	11,779	3.34935	51.96501	0.21406
AC	43,460	32,184	23,529	5.10253	68.36362	0.24960
2	104,166	75,097	51,285	11.85375	81.12359	-0.01451
4	93,936	63,530	40,432	14.02408	66.69236	0.02778
6	69,745	43,179	25,029	15.34910	53.32050	0.05181
8	44,865	25,517	13,521	14.24508	45.03693	0.03761

WHERE: DENSITY IN lb/ft^3 = $B * \mathrm{Ln}\left(\frac{A}{R - C}\right)$

$$R = \text{RATIO} = \frac{\text{COUNT}}{\text{STD CNT}}$$

MOISTURE STANDARD COUNT: 9,910

---COUNT AT---- 0.0 --- lb/ft^3 ---	33.1	--- A ---	--- B ---
471	6,227	56.98766	-2.70850

WHERE: MOISTURE IN lb/ft^3 = (A * R) + B

SMITH-EMERY LABORATORIES
The Full Service Independent Testing Laboratory, Established 1904

E.8.4.

FIELD DAILY REPORT

Job No.: 93134-3 Report No.: Date: 3/15/01 SECo Representative: Pat Morrison R#163

PROJECT I.D.: HPNS DO#109 Excavation BackFill

The following services were provided this date: BackFill Observation
Density Testing

Equipment Working: (1) backhoe w/vibratory plate, (1) smooth drum roller, (1) dozer, (1) loader

Description of Work: On site in the a.m. as requested to continue backfill observation and density testing.

7:30-10:30 standby

10:30 ITSI continuing with backfill operations at Fuel Line "F" Backfill placed in lifts at near optimum, in east end of excavation. Sno fence in bottom total depth ~5 FT. ~~Smooth~~ First lift tracked in by dozer to ≥ 85% relative

6:00pm compaction as required. Fill placed to within 2 FT of Finish Grade in lifts compacted at near optimum except for last lift @ -2FT still needs compaction. Density tests confirmed project requirements were met on underlying lifts based on curve by Cyme. SECo curve and in place test reports to be available Friday 3/16/01 @ ~11:00am

DO 109 Backfill 4hrs/4 tests
KSS

(✓) Work was conducted in accordance with project requirements.
( ) Work was not conducted in accordance with project requirements.

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TABLE I ~ SOILS TESTING

PROJECT I.D. HPNS DO#109 Excavation Backfill PROJECT NO. 93134-3 OFFICE REPORT NO.

NG# 9624
Dstd 33233 x_i=0.95
Mstd 9774 x_i=0.94

LOCATION KEY
BF - Backfill
BP - Building Pad
EL - Electrical
EX - Excavation
FTG - Footing
SD - Storm Drain
SW - Sewerline
TR - Trench
WL - Wall
WTL - Waterline

ELEVATION KEY
SG - Subgrade
FG - Finish Grade
AB - Aggregate Base
FSG - Finish Subgrade
FAB - Finish Agg. Base
BTM - Bottom

METHOD KEY
SC - Sandcone
NG - Nuclear Gage
DT - Drive Tube

DATE	TEST NO.	LOCATION	ELEV.	% MOIST.	DRY DENSITY	SOIL TYPE	% REL. COMPACTION FIELD	% REL. COMPACTION SPECIFIED	TECH	METHOD
[illegible]	[illegible]	Rel Line "F" Exc BF 100' E of Bldg 146	-3.1'	10.3	127.0	SECo #1	99	85	PM	NG
[illegible]	[illegible]	" 50' " "	-3.1'	12.0	123.5		97	85		
[illegible]	[illegible]	" 40' " "	-2.0'	12.5	117.2		*92*	95		
[illegible]	[illegible]	Retest # 3, 3-14-01	-2.0'	10.6	126.3		99	95		
[illegible]	[illegible]	Rel Line "F" Exc BF 150' E of Bldg 146	-2.0'	10.2	124.9		98	95		
[illegible]	[illegible]	" 50' E of Bldg 146	-1.0'	9.1	124.6	SECo #1	98	95		
[illegible]	[illegible]	Exc 20-2 BF, East Side	FAB	6.2	127.8	Cyme #7	95	95		
[illegible]	[illegible]	Exc 20-2 BF, West Side	FAB	6.5	128.8	Cyme #7	96	95	PM	NG
[illegible]	[illegible]	Rel Line "F" Exc BF 210' E of Bldg 146	-4.0	10.8	116.4	SECo #1	91	85	PM	NG
[illegible]	[illegible]	" 165' " "	-3.0	12.5	115.3	SECo #1	90	85	PM	NG
[illegible]	[illegible]	" 200' " "	-2.5	9.9	122.0	SECo #1	96	95	PM	NG
[illegible]	[illegible]	" 190' " "	-2.0	10.1	115.0	SECo #1	*90*	95	PM	NG
		Test # 4 of 3/15/01 Did not pass and no passing retest by SECo Dan Brennan w/IT notified.								

LABORATORY STANDARD: ASTM D698

SOIL TYPE	% OPTIMUM MOISTURE	MAXIMUM DRY DENSITY, PCF
SECo #1 - Gray silty Sand w/gravel	8.2	127.4
Cyme #7 - Gray Gravel w/Sand (CIIIAB)	8.0	134.0

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SMITH-EMERY COMPANY

March 21, 2001

SECo File No. 93134-4
SECo Report No. 01-160

Project: Hunters Point Naval Shipyard
San Francisco, California

TABLE NO. 1

ELEVATION KEY
SG-Subgrade FSG-Finished Subgrade
FG-Finish Grade FAB-Finish Agg. Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
01	03/14/01	NG	-3.1	10.3	127.0	99	85	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 100'EAST OF BUILDING 146								
02	03/14/01	NG	-3.1	12.0	123.5	97	85	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 50'EAST OF BUILDING 146								
03	03/14/01	NG	-2.0	12.5	117.2	92	95	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 40'EAST OF BUILDING 146, **TEST FAILED**								
04	03/14/01	NG	-2.0	10.6	126.3	99	95	1
LOCATION: **RETEST OF 03/14/01, NO. 3**								
05	03/14/01	NG	-2.0	10.2	124.9	98	95	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 150'EAST OF BUILDING 146								
06	03/14/01	NG	-1.0	9.1	124.6	98	95	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 50'EAST OF BUILDING 146								
07	03/14/01	NG	FAB	6.2	127.8	95	95	7
LOCATION: EXCAVATION 20-2 BACKFILL, EAST SIDE								
08	03/14/01	NG	FAB	6.5	128.8	96	95	7
LOCATION: EXCAVATION 20-2 BACKFILL, WEST SIDE								
01	03/15/01	NG	-4.0	10.8	116.4	91	85	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 210'EAST OF BUILDING 146								
02	03/15/01	NG	-3.0	12.5	115.3	90	85	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 165'EAST OF BUILDING 146								
03	03/15/01	NG	-2.5	9.9	122.0	96	95	1
LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 200'EAST OF BUILDING 146								

SMITH-EMERY COMPANY

March 21, 2001

SECo File No. 93134-4
SECo Report No. 01-160

Project: Hunters Point Naval Shipyard
San Francisco, California

TABLE NO. 1

ELEVATION KEY

SG-Subgrade FSG-Finished Subgrade
FG-Finish Grade FAB-Finish Agg. Base
AB-Aggregate Base BTM-Bottom

METHOD KEY

SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
04	03/15/01	NG	-2.5	10.1	115.0	90	95	1

LOCATION: FUEL LINE "F" EXCAVATION BACKFILL, 190'EAST OF BUILDING 146,
TEST FAILED (IT CORPORATION NOTIFIED 03/15/01)

END of TABLE 1

SMITH-EMERY COMPANY

March 21, 2001

SECo File No. 93134-4
SECo Report No. 01-160

Project: Hunters Point Naval Shipyard
San Francisco, California

TABLE NO. 2

RESULTS OF LABORATORY COMPACTION CHARACTERISTICS OF SOIL TESTS

Soil Type	Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
1	GRAY SILTY SAND WITH GRAVEL	127.4	8.2
7	GRAY GRAVEL W/ SAND CLASS II AGGREGATE BASE	134.0	7.0

END of TABLE 2

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0136								
01	11/4/98	NG	-3.5	5.8	128.3	91	85	1
LOCATION:	EXCAVATION BACKFILL BO136, CENTER							
02	11/4/98	NG	-2.5	8.1	138.8	99	95	1
LOCATION:	EXCAVATION BACKFILL BO136, CENTER							
03	11/4/98	NG	0.0	7.2	130.2	92	95	1
LOCATION:	EXCAVATION BACKFILL BO136, CENTER, **TEST FAILED**							
04	11/4/98	NG	0.0	8.3	133.7	95	95	1
LOCATION:	**RETEST OF NO. 03**							
05	11/5/98	NG	0.0	7.0	136.6	97	95	1
LOCATION:	EXCAVATION BACKFILL B0136, CENTER							

1 GRAY BROWN SANDY GRAVEL

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0241								
18	11/5/98	NG	-4.0	5.8	136.8	97	85	1
LOCATION:	EXCAVATION BACKFILL B0241, CENTER							
19	11/5/98	NG	-3.0	6.0	132.4	94	94	1
LOCATION:	EXCAVATION BACKFILL B0241, CENTER, **TEST FAILED**							
20	11/5/98	NG	-3.0	5.8	135.6	96	95	1
LOCATION:	**RETEST OF NO. 19**							
21	11/5/98	NG	-2.0	6.3	132.7	94	95	1
LOCATION:	EXCAVATION BACKFILL B0241, CENTER, **TEST FAILED**							
22	11/5/98	NG	-2.0	6.0	136.3	97	95	1
LOCATION:	**RETEST OF NO. 21**							
23	11/5/98	NG	-1.0	6.8	133.9	95	95	1
LOCATION:	EXCAVATION BACKFILL B0241, CENTER							
24	11/5/98	NG	0.0	6.7	135.7	96	95	1
LOCATION:	EXCAVATION BACKFILL B0241, CENTER							

1 GRAY BROWN SILTY SAND WITH GRAVEL

SMITH-EMERY COMPANY

ELEVATION KEY

SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY

SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0636								
06	11/5/98	NG	-4.0	7.3	129.0	92	85	1
LOCATION:	EXCAVATION BACKFILL B0636, CENTER							
07	11/5/98	NG	-3.0	10.1	131.0	93	85	1
LOCATION:	EXCAVATION BACKFILL B0636, CENTER							
08	11/5/98	NG	-2.0	8.5	128.1	91	95	1
LOCATION:	EXCAVATION BACKFILL B0636, CENTER, **TEST FAILED**							
09	11/5/98	NG	-2.0	8.2	133.3	95	95	1
LOCATION:	**RETEST OF NO. 08**							
10	11/5/98	NG	-1.0	7.5	137.9	98	95	1
LOCATION:	EXCAVATION BACKFILL B0636, CENTER							
11	11/5/98	NG	0.0	7.6	137.9	98	95	1
LOCATION:	EXCAVATION BACKFILL B0636, CENTER							

1 GRAY BROWN SILTY SAND WITH GRAVEL

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0933								
12	11/5/98	NG	-4.0	7.6	134.3	95	85	1
LOCATION:	EXCAVATION BACKFILL B0933, CENTER							
13	11/5/98	NG	-3.0	9.2	130.1	92	95	1
LOCATION:	EXCAVATION BACKFILL B0933, CENTER, **TEST FAILED**							
14	11/5/98	NG	-3.0	8.7	135.2	96	95	1
LOCATION:	**RETEST OF NO. 13**							
15	11/5/98	NG	-2.0	5.9	133.2	95	95	1
LOCATION:	EXCAVATION BACKFILL B0933, CENTER							
16	11/5/98	NG	-1.0	7.4	134.3	95	95	1
LOCATION:	EXCAVATION BACKFILL B0933, CENTER							
17	11/5/98	NG	0.0	6.2	135.4	96	95	1
LOCATION:	EXCAVATION BACKFILL B0933, CENTER							

1 GRAY BROWN SILTY SAND WITH GRAVEL

SMITH-EMERY COMPANY

ELEVATION KEY

SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY

SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 18-3								
25	11/9/98	NG	-4.0	7.2	132.4	94	85	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER							
26	11/9/98	NG	-4.0	5.4	118.6	84	85	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER, **TEST FAILED**							
27	11/9/98	NG	-4.0	5.4	125.8	89	85	1
LOCATION:	**RETEST OF NO. 26**							
28	11/9/98	NG	-3.0	7.3	134.2	95	95	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER							
29	11/9/98	NG	-2.0	6.7	138.0	98	95	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER							
30	11/10/98	NG	-1.0	5.2	128.0	91	95	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER, **TEST FAILED**							
31	11/10/98	NG	-1.0	8.2	138.3	98	95	1
LOCATION:	**RETEST OF NO. 30**							
32	11/10/98	NG	0.0	7.2	138.3	98	95	1
LOCATION:	EXCAVATION BACKFILL 18-3, CENTER							

1 GRAY BROWN SANDY GRAVEL

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1525								
37	11/10/98	NG	-2.0	6.3	127.1	90	95	1
LOCATION:	EXCAVATION BACKFILL B1525 CENTER, **TEST FAILED**							
38	11/10/98	NG	-2.0	6.5	134.3	95	95	1
LOCATION:	**RETEST OF NO. 37**							
39	11/10/98	NG	-1.0	6.9	136.7	97	95	1
LOCATION:	EXCAVATION BACKFILL B1525, CENTER							
1	GRAY BROWN SANDY GRAVEL							
40	11/10/98	NG	FAB	6.0	136.1	96	95	6
LOCATION:	EXCAVATION BACKFILL B1525, CENTER							
6	BROWN GRAY SANDY GRAVEL							

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 7-2								
51	11/12/98	NG	-4.0	5.7	129.1	92	85	1
LOCATION:	EXCAVATION BACKFILL 7-2, CENTER							
52	11/12/98	NG	-3.5	6.1	124.9	89	85	1
LOCATION:	EXCAVATION BACKFILL 7-2, CENTER							
53	11/12/98	NG	-2.5	4.7	130.2	92	95	1
LOCATION:	EXCAVATION BACKFILL 7-2, EAST CENTER, **TEST FAILED**							
54	11/12/98	NG	-2.5	5.9	133.6	95	95	1
LOCATION:	**RETEST OF NO. 53**							
55	11/12/98	NG	-1.0	6.1	137.8	98	95	1
LOCATION:	EXCAVATION BACKFILL 7-2, NORTHWEST							
1	GRAY BROWN SANDY GRAVEL							
56	11/12/98	NG	FAB	5.8	132.1	95	95	5
LOCATION:	EXCAVATION BACKFILL 7-2, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

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METHOD KEY

SC-Sandcone
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1324								
57	11/12/98	NG	-5.0	6.8	129.8	92	85	1
LOCATION:	EXCAVATION BACKFILL B1324, EAST							
58	11/12/98	NG	-4.0	6.9	130.2	93	85	1
LOCATION:	EXCAVATION BACKFILL B1324, WEST							
59	11/12/98	NG	-3.0	9.3	133.8	95	95	1
LOCATION:	EXCAVATION BACKFILL B1324, CENTER							
60	11/12/98	NG	-1.5	5.7	131.8	94	95	1
LOCATION:	EXCAVATION BACKFILL B1324, CENTER, **TEST FAILED**							
61	11/12/98	NG	-1.5	5.8	133.4	95	95	1
LOCATION:	**RETEST OF NO. 60**							
62	11/12/98	NG	0.0	6.4	134.7	96	95	1
LOCATION:	EXCAVATION BACKFILL B1324, CENTER							

1 GRAY BROWN SANDY GRAVEL

SMITH-EMERY COMPANY

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AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 18-2								
63	11/13/98	NG	-10.0	6.5	127.8	91	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, WEST CENTER BRIDGE LIFT							
64	11/13/98	NG	-10.0	6.2	126.9	90	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTHEAST CORNER							
65	11/13/98	NG	-8.0	5.8	125.4	89	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTHWEST CORNER							
66	11/13/98	NG	-8.0	5.9	124.5	89	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, EAST CENTRAL SECTION							
1	GRAY BROWN SANDY GRAVEL							
67	11/16/98	NG	-7.0	6.2	119.5	85	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, NORTHWEST QUADRANT							
68	11/16/98	NG	-7.0	5.8	124.9	89	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTHEAST QUADRANT							
69	11/16/98	NG	-6.0	5.1	133.6	95	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, NORTHEAST QUADRANT							
70	11/16/98	NG	-6.0	7.2	133.5	95	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTHWEST QUADRANT							
71	11/16/98	NG	-5.0	6.3	130.8	93	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, NORTHWEST QUADRANT							
72	11/16/98	NG	-5.0	7.1	122.3	87	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTHEAST QUADRANT							
73	11/16/98	NG	-4.0	7.6	130.0	92	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, SOUTH MIDDLE							
74	11/16/98	NG	-4.0	8.0	130.7	93	85	1
LOCATION:	EXCAVATION BACKFILL 18-2, NORTHEAST							
75	11/16/98	NG	-3.0	6.1	133.6	95	95	1

LOCATION: EXCAVATION BACKFILL 18-2, SOUTHWEST QUADRANT

76	11/16/98	NG	-3.0	6.7	132.8	94	95	1

LOCATION: EXCAVATION BACKFILL 18-2, NORTHWEST QUADRANT. **TEST FAILED**

77	11/16/98	NG	-3.0	6.5	133.9	95	95	1

LOCATION: **RETEST OF NO. 76**

1 GRAY SANDY GRAVEL

78	11/17/98	NG	-2.0	6.1	133.8	95	95	1

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH WEST QUADRANT

79	11/17/98	NG	-2.0	7.3	138.0	98	95	1

LOCATION: BACKFILL EXCAVATION 18-2, NORTH EASTQUADRANT

80	11/17/98	NG	-1.5	7.4	133.9	95	95	1

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH EAST QUADRANT

81	11/17/98	NG	-1.5	7.6	134.0	95	95	1

LOCATION: BACKFILL EXCAVATION 18-2, NORTH WEST QUADRANT

82	11/17/98	NG	-0.5	7.4	134.6	96	95	1

LOCATION: BACKFILL EXCAVATION 18-2, CENTER

83	11/17/98	NG	FAB	7.8	134.1	96	95	1

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH WEST QUADRANT

84	11/17/98	NG	FAB	7.5	133.6	95	95	1

LOCATION: BACKFILL EXCAVATION 18-2, NORTH EAST QUADRANT

1 GRAY SANDY GRAVEL

85	11/18/98	NG	FAB	6.9	135.2	97	95	5

LOCATION: BACKFILL EXCAVATION 18-2, NORTH QUADRANT

86	11/18/98	NG	FAB	8.1	135.8	97	95	5

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH QUADRANT

5 GRAY CLASS II AGGREGATE BASE

1	4/7/99	NG	-6.0	4.6	135.5	98	85	16

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH SIDE

2	4/7/99	NG	-6.0	5.3	135.1	98	85	16

LOCATION: BACKFILL EXCAVATION 18-2, NORTH SIDE

3	4/7/99	NG	-5.0	4.7	138.6	99	85	16

LOCATION: BACKFILL EXCAVATION 18-2, SOUTH SIDE

16 BROWN SANDY CLAY WITH GRAVEL

4	4/15/99	NG	-2.9	8.6	132.2	96	95	28

LOCATION: BACKFILL EXCAVATION 18-2, NORTHEAST QUADRANT

5	4/15/99	NG	-2.9	8.2	131.9	96	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, NORTHWEST QUADRANT							
6	4/15/99	NG	-2.9	8.9	131.2	95	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTH CENTER							
7	4/19/99	NG	-2.0	8.3	134.1	98	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, NORTH CENTER							
8	4/19/99	NG	-2.0	8.5	133.7	97	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTHEAST QUADRANT							
9	4/19/99	NG	-2.0	8.3	130.8	95	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTHWEST QUADRANT							
10	4/19/99	NG	-1.0	8.5	132.8	97	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, NORTHWEST QUADRANT							
11	4/19/99	NG	-1.0	8.7	133.9	97	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, NORTHEAST QUADRANT							
12	4/19/99	NG	-1.0	8.8	134.3	98	95	28
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTH CENTER							
28	BROWN SANDY SILTY GRAVEL							
13	4/21/99	NG	FAB	6.8	135.6	97	95	5
LOCATION:	BACKFILL EXCAVATION 18-2, NORTHEAST QUADRANT							
14	4/21/99	NG	FAB	7.1	134.8	96	95	5
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTHWEST QUADRANT							
15	4/21/99	NG	FAB	6.7	134.9	96	95	5
LOCATION:	BACKFILL EXCAVATION 18-2, SOUTH CENTER							
5	GRAY CLASS II AGGREGATE BASE							

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METHOD KEY
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0638								
87	11/18/98	NG	-4.5	8.5	133.2	95	85	1
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
88	11/18/98	NG	-3.5	7.5	130.5	93	85	1
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
89	11/18/98	NG	-2.5	8.1	135.3	96	95	1
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
90	11/18/98	NG	-1.5	8.1	134.6	96	95	1
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
91	11/18/98	NG	-0.5	8.2	130.9	93	95	1
LOCATION:	BACKFILL EXCAVATION B0638, CENTER; **TEST FAILED**							
92	11/18/98	NG	-0.5	7.9	134.4	95	95	1
LOCATION:	**RETEST OF NO. 91**							
1	GRAY SANDY GRAVEL							
93	11/18/98	NG	FAB	5.1	132.0	95	95	5
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
5	GRAY CLASS II AGGREGATE BASE							
1	4/22/99	NG	-3.1	8.4	131.9	96	90	28
LOCATION:	BACKFILL EXCAVATION B0638, SOUTHWEST QUADRANT							
2	4/22/99	NG	-2.0	8.7	134.8	98	95	28
LOCATION:	BACKFILL EXCAVATION B0638, NORTHEAST QUADRANT							
3	4/22/99	NG	-1.0	8.3	132.2	96	95	28
LOCATION:	BACKFILL EXCAVATION B0638, CENTER							
28	BROWN SANDY SILTY GRAVEL							

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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1036								
103	11/19/98	NG	-4.0	6.5	130.5	92	85	6
LOCATION:	BACKFILL EXCAVATION B1036, CENTER							
6	BROWN GRAY SANDY GRAVEL							
104	11/19/98	NG	-3.0	8.2	133.3	95	95	8
LOCATION:	BACKFILL EXCAVATION B1036, CENTER							
105	11/19/98	NG	-2.0	7.4	128.9	92	95	8
LOCATION:	BACKFILL EXCAVATION B1036, CENTER; **TEST FAILED**							
106	11/19/98	NG	-2.0	7.6	133.5	95	95	8
LOCATION:	**RETEST OF NO. 105**							
107	11/19/98	NG	-1.0	7.5	136.4	97	95	8
LOCATION:	BACKFILL EXCAVATION B1036, CENTER							
8	GRAY SANDY GRAVEL							
108	11/19/98	NG	FAB	6.3	133.9	96	95	5
LOCATION:	BACKFILL EXCAVATION B1036, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

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METHOD KEY
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1138								
94	11/19/98	NG	-4.5	7.7	137.2	97	85	6
LOCATION:	BACKFILL EXCAVATION B1138, CENTER							
95	11/19/98	NG	-3.5	7.7	134.7	95	85	6
LOCATION:	BACKFILL EXCAVATION B1138, CENTER							
96	11/19/98	NG	-2.5	8.5	134.6	95	95	6
LOCATION:	BACKFILL EXCAVATION B1138, CENTER							
97	11/19/98	NG	-1.0	7.3	135.3	95	95	6
LOCATION:	BACKFILL EXCAVATION B1138, CENTER							
6	BROWN GRAY SANDY GRAVEL							
98	11/19/98	NG	FAB	5.1	132.3	95	95	5
LOCATION:	BACKFILL EXCAVATION B1138, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

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METHOD KEY

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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1128								
119	11/23/98	NG	-3.0	7.2	136.9	97	95	8
LOCATION:	EXCAVATION BACKFILL B1128, CENTER							
120	11/23/98	NG	-2.0	7.5	133.5	95	95	8
LOCATION:	EXCAVATION BACKFILL B1128, CENTER							
121	11/23/98	NG	-1.0	7.4	136.4	97	95	8
LOCATION:	EXCAVATION BACKFILL B1128, CENTER							
8	GRAY SANDY GRAVEL							
122	11/23/98	NG	FAB	6.4	134.2	96	95	5
LOCATION:	EXCAVATION BACKFILL B1128, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B1422								
113	11/23/98	NG	-4.5	7.4	135.2	96	85	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							
114	11/23/98	NG	-3.5	7.0	139.4	99	85	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							
115	11/23/98	NG	-2.5	7.1	136.2	97	95	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							
116	11/23/98	NG	-1.5	7.7	138.2	98	95	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							
117	11/23/98	NG	0.0	8.2	135.4	96	95	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							
118	11/23/98	NG	FAB	7.7	133.2	96	95	8
LOCATION:	EXCAVATION BACKFILL B1422, CENTER							

8 GRAY SANDY GRAVEL

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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 7-1								
123	12/2/98	NG	-5.0	10.7	125.1	98	90	9
LOCATION: EXCAVATION 7-1 BACKFILL								
9 ORANGE BROWN SANDY CLAY GRAVEL								
124	12/2/98	NG	-5.5	9.3	133.0	97	90	10
LOCATION: EXCAVATION 7-1 BACKFILL								
125	12/2/98	NG	-5.0	10.4	126.8	92	90	10
LOCATION: EXCAVATION 7-1 BACKFILL								
126	12/2/98	NG	-8.0	9.6	127.5	93	90	10
LOCATION: EXCAVATION 7-1 BACKFILL								
127	12/2/98	NG	-8.0	8.3	128.9	94	90	10
LOCATION: EXCAVATION 7-1 BACKFILL								
128	12/2/98	NG	-8.0	8.9	122.4	89	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, **TEST FAILED**								
129	12/4/98	NG	-7.0	9.8	125.0	91	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, 10' NORTHEAST OF RAMP								
130	12/4/98	NG	-7.5	9.3	129.2	94	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT								
131	12/4/98	NG	-7.0	9.0	132.0	96	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT MIDDLE OF EXCAVATION								
132	12/4/98	NG	-7.0	8.9	129.0	94	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT MIDDLE OF EXCAVATION								
133	12/4/98	NG	-8.0	9.0	133.2	97	90	10
LOCATION: **RETEST OF NO. 128**								
134	12/4/98	NG	-7.5	8.7	127.8	93	90	10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT								
135	12/7/98	NG	-6.0	8.1	133.8	97	90	10

LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHEAST RANGE

136 12/7/98 NG -5.5 9.8 132.1 96 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHWEST RANGE

137 12/7/98 NG -5.5 10.1 128.9 94 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHWEST RANGE

138 12/7/98 NG -4.0 9.1 129.2 94 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHEAST RANGE RAMP

139 12/7/98 NG -3.5 9.4 128.8 94 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHEAST RANGE RAMP

140 12/8/98 NG -6.0 8.5 128.3 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT SOUTHWEST CORNER

141 12/8/98 NG -7.0 7.8 129.1 94 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT NORTHWEST CORNER

142 12/8/98 NG -5.0 7.8 128.3 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT SOUTHEAST CORNER

143 12/8/98 NG -5.0 7.9 126.2 92 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT SOUTHEAST CORNER

144 12/8/98 NG -3.5 7.3 128.0 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT EAST SIDE

145 12/8/98 NG -5.0 7.3 134.2 96 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHEAST CORNER

146 12/8/98 NG -4.5 8.5 127.5 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT SOUTHEAST CORNER

147 12/8/98 NG -4.0 7.7 129.7 94 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHWEST CORNER

148 12/9/98 NG -5.0 8.3 126.6 92 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHWEST QUADRANT SOUTHWEST CORNER

149 12/9/98 NG -3.5 9.9 120.0 87 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHWEST QUADRANT NORTHWEST CORNER; **TEST FAILED**

150 12/9/98 NG -3.5 9.7 123.6 90 90 10
LOCATION: **RETEST OF NO. 149**

151 12/9/98 NG -4.5 8.4 123.2 90 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT NORTHWEST CORNER

152 12/9/98 NG -5.5 8.6 115.6 84 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT NORTHEAST CORNER; **TEST FAILED**

153 12/9/98 NG -5.5 8.2 127.0 92 90 10
LOCATION: **RETEST OF NO. 152**

154 12/9/98 NG -5.0 8.9 127.6 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT SOUTHEAST CORNER

155 12/9/98 NG -5.0 8.5 124.6 91 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT SOUTHWEST CORNER

156 12/9/98 NG -4.5 10.5 124.3 90 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHWEST QUADRANT SOUTHWEST CORNER

157 12/9/98 NG -4.5 8.1 128.4 93 90 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHWEST CORNER

158 12/9/98 NG -2.0 7.9 129.1 94 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHEAST CORNER; **TEST FAILED**

159 12/9/98 NG -2.0 7.5 131.2 95 95 10
LOCATION: **RETEST OF NO. 158**

160 12/9/98 NG -1.0 7.9 134.0 97 95 10
LOCATION: EXCAVATION 7-1 BACKFILL,SOUTHEAST QUADRANT NORTHEAST CORNER

161 12/10/98 NG -2.0 7.4 132.8 97 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT SOUTHWEST CORNER

162 12/10/98 NG -2.5 7.4 132.9 97 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT NORTHWEST CORNER

163 12/10/98 NG -2.5 7.7 131.8 96 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT NORTHEAST CORNER

164 12/10/98 NG -2.5 7.1 133.0 97 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHWEST CORNER

165 12/10/98 NG -2.0 6.3 129.7 94 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHEAST CORNER; **TEST FAILED**

166 12/10/98 NG -2.0 6.5 131.9 95 95 10
LOCATION: **RETEST OF NO. 165**

167 12/10/98 NG -2.0 5.9 128.3 93 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT EAST SIDE, **TEST FAILED**

168 12/14/98 NG -4.0 10.8 128.5 93 90 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT AT RAMP NORTH EAST CORNER

169 12/14/98 NG -3.5 10.5 128.5 93 90 10

LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT, SOUTHEAST CORNER

170 12/14/98 NG -1.5 10.6 127.8 93 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHEAST QUADRANT, SOUTHEAST CORNER, **TEST FAILED**

171 12/14/98 NG -1.5 10.2 130.2 95 95 10
LOCATION: **RETEST OF NO. 170**

172 12/14/98 NG -2.0 7.8 131.5 96 95 10
LOCATION: **RETEST OF NO. 167**

173 12/15/98 NG -2.0 7.5 135.9 98 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT, SOUTHWEST CORNER

174 12/15/98 NG -3.0 7.1 134.7 98 90 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHWEST QUADRANT, SOUTHWEST CORNER

175 12/15/98 NG -4.0 10.6 127.1 92 90 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT, NORTHWEST CORNER

176 12/15/98 NG -3.5 8.8 134.4 98 90 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHWEST QUADRANT, EAST SIDE

177 12/15/98 NG -0.5 8.3 128.8 94 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHEAST QUADRANT, SOUTH SIDE, **TEST FAILED**

178 12/15/98 NG -0.5 10.4 130.0 95 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHEAST QUADRANT NORTHEAST CORNER

179 12/15/98 NG -0.5 8.1 131.3 95 95 10
LOCATION: **RETEST OF NO. 177**

180 12/17/98 NG -1.5 7.9 129.7 94 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT SOUTHWEST CORNER, **TEST FAILED**

181 12/17/98 NG -1.5 7.5 130.9 95 95 10
LOCATION: **RETEST OF NO. 180**

182 12/17/98 NG -2.5 7.6 129.4 94 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT SOUTHEAST CORNER, **TEST FAILED**

183 12/17/98 NG -2.5 7.3 132.3 96 95 10
LOCATION: **RETEST OF NO. 182**

184 12/17/98 NG -2.0 8.6 127.6 93 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT NORTHEAST CORNER, **TEST FAILED**

185 12/17/98 NG -2.0 7.4 134.9 98 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT NORTHWEST CORNER

186 12/17/98 NG -2.0 8.2 127.8 93 95 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT NORTHEAST CORNER, **TEST FAILED**

187 12/17/98 NG -3.0 9.1 125.3 91 95 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT NORTHWEST CORNER, **TEST FAILED**

188 12/17/98 NG -2.0 8.2 130.8 95 95 10
LOCATION: **RETEST OF NO. 184**

189 12/17/98 NG -2.0 7.7 132.5 96 95 10
LOCATION: **RETEST OF NO. 186**

190 12/17/98 NG -3.0 8.9 131.4 96 95 10
LOCATION: **RETEST OF NO. 187**

192 12/18/98 NG -1.0 8.1 132.6 96 95 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT NORTHEAST CORNER

193 12/18/98 NG -2.0 9.5 130.2 95 95 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHEAST QUADRANT WEST SIDE

194 12/18/98 NG -2.0 8.6 125.3 91 95 10
LOCATION: EXCAVATION BACKFILL 7-1, NORTHWEST QUADRANT SOUTHEAST CORNER, **TEST FAILED**

195 12/18/98 NG -1.5 7.1 130.8 95 95 10
LOCATION: EXCAVATION BACKFILL 7-1, SOUTHWEST QUADRANT SOUTHEAST CORNER

196 12/18/98 NG -2.0 8.3 129.9 95 95 10
LOCATION: **RETEST OF NO. 194**

197 12/21/98 NG -1.0 7.0 133.6 97 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT SOUTHSIDE

198 12/21/98 NG -1.0 7.9 124.6 91 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT NORTHEAST CORNER; **TEST FAILED**

199 12/21/98 NG -1.0 8.4 125.2 91 95 10
LOCATION: EXCAVATION 7-1 BACKFILL, NORTHWEST QUADRANT SOUTHWEST CORNER; **TEST FAILED**

200 12/22/98 NG -1.0 9.1 123.6 90 95 10
LOCATION: **RETEST OF NO. 198**

201 12/22/98 NG -1.0 8.1 129.9 94 95 10
LOCATION: **RETEST OF NO. 199**

202 12/22/98 NG -1.0 8.0 131.7 96 95 10
LOCATION: **RETEST OF NO. 198**

203	12/22/98	NG	-1.0	8.6	130.4	95	95	10
LOCATION:	**RETEST OF NO. 199**							
205	12/23/98	NG	-3.0	7.2	131.4	96	95	10
LOCATION:	**RETEST OF NO. 204**							
208	12/23/98	NG	-0.5	9.6	130.5	95	95	10
LOCATION:	EXCAVATION 7-1 BACKFILL, NORTHWEST QUADRANT NORTHWEST CORNER							
209	12/23/98	NG	-0.5	9.3	131.1	95	95	10
LOCATION:	EXCAVATION 7-1 BACKFILL, SOUTHWEST QUADRANT NORTHWEST CORNER							
10	ORANGE BROWN SANDY GRAVELWITH SOME CLAY							
220	12/29/98	NG	FAB	5.7	128.2	92	95	5
LOCATION:	EXCAVATION 7-1 BACKFILL, NORTHEAST QUADRANT, **TEST FAILED**							
221	12/29/98	NG	FAB	6.9	135.6	97	95	5
LOCATION:	EXCAVATION 7-1 BACKFILL, SOUTHEAST QUADRANT							
222	12/29/98	NG	FAB	6.0	133.9	96	95	5
LOCATION:	**RETEST OF NO. 220**							
5	GRAY CLASS II AGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 7-4								
191	12/18/98	NG	-7.0	8.3	129.0	94	90	10
LOCATION: EXCAVATION BACKFILL, 7-4, CENTER								
204	12/23/98	NG	-3.0	7.4	129.6	94	95	10
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHWEST QUADRANT RAMP, **TEST FAILED**								
205	12/23/98	NG	-3.0	7.2	131.4	96	95	10
LOCATION: **RETEST OF NO. 204**								
206	12/23/98	NG	-4.0	7.2	130.8	95	90	10
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHWEST QUADRANT RAMP								
207	12/23/98	NG	-6.0	11.0	126.5	92	90	10
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHEAST QUADRANT								
10	ORANGE BROWN SANDY GRAVEL WITH SOME CLAY							
216	12/28/98	NG	-5.0	9.2	123.2	92	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHEAST QUADRANT								
217	12/29/98	NG	-4.0	10.0	126.5	94	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, NORTHEAST QUADRANT								
218	12/29/98	NG	-5.0	10.2	129.6	97	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, NORTHWEST QUADRANT								
219	12/29/98	NG	-4.0	10.5	124.7	93	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHWEST QUADRANT								
223	12/30/98	NG	-3.2	10.9	123.0	92	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, NORTHWEST QUADRANT								
224	12/30/98	NG	-3.2	11.9	123.2	92	90	13
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHEAST QUADRANT								
226	12/31/98	NG	-2.0	9.8	127.2	95	95	13
LOCATION: EXCAVATION 7-4 BACKFILL, CENTER								

230	12/31/98	NG	-1.0	8.0	128.3	96	95	13
LOCATION:	EXCAVATION 7-4 BACKFILL, CENTER							
244	1/29/99	NG	FSG	10.5	128.1	96	95	13
LOCATION:	EXCAVATION 7-4 BACKFILL, NORTHWEST QUADRANT							
245	1/29/99	NG	FSG	10.8	125.6	94	95	13
LOCATION:	EXCAVATION 7-4 BACKFILL, SOUTHWEST QUADRANT, **TEST FAILED**							
246	1/29/99	NG	FSG	10.3	127.3	95	95	13
LOCATION:	**RETEST OF NO. 245**							

13 BROWN SANDY GRAVEL WITH CLAY

263	3/15/99	NG	FAB	4.4	137.1	98	95	5
LOCATION:	EXCAVATION 7-4 BACKFILL, SOUTHEAST QUADRANT							
264	3/15/99	NG	FAB	3.9	136.7	98	95	5
LOCATION:	EXCAVATION 7-4 BACKFILL, NORTHWEST QUADRANT							
265	3/15/99	NG	FAB	4.3	136.3	98	95	5
LOCATION:	EXCAVATION 7-4 BACKFILL, NORTHEAST QUADRANT							

5 GRAY CLASS II AGGREGATE BASE

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 7-3								
211	12/28/98	NG	-6.0	8.8	129.0	96	90	13
LOCATION:	EXCAVATION 7-3 BACKFILL, NORTHWEST QUADRANT							
212	12/28/98	NG	-6.0	8.6	130.1	97	90	13
LOCATION:	EXCAVATION 7-3 BACKFILL, SOUTHWEST QUADRANT							
225	12/30/98	NG	-5.0	11.9	125.2	93	90	13
LOCATION:	EXCAVATION 7-3 BACKFILL, CENTER							
227	12/31/98	NG	-4.0	10.6	120.3	90	90	13
LOCATION:	EXCAVATION 7-3 BACKFILL,WEST							
228	12/31/98	NG	-3.2	11.3	126.7	95	90	13
LOCATION:	EXCAVATION 7-3 BACKFILL, EAST							
229	12/31/98	NG	-2.0	7.8	126.9	95	95	13
LOCATION:	EXCAVATION 7-3 BACKFILL, SOUTH							
243	1/29/99	NG	FSG	10.8	130.4	97	95	13
LOCATION:	EXCAVATION 7-3 BACKFILL, SOUTHEAST QUADRANT							
13	BROWN SANDY GRAVEL WITH CLAY							
1	4/28/99	NG	FAB	8.8	130.6	95	95	28
LOCATION:	BACKFILL EXCAVATION 7-3, POTHOLE, CENTER							
28	BROWN SANDY SILTY GRAVEL WITH FINES							

SMITH-EMERY COMPANY

ELEVATION KEY

SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY

SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 18-1								
231	1/26/99	NG	FSG	9.4	132.2	98	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, TOP OF RAMP								
232	1/26/99	NG	-11/2	9.6	130.3	97	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, @ RAMP								
233	1/26/99	NG	-21/2	9.6	130.0	97	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, @ RAMP								
234	1/27/99	NG	-3.5	9.6	126.4	94	90	13
LOCATION: EXCAVATION 18-1 BACKFILL, NORTHEAST QUADRANT								
235	1/27/99	NG	-4.5	9.7	130.5	97	90	13
LOCATION: EXCAVATION 18-1 BACKFILL, NORTHWEST QUADRANT								
236	1/27/99	NG	-3.0	10.0	126.3	94	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, WESTSIDE, **TEST FAILED**								
237	1/27/99	NG	-3.0	9.8	128.7	96	95	13
LOCATION: **RETEST OF NO. 236**								
238	1/27/99	NG	-5.5	9.3	128.9	96	90	13
LOCATION: EXCAVATION 18-1/MIDDLE @ POWER POLE								
239	1/28/99	NG	-3.5	11.0	124.8	93	90	13
LOCATION: EXCAVATION 18-1 BACKFILL, SOUTHWEST QUADRANT, NORTHWEST CORNER								
240	1/28/99	NG	-1.5	10.5	125.8	94	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, NORTHWEST QUADRANT, MIDDLE, **TEST FAILED**								
241	1/28/99	NG	-1.5	10.3	127.5	95	95	13
LOCATION: **RETEST OF NO. 240**								
242	1/28/99	NG	-5.0	9.5	131.6	98	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, NORTHEAST QUADRANT, SOUTHWEST CORNER @ POWER POLE								
247	2/2/99	NG	-1.0	8.6	130.8	97	95	13
LOCATION: EXCAVATION 18-1 BACKFILL, NORTHWEST QUADRANT								

248 2/2/99 NG -3.0 8.2 125.5 94 95 13
LOCATION: EXCAVATION 18-1 BACKFILL, SOUTHWEST QUADRANT, **TEST FAILED**

249 2/2/99 NG -2.5 6.5 131.9 98 95 13
LOCATION: EXCAVATION 18-1 BACKFILL, SOUTHEAST QUADRANT

250 2/2/99 NG -3.0 8.0 127.1 95 95 13
LOCATION: **RETEST OF NO. 248**

251 2/3/99 NG +1.0 10.1 127.4 95 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 40 FEET SOUTHEAST OF POWER POLE

252 2/3/99 NG +4.0 10.8 126.0 94 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 100 FEET NORTHWEST OF POWER POLE

253 2/3/99 NG 0.0 10.6 123.4 92 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 70 FEET NORTH, 30 EAST OF POWER POLE

254 2/3/99 NG +3.0 10.1 127.1 95 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 40 FEET NORTH OF POWER POLE

255 2/3/99 NG +2.0 8.9 130.6 97 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 20 FEET EAST, 70 FEET NORTH OF POWER POLE

256 2/4/99 NG +1.0 11.5 128.8 96 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 30 FEET EAST, 20 FEET NORTH OF POWER POLE

257 2/4/99 NG +2.0 10.3 127.7 95 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 60 FEET SOUTH OF POWER POLE

258 2/4/99 NG +3.0 9.8 129.5 97 90 13
LOCATION: BACKFILL, EXCAVATION 18-1, 10 FEET WEST, 40 FEET NORTH OF POWER POLE

259 2/4/99 NG +4.0 11.1 128.3 96 95 13
LOCATION: BACKFILL, EXCAVATION 18-1, 60 FEET WEST, 80 FEET NORTH OF POWER POLE

260 2/4/99 NG +5.0 10.8 127.2 95 95 13
LOCATION: BACKFILL, EXCAVATION 18-1, 80 FEET WEST, 70 FEET SOUTH OF POWER POLE

261 2/4/99 NG +6.0 10.6 127.2 95 95 13
LOCATION: BACKFILL, EXCAVATION 18-1, 50 FEET WEST, 70 FEET NORTH OF POWER POLE

262 2/4/99 NG +5.0 10.4 127.6 95 95 13
LOCATION: BACKFILL, EXCAVATION 18-1, 30 FEET WEST, 50 FEET SOUTH OF POWER POLE

13 BROWN SANDY GRAVEL WITH CLAY

1 4/5/99 NG -8.0 8.9 131.8 95 85 16
LOCATION: BACKFILL EXCAVATION 18-1, NORTHEAST QUADRANT

2 4/5/99 NG -9.0 9.1 131.9 95 85 16
LOCATION: BACKFILL EXCAVATION 18-1, SOUTH WEST QUADRANT

3	4/6/99	NG	-8.0	8.5	131.4	95	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, NORTHWEST QUADRANT							
4	4/6/99	NG	-5.0	8.7	135.1	98	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, NORTHEAST QUADRANT							
5	4/6/99	NG	-7.0	8.8	132.6	96	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, SOUTH CENTER							
6	4/6/99	NG	-7.0	8.9	136.1	98	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, SOUTHWEST QUADRANT							
7	4/6/99	NG	-4.0	8.7	135.5	98	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, SOUTHEAST QUADRANT							
8	4/6/99	NG	-6.0	8.0	131.4	95	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, NORTH CENTER							
9	4/7/99	NG	-4.0	4.4	139.4	99	85	16
LOCATION:	BACKFILL EXCAVATION 18-1, NORTH SIDE							
16	BROWN SANDY GRAVEL WITH CLAY							
10	5/5/99	NG	-1.0	6.6	126.4	96	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 10' WEST OF STATION 2252							
11	5/5/99	NG	-1.0	6.3	125.9	95	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 20' SOUTH OF STATION 2242							
12	5/5/99	NG	-1.0	6.7	127.8	97	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 15' SOUTHWEST OF STATION 2269							
13	5/5/99	NG	-1.0	6.1	126.9	96	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, AT STATION 2266							
14	5/5/99	NG	-1.0	7.1	128.2	97	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 40' SOUTHWEST OF STATION 2266							
15	5/5/99	NG	-1.0	7.4	128.4	97	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 10' SOUTH OF STATION 2267							
16	5/6/99	NG	FSG	6.5	129.1	98	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 10' SOUTH OF STATION 2251							
17	5/6/99	NG	FSG	7.0	128.9	98	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 10' SOUTH OF STATION 2249							
18	5/6/99	NG	FSG	7.1	127.7	96	95	29
LOCATION:	BACKFILL EXCAVATION 18-1, 10' NORTH OF STATION 2238							
29	BROWN SILTY GRAVEL WITH FINES							

19	5/19/99	NG	+1.0	6.2	125.9	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 30' WEST OF STATION 2297							
20	5/19/99	NG	+1.0	6.6	126.8	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 10' NORTH OF STATION 2226							
21	5/19/99	NG	+1.0	6.8	126.4	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 15' NORTHWEST OF STATION 2265							
22	5/19/99	NG	+2.0	7.0	129.9	98	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 30' SOUTHEAST OF STATION 2265							
23	5/19/99	NG	+2.0	7.1	128.5	96	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 15' WEST OF STATION 3374							
24	5/19/99	NG	+2.0	7.1	126.9	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 50' NORTHWEST OF STATION 2265							
25	5/19/99	NG	+3.0	6.2	126.2	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 10' EAST OF STATION 2244							
26	5/19/99	NG	+3.0	6.6	128.1	96	95	32
LOCATION:	BACKFILL EXCAVATION 18-1 AT STATION 2297							
27	5/19/99	NG	+3.0	6.5	127.3	96	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 40' NORTH OF STATION 2296							
28	5/20/99	NG	FSG	6.9	127.1	95	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 30' NORTH OF STATION 2244							
29	5/20/99	NG	FSG	7.1	127.9	96	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 25' NORTHWEST OF STATION 2297							
30	5/20/99	NG	FSG	7.4	130.8	98	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 30' SOUTHWEST OF STATION 2324							
31	5/20/99	NG	FSG	6.8	130.6	98	95	32
LOCATION:	BACKFILL EXCAVATION 18-1 AT STATION 2237							
32	5/20/99	NG	FSG	7.6	129.8	97	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 50' EAST OF STATION 2299							
33	5/20/99	NG	FSG	6.9	130.3	98	95	32
LOCATION:	BACKFILL EXCAVATION 18-1, 35' NORTHEASTOF STATION 2228							

32 BROWN SILTY SAND WITH GRAVEL

March 24, 1999

SECo File No. 92561
SECo Report No. 99-245

Project: Hunters Point Shipyard
Parcel B-1
San Francisco, California

TABLE NO. 1

ELEVATION KEY
SG-Subgrade
FG-Finish Grade
AB-Aggregate Base
FSG-Finish Subgrade
BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
263	3/15/99	NG	FAB	4.4	137.1	98	95	5
LOCATION: EXCAVATION 7-4 BACKFILL, SOUTHEAST QUADRANT								
264	3/15/99	NG	FAB	3.9	136.7	98	95	5
LOCATION: EXCAVATION 7-4 BACKFILL, NORTHWEST QUADRANT								
265	3/15/99	NG	FAB	4.3	136.3	98	95	5
LOCATION: EXCAVATION 7-4 BACKFILL, NORTHEAST QUADRANT								

END of TABLE 1

SMITH-EMERY COMPANY

February 24. 1999

SECo File No. 92561
SECo Report No. 99-245

Project: Hunters Point Shipyard
Parcel B-1
San Francisco, California

TABLE NO. 2

RESULTS OF LABORATORY COMPACTION CHARACTERISTICS OF SOIL TESTS

Material Type	Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
5	GREY CLASS II AGGREGATE BASE	139.3	6.0

END of TABLE 2

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0536								
1	4/22/99	NG	FAB	5.3	132.1	95	95	5
LOCATION:	BACKFILL EXCAVATION B0536, NORTH CENTER							
5	GRAY CLASS II AGGREGATE BASE							
2	4/22/99	NG	-4.0	8.6	132.9	95	95	28
LOCATION:	BACKFILL EXCAVATION B0536, NORTHWEST QUADRANT							
3	4/22/99	NG	-3.0	8.4	134.6	97	95	28
LOCATION:	BACKFILL EXCAVATION B0536, SOUTHEAST QUADRANT							
4	4/22/99	NG	-2.0	8.8	134.8	98	95	28
LOCATION:	BACKFILL EXCAVATION B0536, NORTHEAST QUADRANT							
5	4/22/99	NG	-1.0	7.9	133.4	97	95	28
LOCATION:	BACKFILL EXCAVATION B0536, SOUTHWEST QUADRANT							
28	BROWN SANDY SILTY GRAVEL							
6	4/22/99	NG	FAB	6.6	133.1	96	95	5
LOCATION:	BACKFILL EXCAVATION B0536, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY

SG-Subgrade FSG-Finish Subgrade
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0632								
1	4/22/99	NG	-3.0	8.4	132.6	97	95	28
LOCATION:	BACKFILL EXCAVATION B0632, NORTHEAST QUADRANT							
2	4/22/99	NG	-2.0	8.7	131.5	96	95	28
LOCATION:	BACKFILL EXCAVATION B0632, SOUTHWEST QUADRANT							
3	4/26/99	NG	-1.0	9.3	131.7	96	95	28
LOCATION:	BACKFILL EXCAVATION B0632, CENTER							
28	BROWN SANDY SILTY GRAVEL							
4	4/26/99	NG	FAB	6.9	132.4	95	95	5
LOCATION:	BACKFILL EXCAVATION B0632, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY
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FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0536								
1	4/27/99	NG	-9.0	9.1	128.7	93	90	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTHWEST QUADRANT							
2	4/27/99	NG	-8.0	8.8	131.4	95	90	28
LOCATION:	BACKFILL EXCAVATION B0628, SOUTHEAST QUADRANT							
3	4/27/99	NG	-7.0	8.4	136.5	92	90	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTHEAST QUADRANT							
4	4/27/99	NG	-6.0	8.2	132.4	96	90	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTHWEST QUADRANT							
5	4/27/99	NG	-5.0	8.0	128.9	94	90	28
LOCATION:	BACKFILL EXCAVATION B0628, CENTER							
6	4/27/99	NG	-4.0	8.4	126.8	92	90	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTHWEST QUADRANT							
7	4/27/99	NG	-3.1	8.1	128.6	94	90	28
LOCATION:	BACKFILL EXCAVATION B0628, SOUTHEAST QUADRANT							
8	4/28/99	NG	-2.0	8.5	131.5	96	95	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTH CENTER							
9	4/28/99	NG	-1.0	9.2	137.7	97	95	28
LOCATION:	BACKFILL EXCAVATION B0628, NORTHWEST QUADRANT							
28	BROWN SANDY SILTY GRAVEL WITH FINES							
10	4/28/99	NG	FAB	6.8	132.1	95	95	5
LOCATION:	BACKFILL EXCAVATION B0628, SOUTHWEST QUADRANT							
5	GRAY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
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RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION B0337								
1	4/29/99	NG	-9.0	6.9	124.4	94	90	29
LOCATION:	BACKFILL EXCAVATION B0337, EAST CENTER							
29	BROWN SILTY GRAVEL WITH FINES							
2	4/29/99	NG	-8.0	10.4	121.8	91	90	24
LOCATION:	BACKFILL EXCAVATION B0337, NORTHWEST QUADRANT							
24	DARK BROWN SAND							
3	4/29/99	NG	-7.0	6.6	129.8	98	90	29
LOCATION:	BACKFILL EXCAVATION B0337, SOUTHEAST QUADRANT							
4	4/29/99	NG	-6.0	6.8	125.6	94	90	29
LOCATION:	BACKFILL EXCAVATION B0337, NORTH CENTER							
5	5/3/99	NG	-5.0	7.8	126.9	96	90	29
LOCATION:	BACKFILL EXCAVATION B0337, NORTHWEST QUADRANT							
6	5/3/99	NG	-4.0	7.9	124.8	94	90	29
LOCATION:	BACKFILL EXCAVATION B0337, NORTHEAST QUADRANT							
7	5/3/99	NG	-3.0	8.2	125.6	95	95	29
LOCATION:	BACKFILL EXCAVATION B0337, SOUTH CENTER							
8	5/3/99	NG	-2.0	8.4	130.8	98	95	29
LOCATION:	BACKFILL EXCAVATION B0337, SOUTHWEST QUADRANT							
9	5/3/99	NG	-1.0	8.3	129.7	98	95	29
LOCATION:	BACKFILL EXCAVATION B0337, SOUTHEAST QUADRANT							
29	BROWN SILTY GRAVEL WITH FINES							
10	5/3/99	NG	FAB	6.4	133.4	95	95	5
LOCATION:	BACKFILL EXCAVATION B0337, NORTH CENTER							
5	GREY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY
SG-Subgrade FSG-Finish Subgrade
FG-Finish Grade FAB-Finish Aggregate Base
AB-Aggregate Base BTM-Bottom

METHOD KEY
SC-Sandcone
NG-Nuclear Gauge

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 18-4								
1	5/3/99	NG	-10.0	8.4	126.4	96	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, NORTHEAST QUADRANT							
2	5/3/99	NG	-9.0	7.3	129.8	98	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, SOUTHWEST QUADRANT							
3	5/4/99	NG	-7.0	7.3	130.1	98	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, NORTHEAST QUADRANT							
4	5/4/99	NG	-6.0	7.5	127.8	97	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, SOUTHWEST QUADRANT							
5	5/4/99	NG	-5.0	7.1	129.5	98	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, NORTH CENTER							
6	5/4/99	NG	-4.0	7.2	126.9	96	90	29
LOCATION:	BACKFILL EXCAVATION 18-4, SOUTHEAST QUADRANT							
7	5/4/99	NG	-3.0	7.8	128.4	97	95	29
LOCATION:	BACKFILL EXCAVATION 18-4, NORTHWEST QUADRANT							
8	5/4/99	NG	-2.0	7.6	127.9	97	95	29
LOCATION:	BACKFILL EXCAVATION 18-4, SOUTH CENTER							
9	5/4/99	NG	-1.0	7.0	126.8	96	95	29
LOCATION:	BACKFILL EXCAVATION 18-4, SOUTHWEST QUADRANT							
29	BROWN SILTY GRAVEL WITH FINES							
10	5/5/99	NG	FAB	6.4	134.0	96	95	5
LOCATION:	BACKFILL EXCAVATION 18-4, CENTER							
5	GRAY CLASS II AGGREGATE BASE							

SMITH-EMERY COMPANY

ELEVATION KEY		METHOD KEY
SG-Subgrade	FSG-Finish Subgrade	SC-Sandcone
FG-Finish Grade	FAB-Finish Aggregate Base	NG-Nuclear Gauge
AB-Aggregate Base	BTM-Bottom	

RESULTS OF DENSITY TESTS

Test No.	Date	Test Type	Elev. Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction Field (%)	Relative Compaction Specified (%)	Soil Type
EXCAVATION 7-5								
1	6/22/99	NG	-7.0	7.0	114.0	86	85	34
LOCATION:	BACKFILL EXCAVATION 7-5, SOUTH HALF							
34	BROWN SILTY SAND WITH GRAVEL							
2	6/22/99	NG	-6.0	6.1	124.3	90	85	28
LOCATION:	BACKFILL EXCAVATION 7-5, CENTER							
28	BROWN SANDY SILTY GRAVEL WITH FINES							
3	6/22/99	NG	-5.0	6.8	117.3	89	85	34
LOCATION:	BACKFILL EXCAVATION 7-5, NORTH HALF							
34	BROWN SILTY SAND WITH GRAVEL							
4	6/23/99	NG	-4.0	6.8	125.0	91	85	28
LOCATION:	BACKFILL EXCAVATION 7-5, CENTER							
5	6/23/99	NG	-3.1	6.5	124.7	91	85	28
LOCATION:	BACKFILL EXCAVATION 7-5, NORTH HALF							
6	6/23/99	NG	-2.0	7.1	126.5	92	95	28
LOCATION:	BACKFILL EXCAVATION 7-5, CENTER, **TEST FAILED**							
7	6/23/99	NG	-2.0	6.9	130.5	95	95	28
LOCATION:	**RETEST OF NO. 6**							
8	6/23/99	NG	-1.0	6.8	131.9	96	95	28
LOCATION:	BACKFILL EXCAVATION 7-5, SOUTH HALF							
9	6/23/99	NG	FG	6.2	133.3	97	95	28
LOCATION:	BACKFILL EXCAVATION 7-5, CENTER							
28	BROWN SANDY SILTY GRAVEL WITH FINES							
1	8/10/99	NG	-7.0	5.8	118.3	86	85	42
LOCATION:	BACKFILL EXCAVATION 7-5, CENTERLINE, 45' FROM NORTH							
2	8/10/99	NG	-7.0	5.6	135.4	97	85	42

LOCATION: BACKFILL EXCAVATION 7-5, CENTERLINE, 20' FROM SOUTH

3 8/10/99 NG -6.0 5.4 123.2 90 85 42
LOCATION: BACKFILL EXCAVATION 7-5, CENTERLINE, 25' FROM NORTH

4 8/10/99 NG -6.0 7.8 125.0 91 85 42
LOCATION: BACKFILL EXCAVATION 7-5, CENTERLINE, 20' FROM SOUTH

5 8/10/99 NG -5.0 6.0 122.7 89 85 42
LOCATION: BACKFILL EXCAVATION 7-5, 10' FROM EAST AND 40' FROM SOUTH

6 8/10/99 NG -5.0 5.8 127.1 92 85 42
LOCATION: BACKFILL EXCAVATION 7-5, 5' FROM WEST AND 10' FROM NORTH

7 8/10/99 NG -4.0 5.1 108.4 79 85 42
LOCATION: BACKFILL EXCAVATION 7-5, 10' FROM EAST AND 15' FROM NORTH, **TEST FAILED**

8 8/10/99 NG -4.0 5.2 126.7 92 85 42
LOCATION: BACKFILL EXCAVATION 7-5, CENTERLINE, 25' FROM WEST

9 8/10/99 NG -4.0 5.4 119.2 87 85 42
LOCATION: **RETEST OF NO. 7**

10 8/11/99 NG -3.1 6.0 117.9 96 85 42
LOCATION: EXCAVATION 7-5 BACKFILL, CENTER

11 8/11/99 NG -2.0 6.7 133.2 97 95 42
LOCATION: EXCAVATION 7-5 BACKFILL, NORTH HALF

12 8/11/99 NG -1.0 5.6 131.9 96 95 42
LOCATION: EXCAVATION 7-5 BACKFILL, NORTH HALF

13 8/11/99 NG -1.0 6.5 132.3 96 95 42
LOCATION: EXCAVATION 7-5 BACKFILL, SOUTH HALF

14 8/12/99 NG FSG 5.8 120.6 88 95 42
LOCATION: EXCAVATION 7-5, **TEST FAILED**

15 8/12/99 NG FSG 5.7 134.7 98 95 42
LOCATION: **RETEST OF NO. 14**

42 GRAY BROWN GRAVELLY SAND WITH CLAY