REDACTED VERSION

APPENDIX H

SJB SERVICES, INC.
Contract Drilling and Testing

BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Attached are the results of laboratory testing conducted on various samples from the above referenced project. Mr. James Kaczor, representing Earth Tech, chose samples contained in this report.

The testing conducted was as follows:

ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

ASTM D-422: Particle Size Analysis of Soils

ASTM D-5084: Measurement of Hydraulic Conductivity of Saturated Porous Material Using a Flexible Wall Permeameter

Samples were received at the SJB Services, Inc. laboratory on January 4, 2008 where they were processed for testing.

If the reviewer should have any questions concerning this report, please do not hesitate to contact our office at any time.

SJB Services, Inc.

[redacted]

Paul Gregorczyk
Laboratory Manager

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TAMS / EARTH TECH

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Contract Drilling and Testing

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-014
Sample Identification: AO-4D-321-06

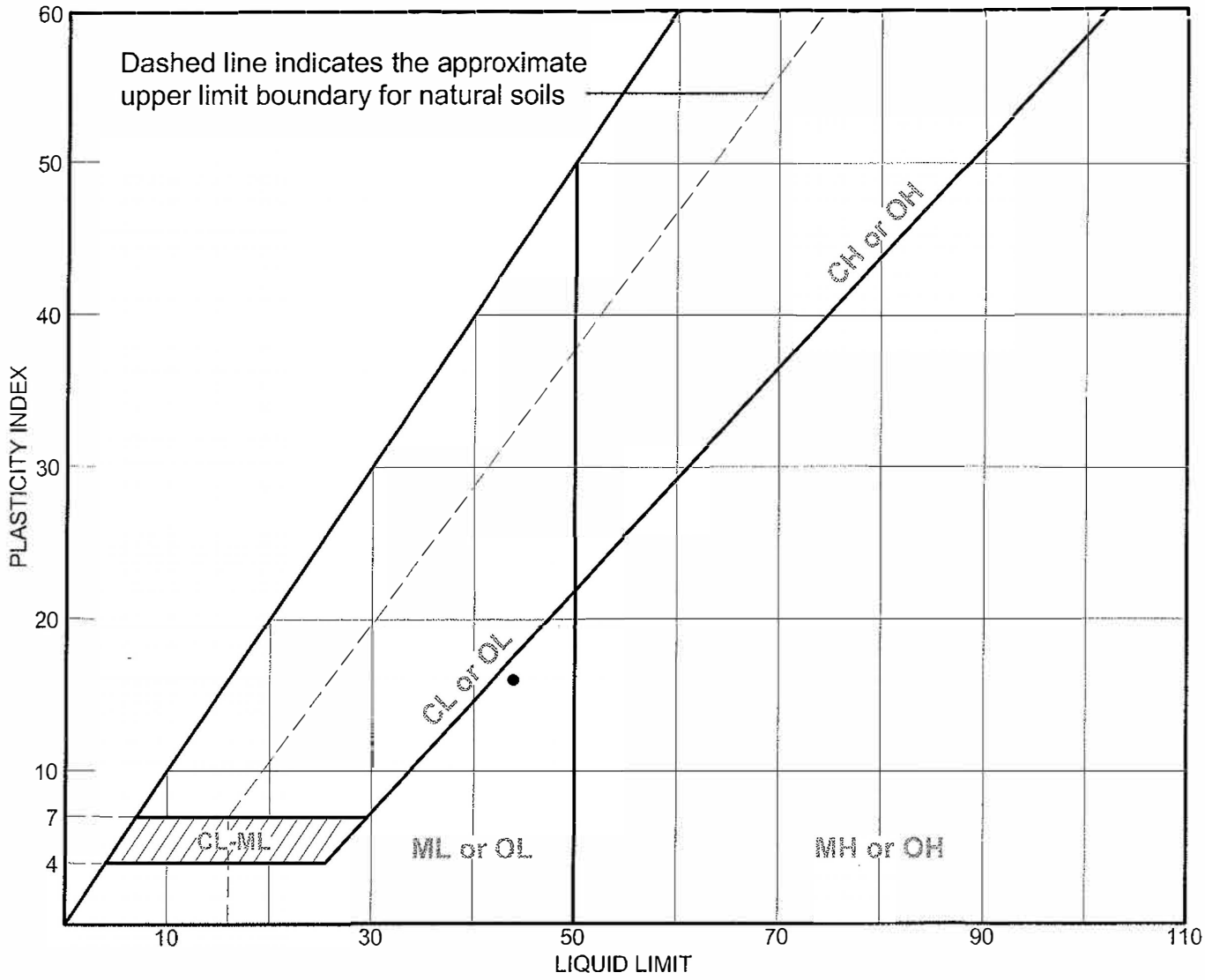
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
44	28	16

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	92.6
¾"	92.6
½"	87.5
¼"	86.0
#4	85.3
#10	83.1
#20	76.6
#40	67.5
#100	52.7
#200	41.3

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4D-321-06	08-014			28	44	16	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069 **Plate**

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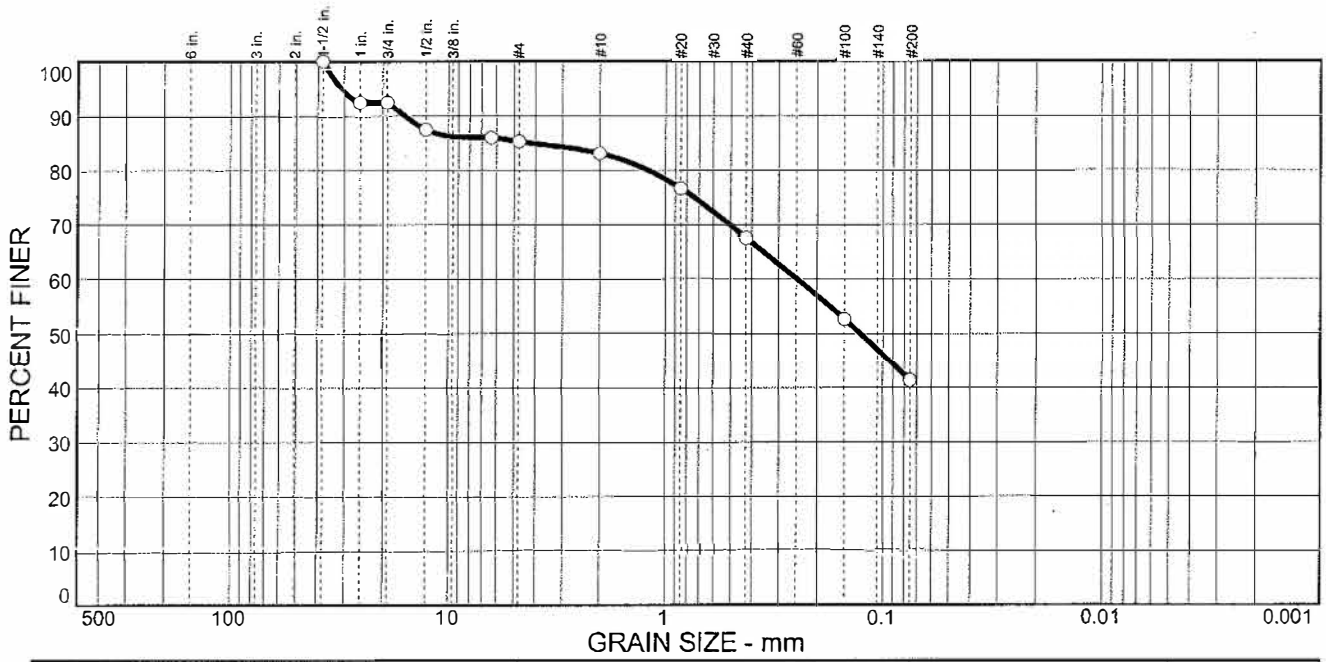
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-014 **Source of Sample:** AO4D-321-06 **Date:** 1/14/08
Location: AO4D-321-06 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	14.7	44.0	41.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	92.6		
.75 in.	92.6		
.5 in.	87.5		
.25 in.	86.0		
#4	85.3		
#10	83.1		
#20	76.6		
#40	67.5		
#100	52.7		
#200	41.3		

* (no specification provided)

Soil Description
SAMPLE AO4D-321-06

Atterberg Limits
PL= 28 LL= 44 PI= 16

Coefficients
D_{85}= 4.19 D_{60}= 0.247 D_{50}= 0.126
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-014

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-015
Sample Identification: AO-4A-309-07

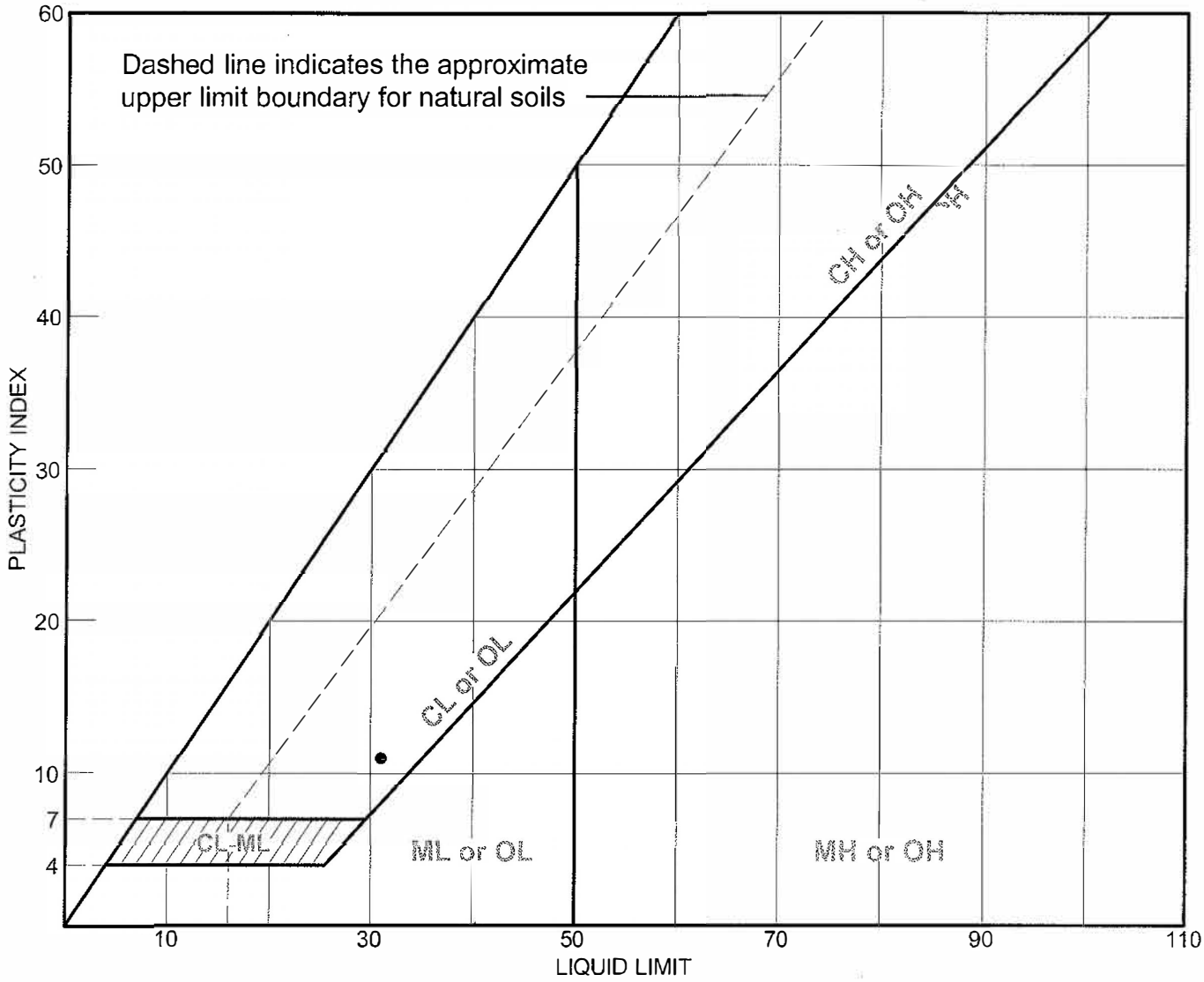
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
31	20	11

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	96.0
¾"	92.1
½"	88.1
¼"	84.2
#4	79.7
#10	63.4
#20	54.2
#40	49.2
#100	40.8
#200	35.7

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4A-309-07	08-015			20	31	11	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

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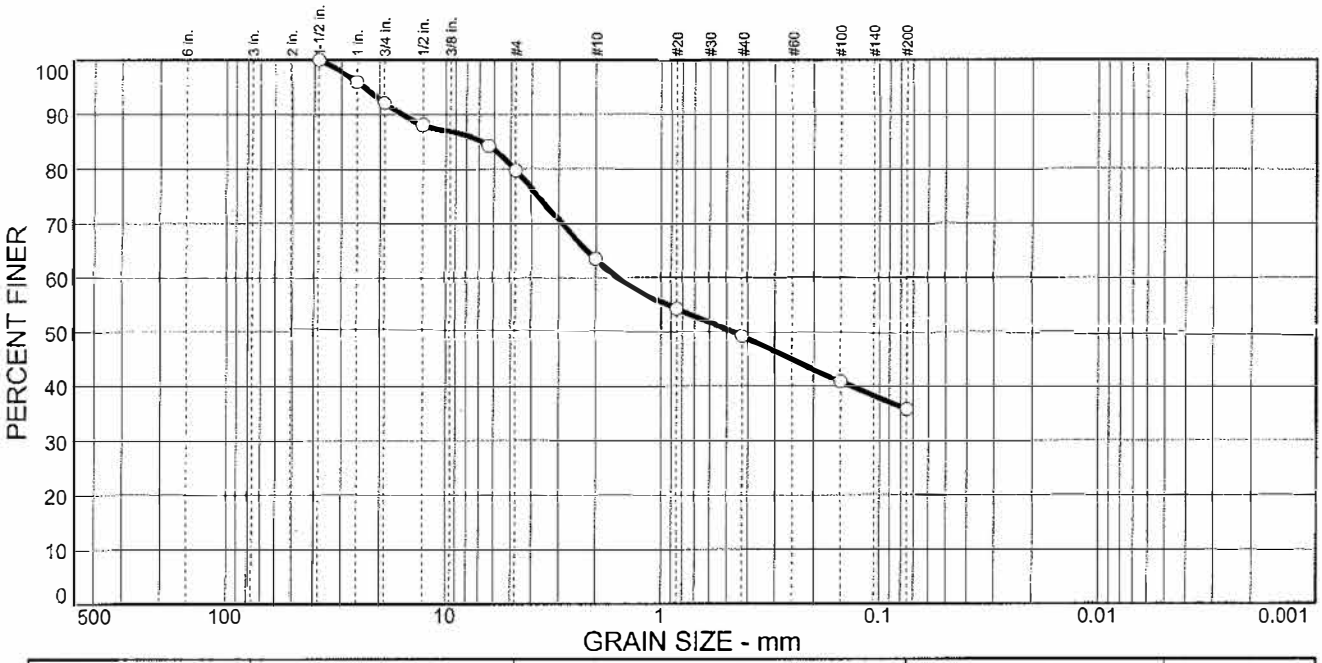
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-015 **Source of Sample:** AO4A-309-07 **Date:** 1/14/08
Location: AO4A-309-07 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	20.3	44.0	35.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	96.0		
.75 in.	92.1		
.5 in.	88.1		
.25 in.	84.2		
#4	79.7		
#10	63.4		
#20	54.2		
#40	49.2		
#100	40.8		
#200	35.7		

* (no specification provided)

Soil Description
SAMPLE NUMBER: AO4A-309-07

Atterberg Limits
PL= 20 LL= 31 PI= 11

Coefficients
D_{85}= 6.87 D_{60}= 1.57 D_{50}= 0.474
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-015

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-016
Sample Identification: AO4C-305-07

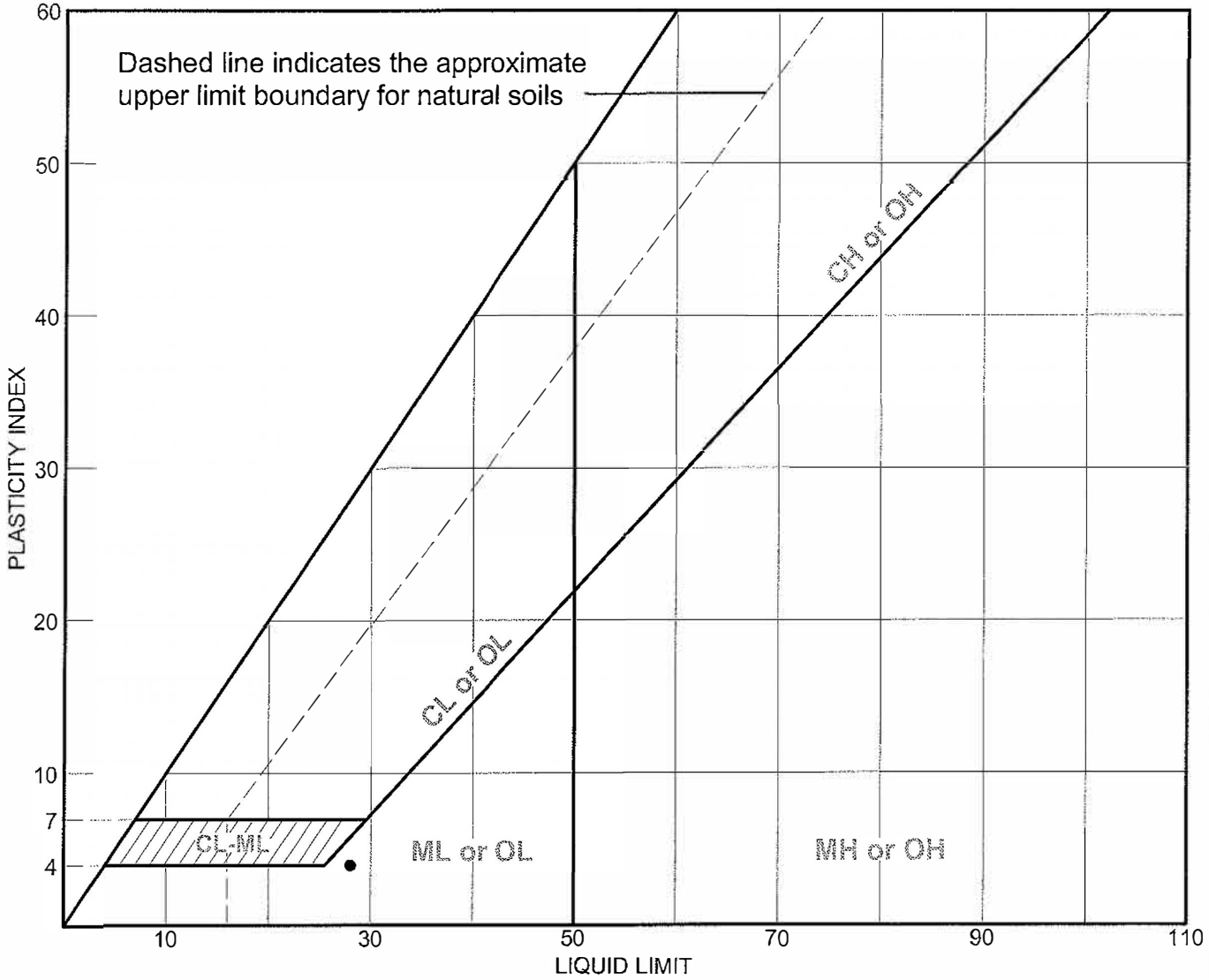
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
28	24	4

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
2"	100.0
1 ½"	90.2
1"	72.0
¾"	64.6
½"	56.1
¼"	45.1
#4	41.5
#10	35.3
#20	31.3
#40	29.4
#100	26.5
#200	23.6

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4C-305-07	08-016			24	28	4	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

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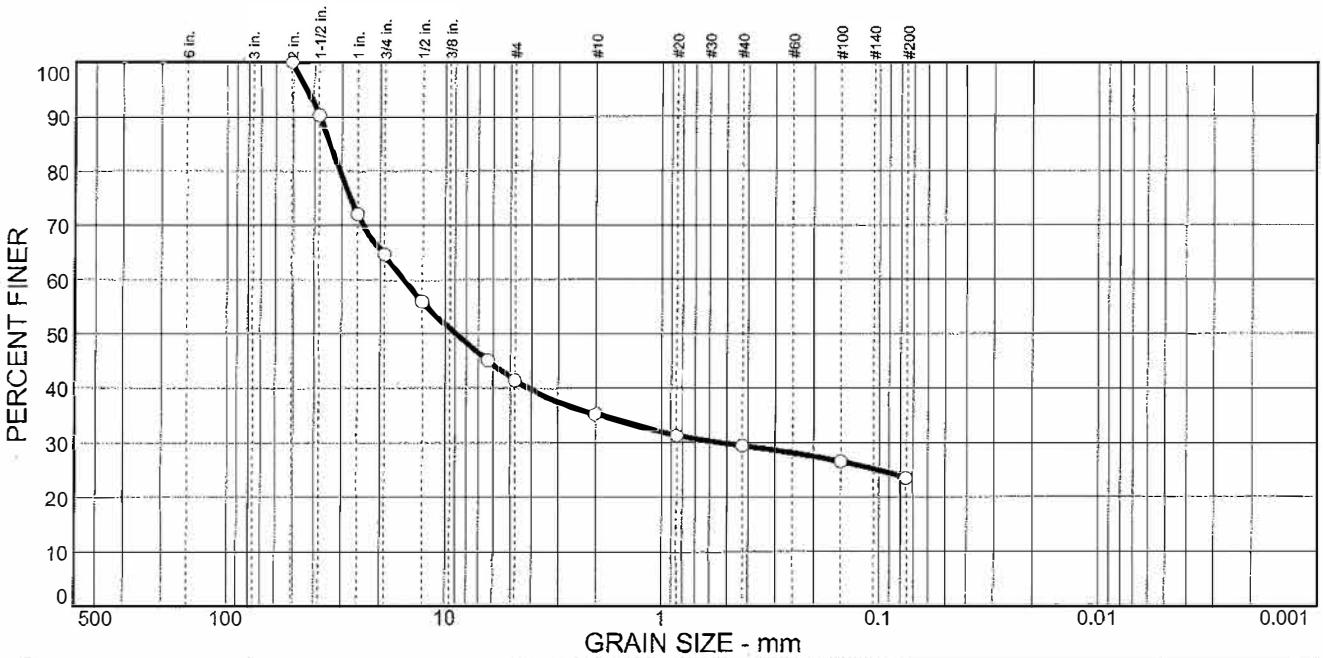
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-016 **Source of Sample:** AO4C-305-07 **Date:** 1/14/08
Location: AO4C-305-07 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	58.5	17.9	23.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1.5 in.	90.2		
1 in.	72.0		
.75 in.	64.6		
.5 in.	56.1		
.25 in.	45.1		
#4	41.5		
#10	35.3		
#20	31.3		
#40	29.4		
#100	26.5		
#200	23.6		

* (no specification provided)

Soil Description
SAMPLE AO4C-305-07

Atterberg Limits
PL= 24 LL= 28 PI= 4

Coefficients
D_{85}= 33.9 D_{60}= 15.4 D_{50}= 8.94
D_{30}= 0.547 D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-016

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-017
Sample Identification: AO3-223-09

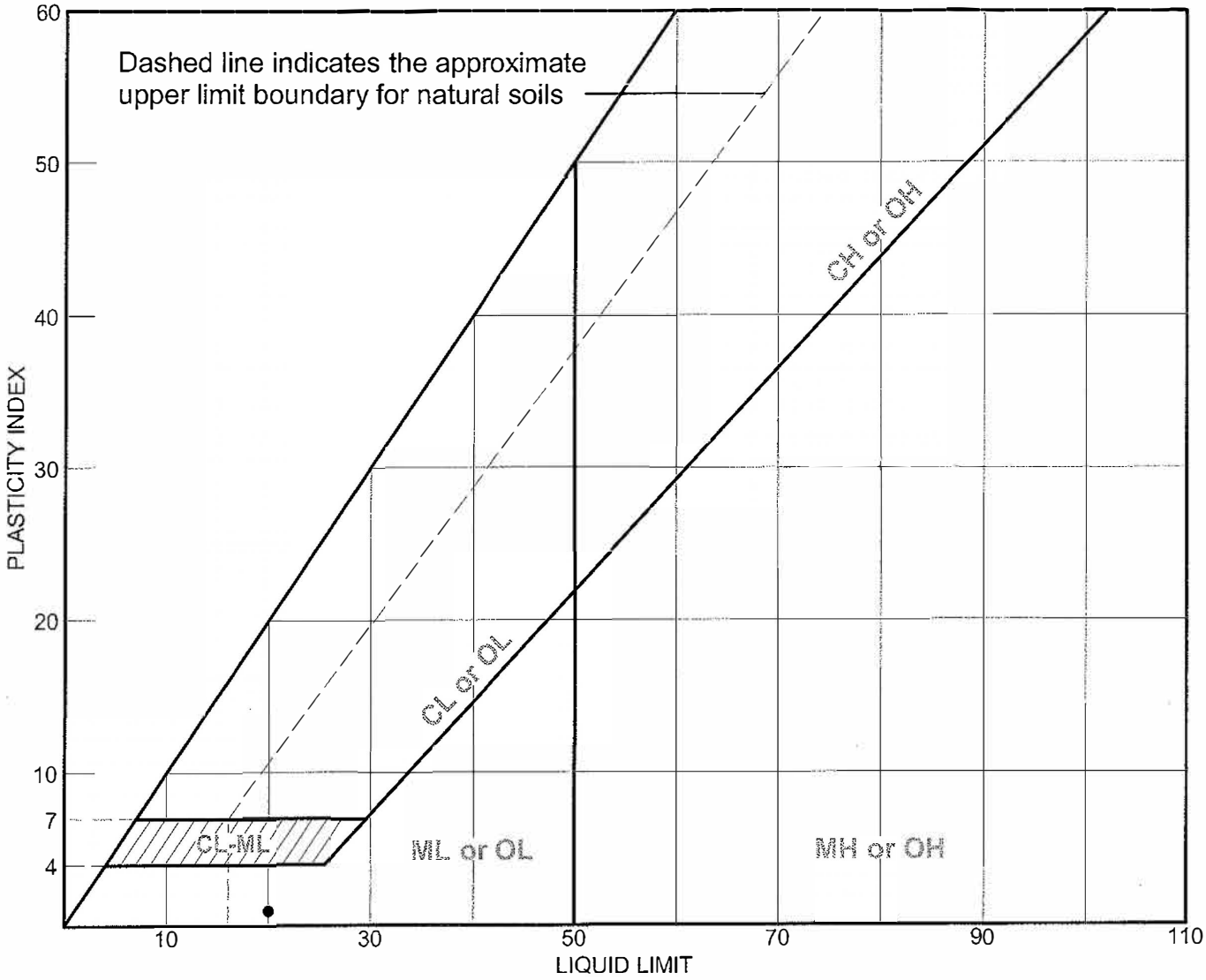
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
20	19	1

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	96.7
¾"	90.7
½"	85.2
¼"	73.1
#4	67.0
#10	55.0
#20	43.2
#40	36.1
#100	26.6
#200	21.4

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO3-223-09	08-017			19	20	1	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

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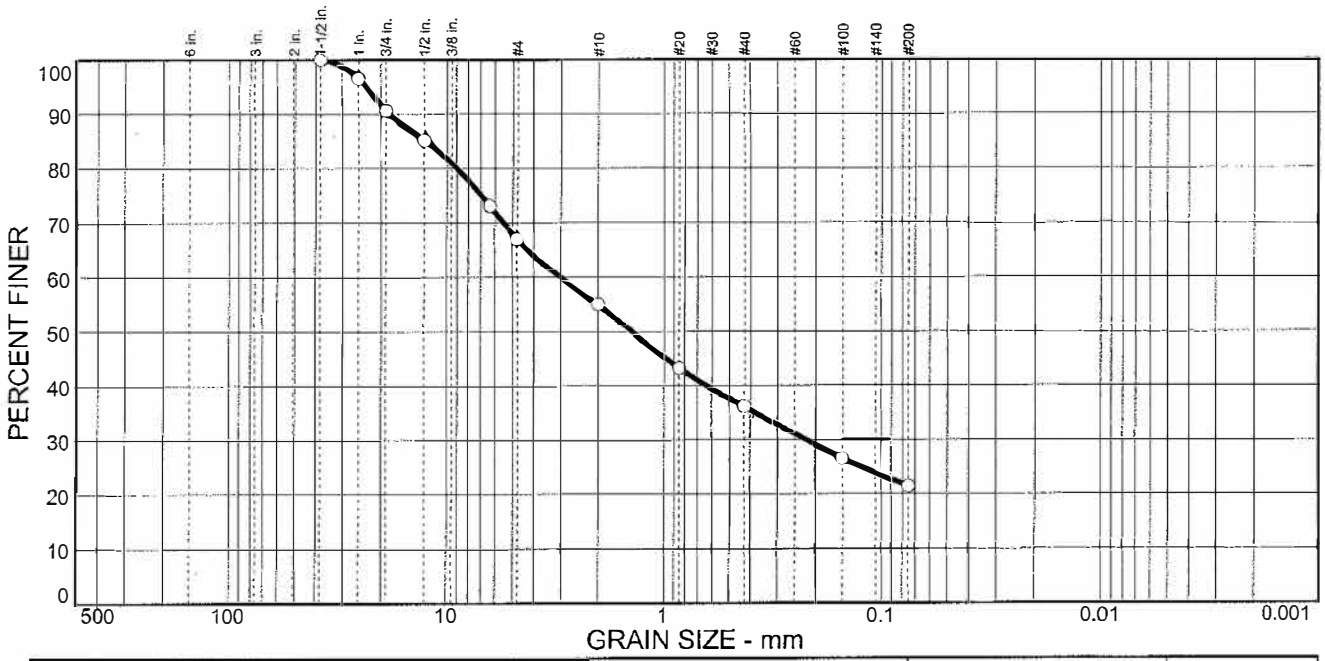
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-017 **Source of Sample:** AO3-223-09 **Date:** 1/14/08
Location: AO3-223-09 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	33.0	45.6	21.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	96.7		
.75 in.	90.7		
.5 in.	85.2		
.25 in.	73.1		
#4	67.0		
#10	55.0		
#20	43.2		
#40	36.1		
#100	26.6		
#200	21.4		

* (no specification provided)

Soil Description

SAMPLE AO3-223-09

Atterberg Limits

PL= 19 LL= 20 PI= 1

Coefficients

D_{85}= 12.5 D_{60}= 3.01 D_{50}= 1.39
D_{30}= 0.222 D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

SAMPLE NUMBER: 08-017

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-018
Sample Identification: AO2-208-09

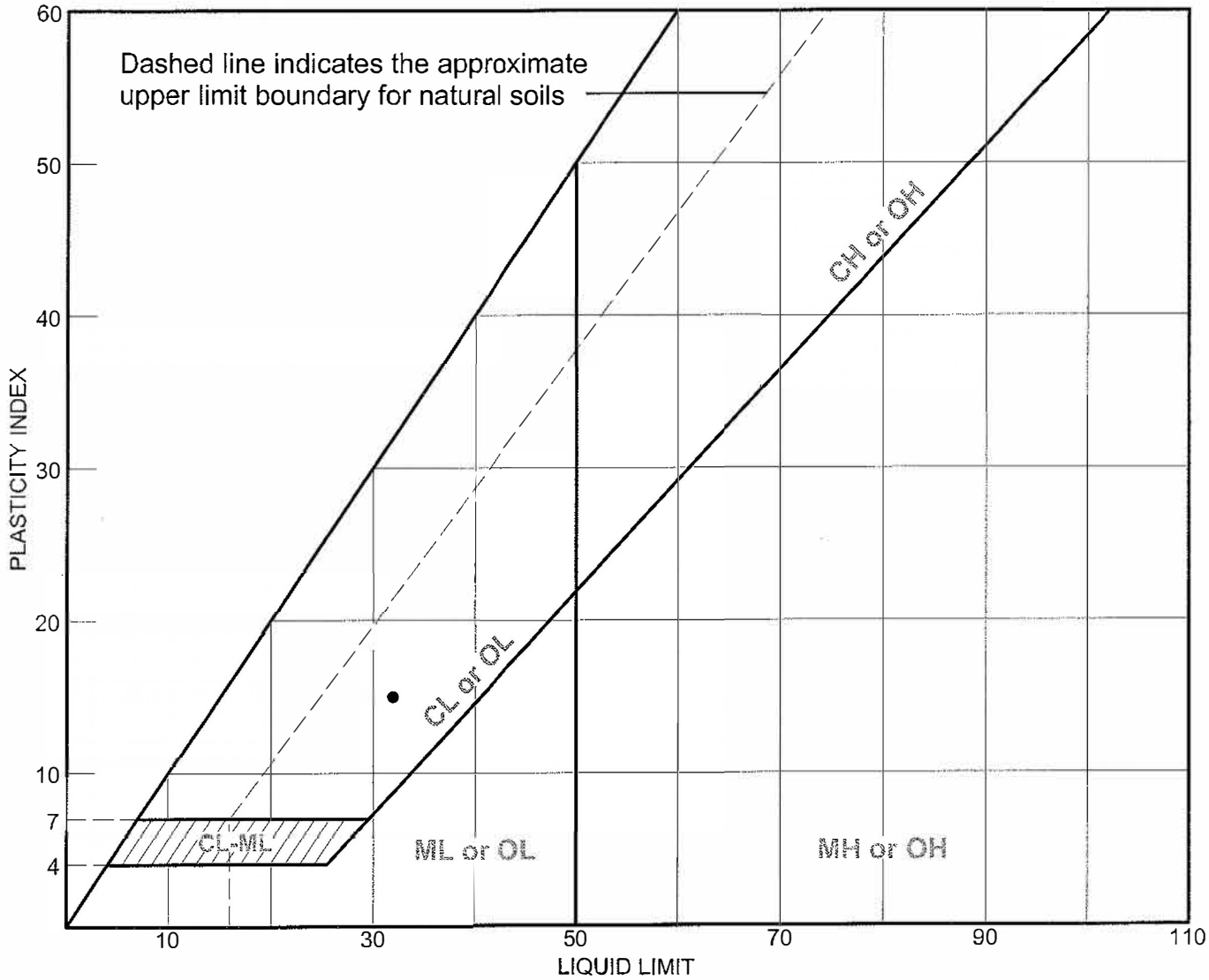
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
32	17	15

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	93.2
¾"	93.2
½"	93.2
¼"	90.2
#4	89.4
#10	82.4
#20	72.8
#40	64.7
#100	44.9
#200	25.0

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO2-208-09	08-018			17	32	15	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

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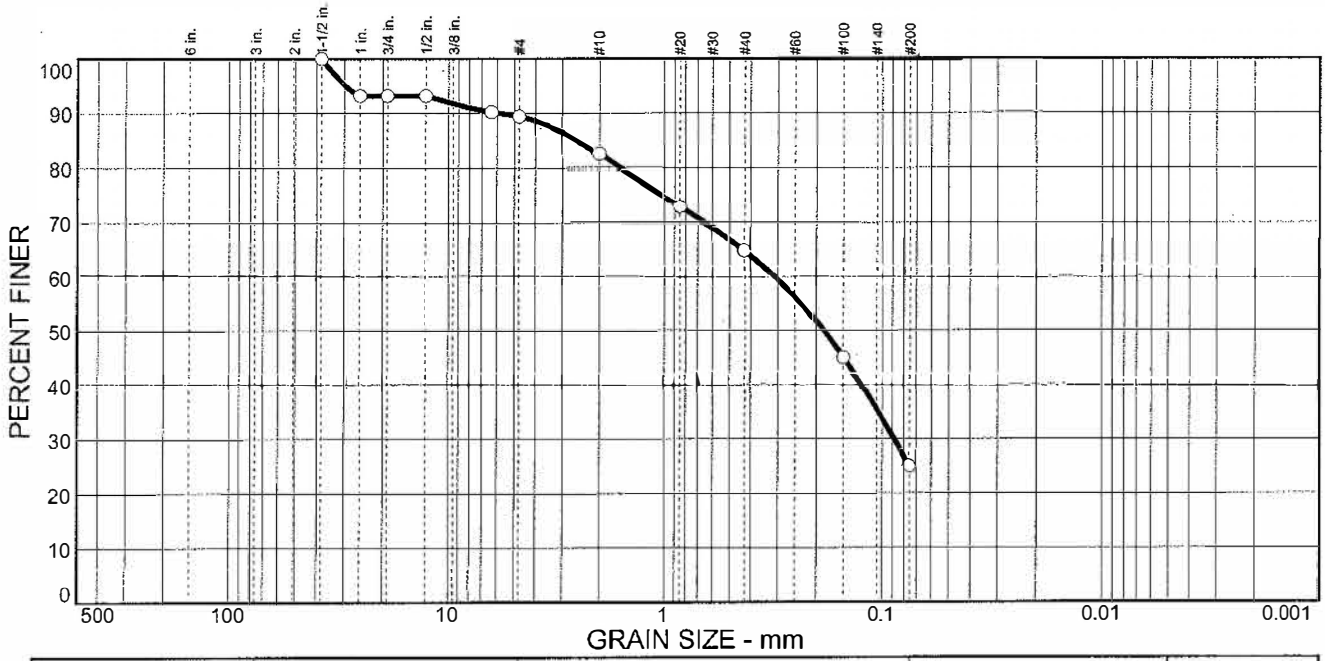
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-018 **Source of Sample:** AO2-208-09 **Date:** 1/14/08
Location: AO2-208-09 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	10.6	64.4	25.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1.00 in.	93.2		
.75 in.	93.2		
.5 in.	93.2		
.25 in.	90.2		
#4	89.4		
#10	82.4		
#20	72.8		
#40	64.7		
#100	44.9		
#200	25.0		

* (no specification provided)

Soil Description
SAMPLE AO2-208-09

Atterberg Limits
PL= 17 LL= 32 PI= 15

Coefficients
D_{85}= 2.57 D_{60}= 0.311 D_{50}= 0.186
D_{30}= 0.0885 D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-018

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-019
Sample Identification: AO4A-211-07

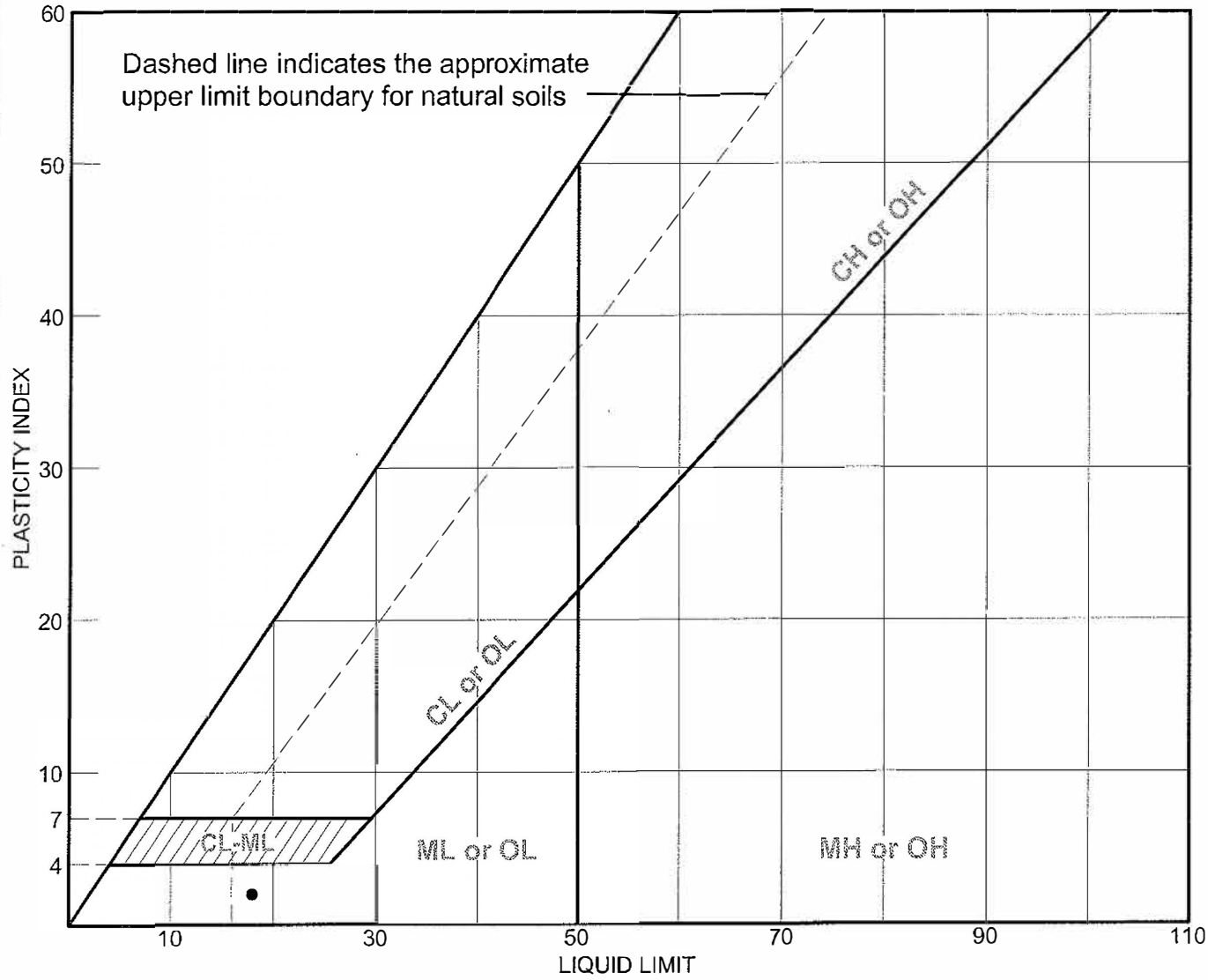
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
18	16	2

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
¾"	100.0
½"	99.4
¼"	95.2
#4	93.4
#10	89.7
#20	85.7
#40	82.5
#100	75.8
#200	68.8

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4A-211-07	08-019			16	18	2	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

SJB SERVICES, INC.
Contract Drilling and Testing

BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
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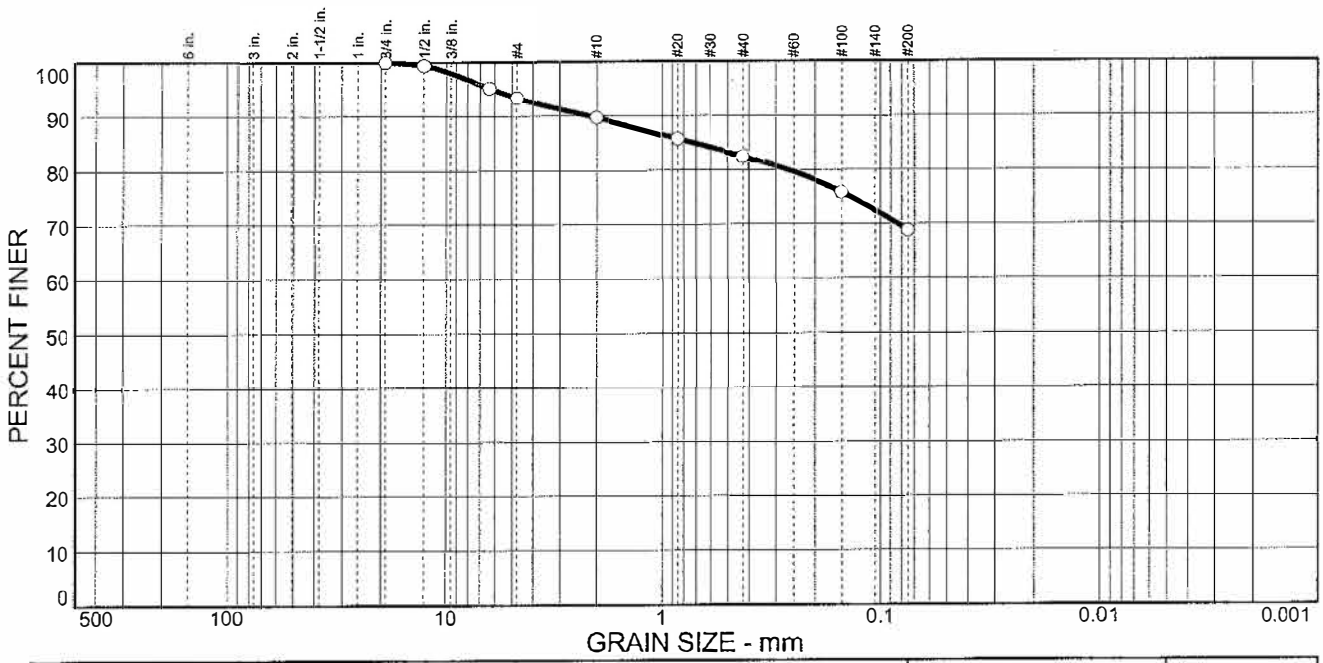
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-019 **Source of Sample:** AO4A-211-07 **Date:** 1/14/08
Location: AO4A-211-07 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	6.6	24.6	68.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75 in.	100.0		
.5 in.	99.4		
.25 in.	95.2		
#4	93.4		
#10	89.7		
#20	85.7		
#40	82.5		
#100	75.8		
#200	68.8		

* (no specification provided)

Soil Description
SAMPLE AO4A-211-07

Atterberg Limits
PL= 16 LL= 18 PI= 2

Coefficients
D_{85}= 0.730 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-019

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-020
Sample Identification: AO4B-219-05

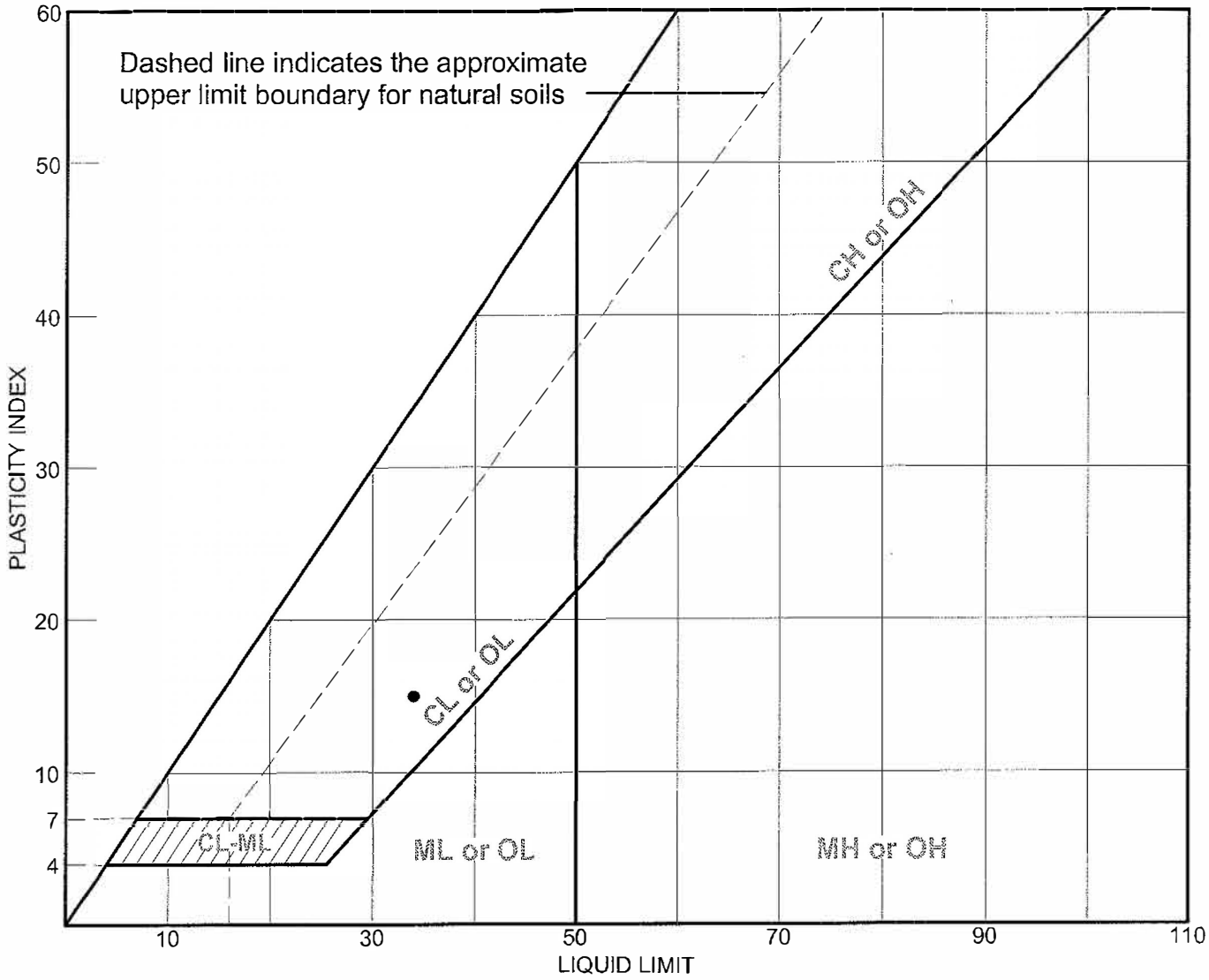
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
34	19	15

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
2"	100.0
1 ½"	80.0
1"	80.0
¾"	77.4
½"	74.2
¼"	69.0
#4	67.1
#10	60.0
#20	55.2
#40	51.8
#100	45.1
#200	39.2

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4B-219-05	08-020			19	34	15	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

SJB SERVICES, INC.
Contract Drilling and Testing

BUFFALO OFFICE
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Hamburg, NY 14075
Phone: (716) 649-8110
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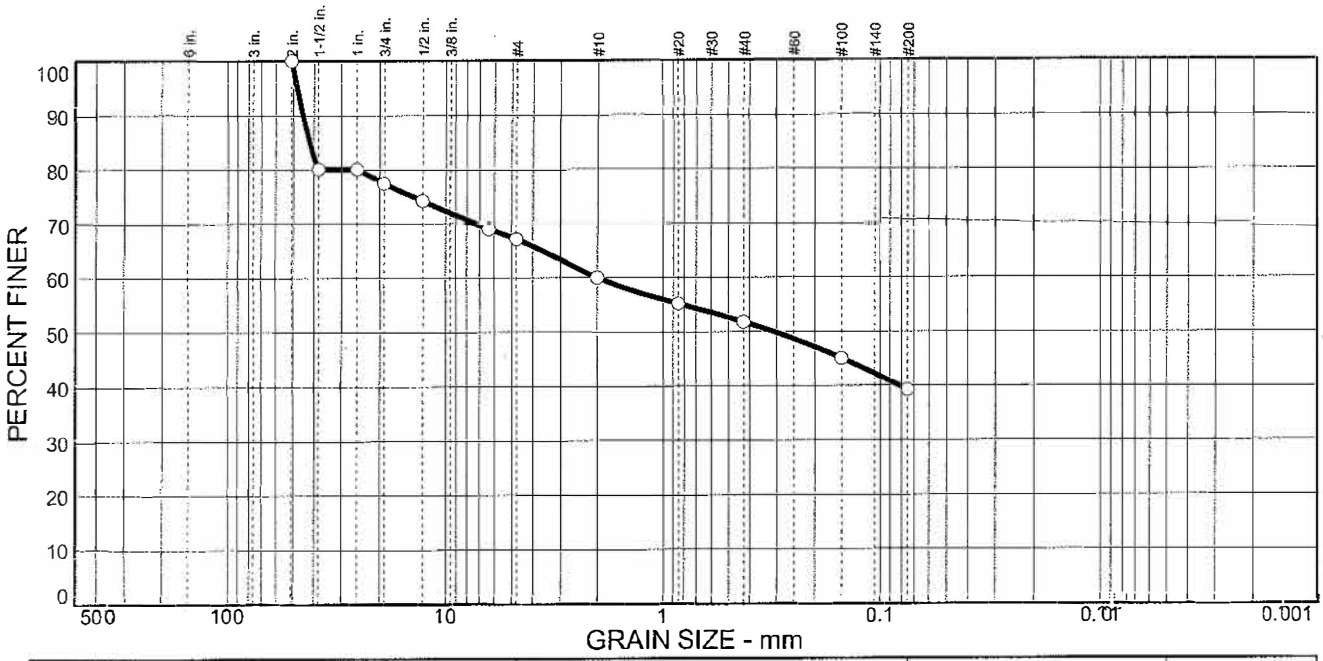
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-020 **Source of Sample:** AO4B-219-05 **Date:** 1/14/08
Location: AO4B-219-05 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	32.9	27.9	39.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1.5 in.	80.0		
1 in.	80.0		
.75 in.	77.4		
.5 in.	74.2		
.25 in.	69.0		
#4	67.1		
#10	60.0		
#20	55.2		
#40	51.8		
#100	45.1		
#200	39.2		

* (no specification provided)

Soil Description
SAMPLE AO4B-219-05

Atterberg Limits
PL= 19 LL= 34 PI= 15

Coefficients
D_{85}= 42.0 D_{60}= 2.00 D_{50}= 0.308
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-020

Plate

SJB SERVICES, INC.
Contract Drilling and Testing

BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-021
Sample Identification: AO2-229-10

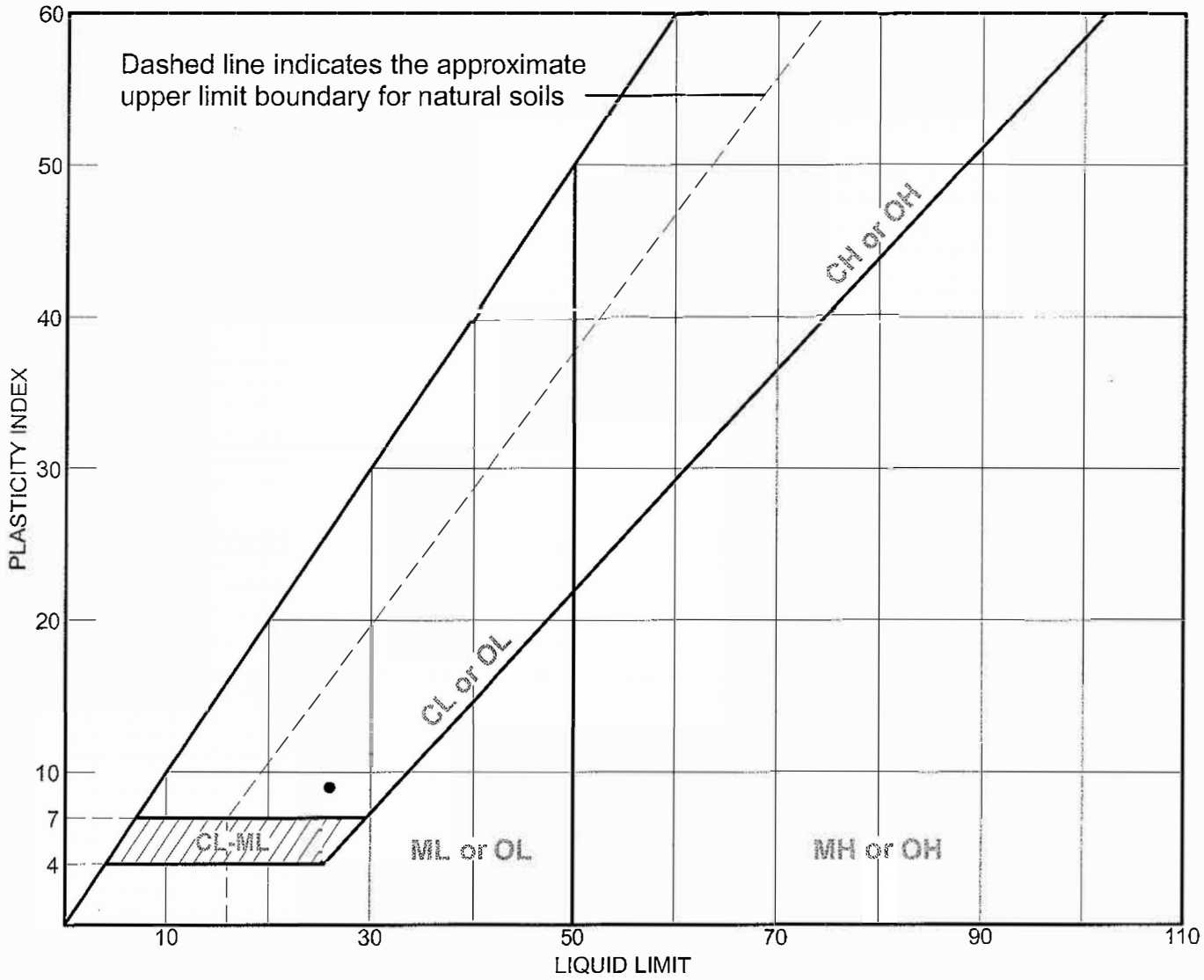
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
26	17	9

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1"	100.0
¾"	97.2
½"	82.4
¼"	64.1
#4	57.7
#10	48.7
#20	44.3
#40	42.5
#100	41.6
#200	38.5

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO2-229-10	08-021			17	26	9	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH
Project: GUTERL STEEL
Project No.: BD-07-069

Plate

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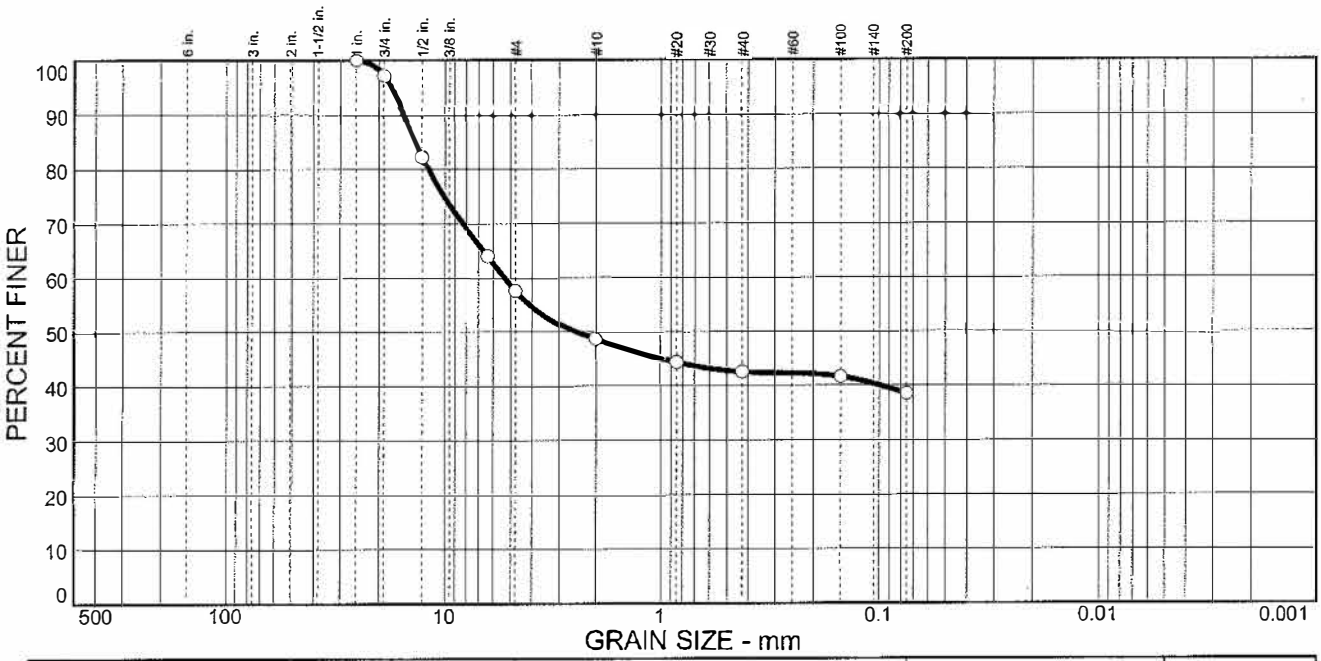
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-021 **Source of Sample:** AO2-229-10 **Date:** 1/14/08
Location: AO2-22-10 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	42.3	19.2	38.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	97.2		
.5 in.	82.4		
.25 in.	64.1		
#4	57.7		
#10	48.7		
#20	44.3		
#40	42.5		
#100	41.6		
#200	38.5		

* (no specification provided)

Soil Description
SAMPLE AO2-229-10

Atterberg Limits
PL= 17 LL= 26 PI= 9

Coefficients
D_{85}= 13.6 D_{60}= 5.30 D_{50}= 2.48
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-021

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-022
Sample Identification: AO4C-306-07

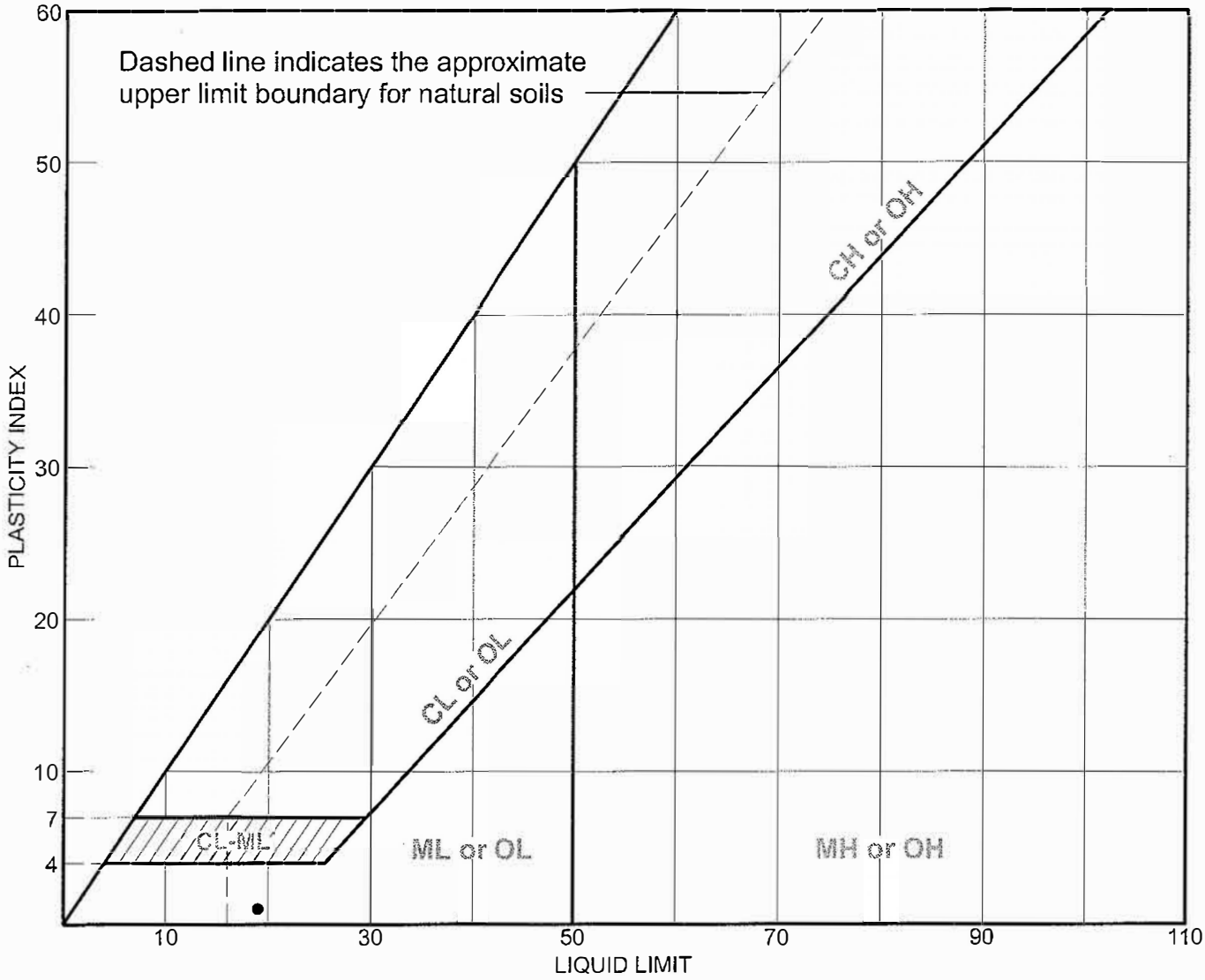
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
19	18	1

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1"	100.0
¾"	95.2
½"	93.3
¼"	87.3
#4	84.8
#10	78.6
#20	72.2
#40	67.9
#100	61.9
#200	56.4

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO4C-306-07	08-022			18	19	1	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH
Project: GUTERL STEEL

Project No.: BD-07-069 **Plate**

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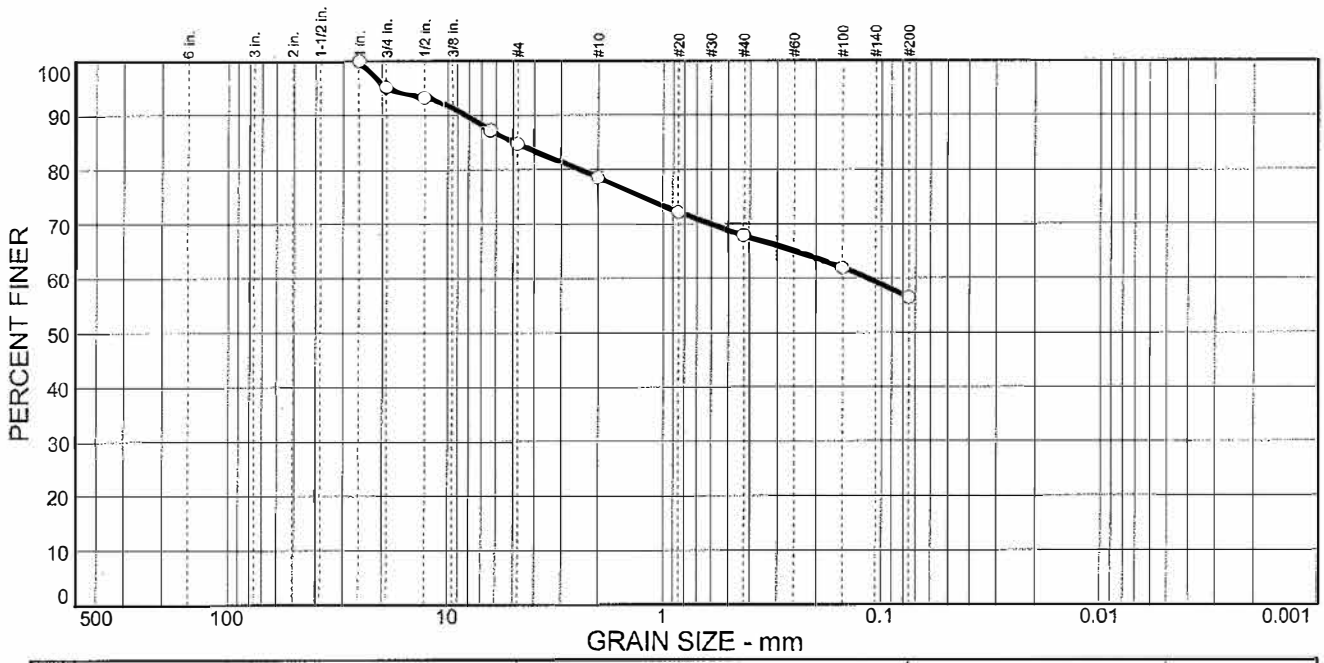
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-022 **Source of Sample:** AO4C-306-07 **Date:** 1/14/08
Location: AO4C-306-07 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	15.2	28.4	56.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	95.2		
.5 in.	93.3		
.25 in.	87.3		
#4	84.8		
#10	78.6		
#20	72.2		
#40	67.9		
#100	61.9		
#200	56.4		

* (no specification provided)

Soil Description
SAMPLE AO4C-306-07

Atterberg Limits
PL= 18 LL= 19 PI= 1

Coefficients
D_{85}= 4.87 D_{60}= 0.116 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-022

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-023
Sample Identification: AO3-226-31

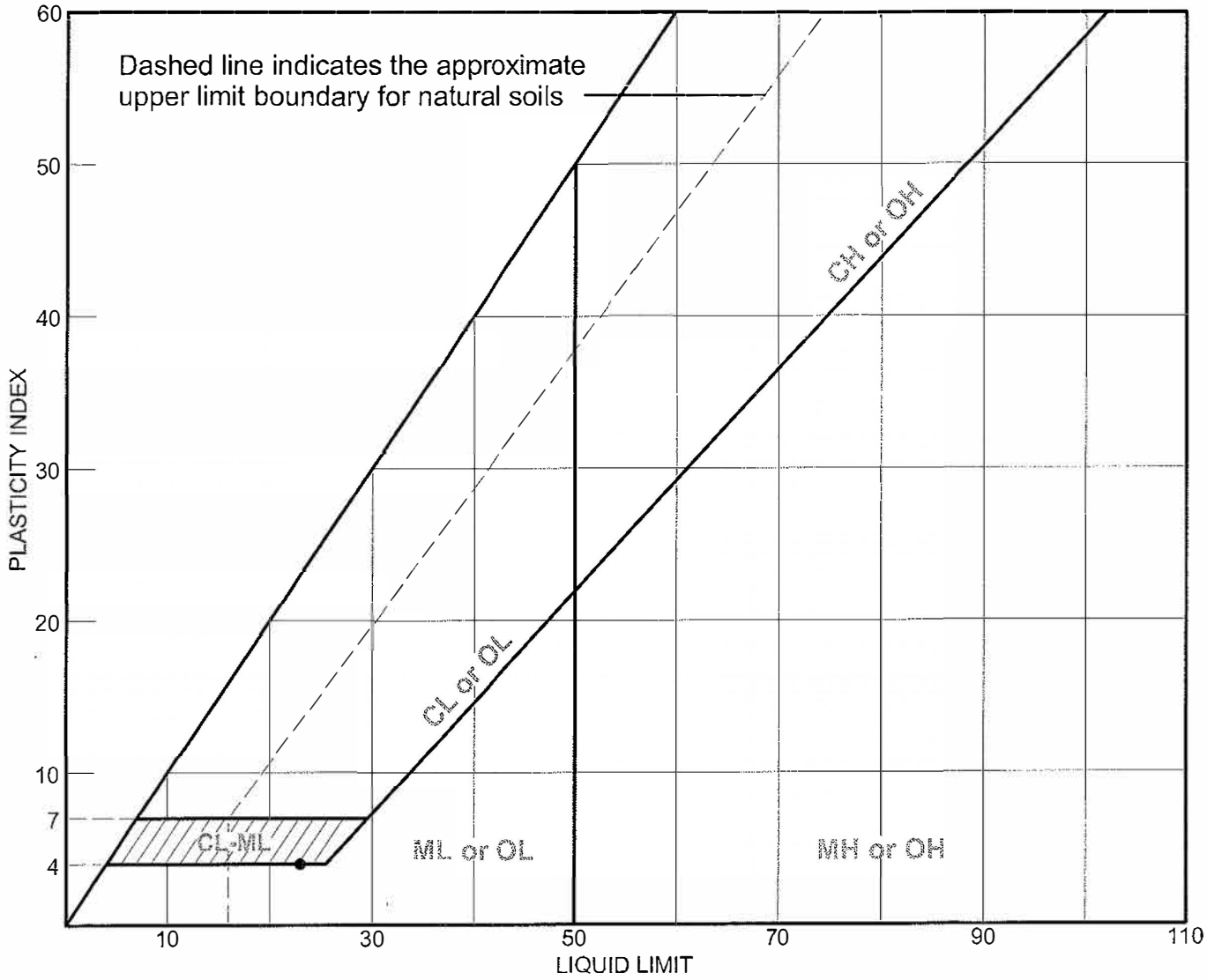
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
23	19	4

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1"	100.0
¾"	94.2
½"	85.5
¼"	74.0
#4	68.2
#10	58.4
#20	52.5
#40	49.5
#100	46.0
#200	43.7

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO3-226-31	08-023			19	23	4	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

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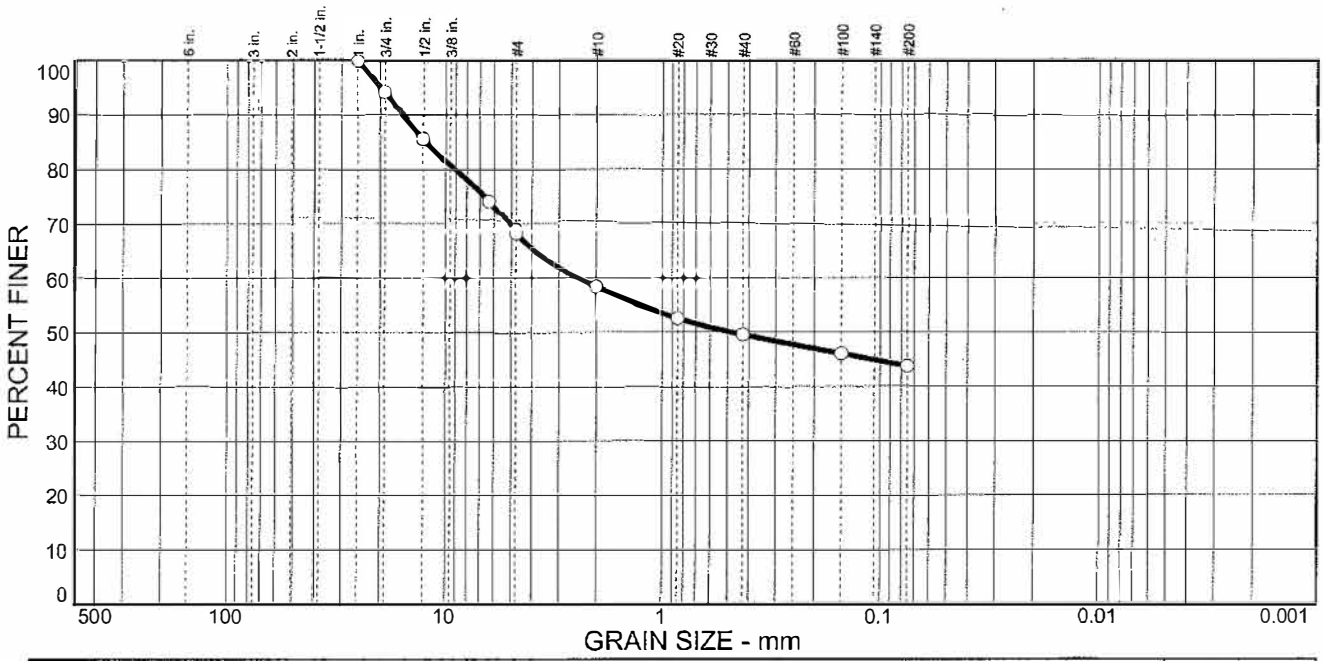
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-023 **Source of Sample:** AO3-226-31 **Date:** 1/14/08
Location: AO3-226-31 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	31.8	24.5	43.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	94.2		
.5 in.	85.5		
.25 in.	74.0		
#4	68.2		
#10	58.4		
#20	52.5		
#40	49.5		
#100	46.0		
#200	43.7		

* (no specification provided)

Soil Description
SAMPLE AO3-226-31

Atterberg Limits
PL= 19 LL= 23 PI= 4

Coefficients
D_{85}= 12.4 D_{60}= 2.45 D_{50}= 0.487
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-023

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-024
Sample Identification: AO5A-213-01

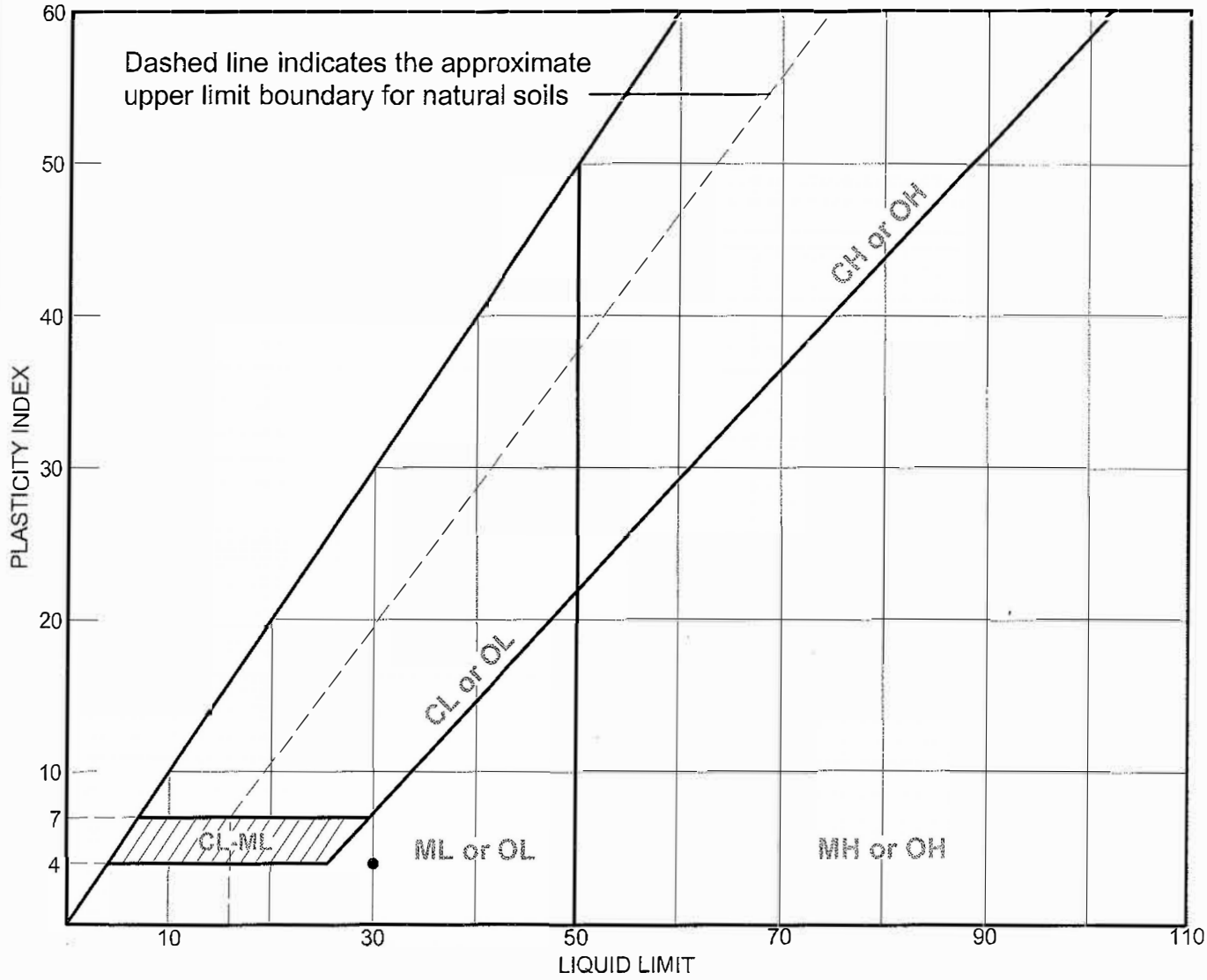
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
30	26	4

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	95.8
¾"	83.9
½"	71.3
¼"	53.1
#4	49.7
#10	38.7
#20	30.3
#40	25.0
#100	16.8
#200	13.6

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO5A-213-01	08-024			26	30	4	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

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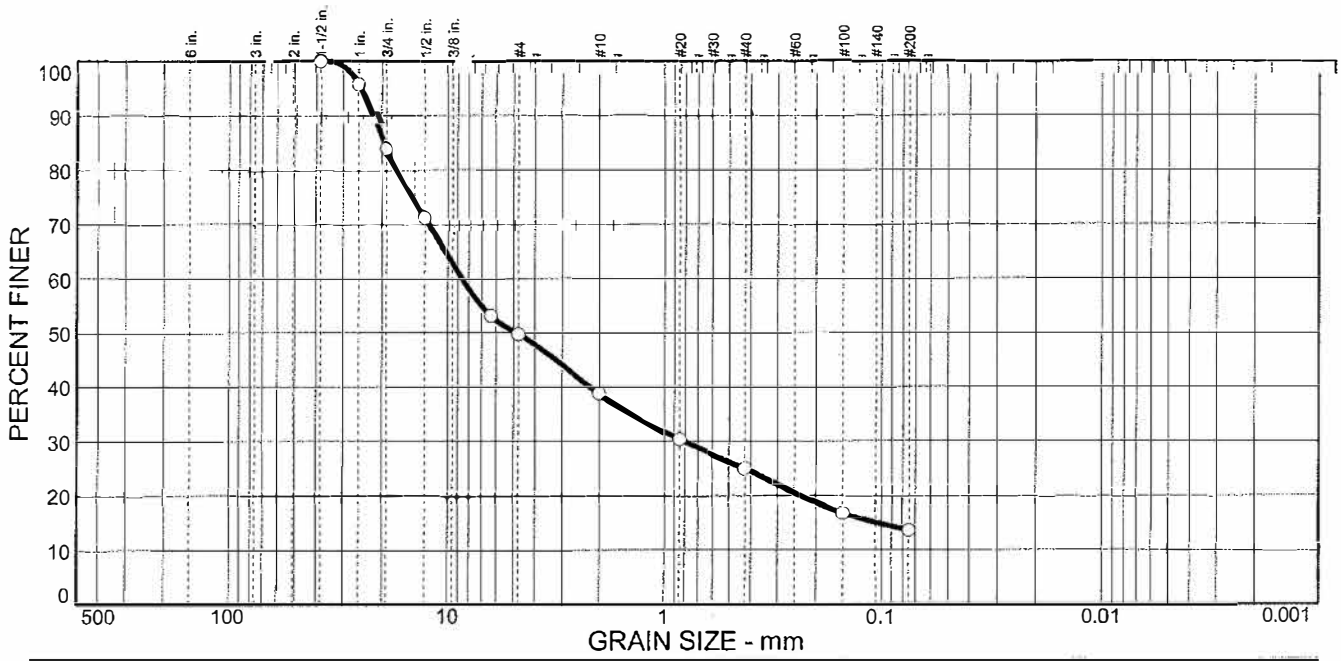
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-024 **Source of Sample:** AO5A-213-01 **Date:** 1/14/08
Location: AO5A-213-01 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	50.3	36.1	13.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	95.8		
.75 in.	83.9		
.5 in.	71.3		
.25 in.	53.1		
#4	49.7		
#10	38.7		
#20	30.3		
#40	25.0		
#100	16.8		
#200	13.6		

* (no specification provided)

Soil Description

SAMPLE AO5A-213-01

Atterberg Limits

PL= 26 LL= 30 PI= 4

Coefficients

D_{85}= 19.6 D_{60}= 8.61 D_{50}= 4.89
D_{30}= 0.818 D_{15}= 0.106 D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

SAMPLE NUMBER: 08-024

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-025
Sample Identification: AO5A-209-01

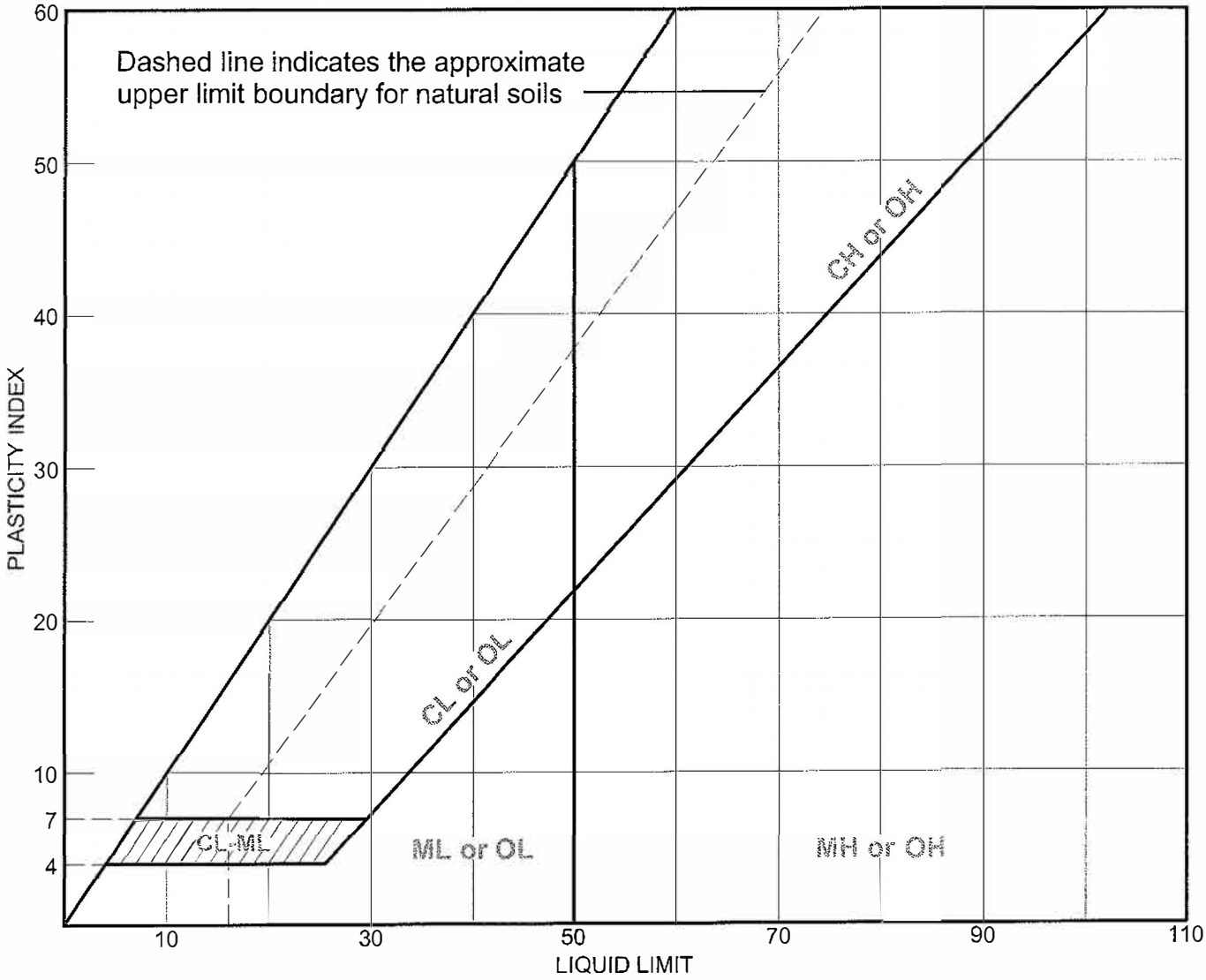
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
--	NP	non-plastic

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
½"	100.0
¼"	96.8
#4	93.5
#10	79.3
#20	62.4
#40	49.3
#100	30.5
#200	20.9

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO5A-209-01	08-025			NP	--	NP	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH
Project: GUTERL STEEL

Project No.: BD-07-069 **Plate**

SJB SERVICES, INC.
Contract Drilling and Testing

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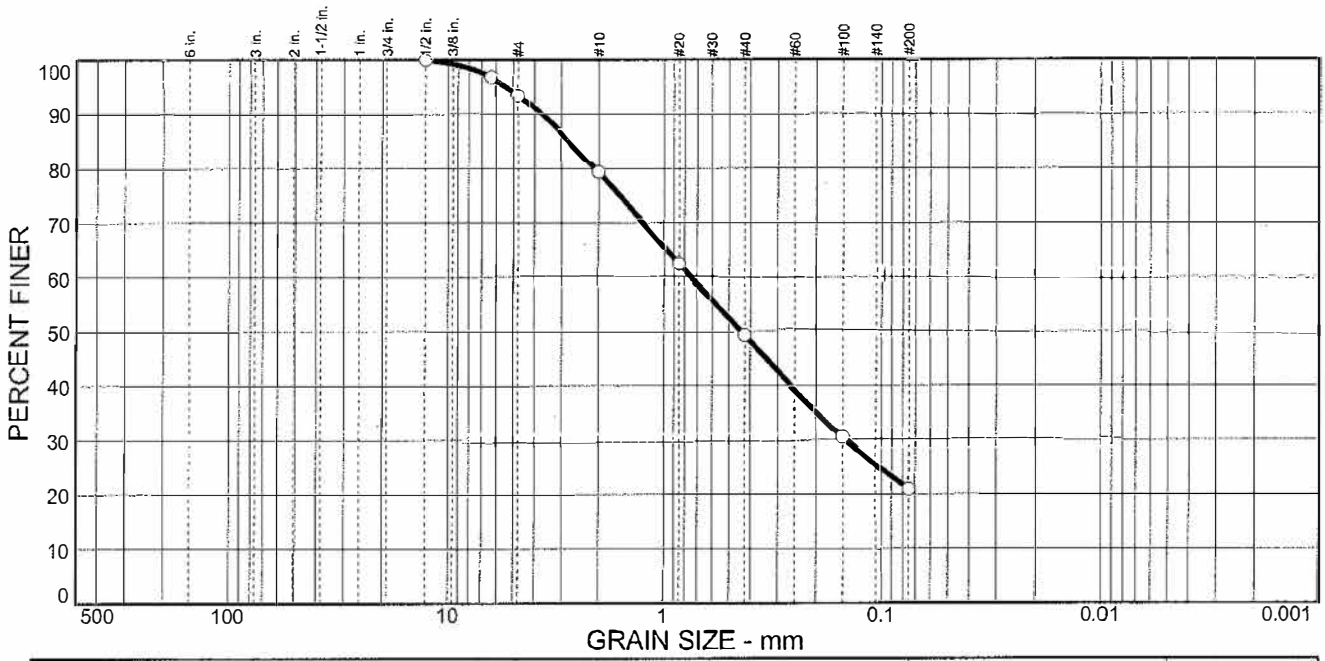
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-025 **Source of Sample:** AO5A-209-01 **Date:** 1/14/08
Location: AO5A-209-01 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	6.5	72.6	20.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.5 in.	100.0		
.25 in.	96.8		
#4	93.5		
#10	79.3		
#20	62.4		
#40	49.3		
#100	30.5		
#200	20.9		

* (no specification provided)

Soil Description
SAMPLE AO5A-209-01

Atterberg Limits
PL= NP LL= NV PI= NP

Coefficients
D_{85}= 2.74 D_{60}= 0.751 D_{50}= 0.441
D_{30}= 0.145 D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-025

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-026
Sample Identification: AO5A-215-01

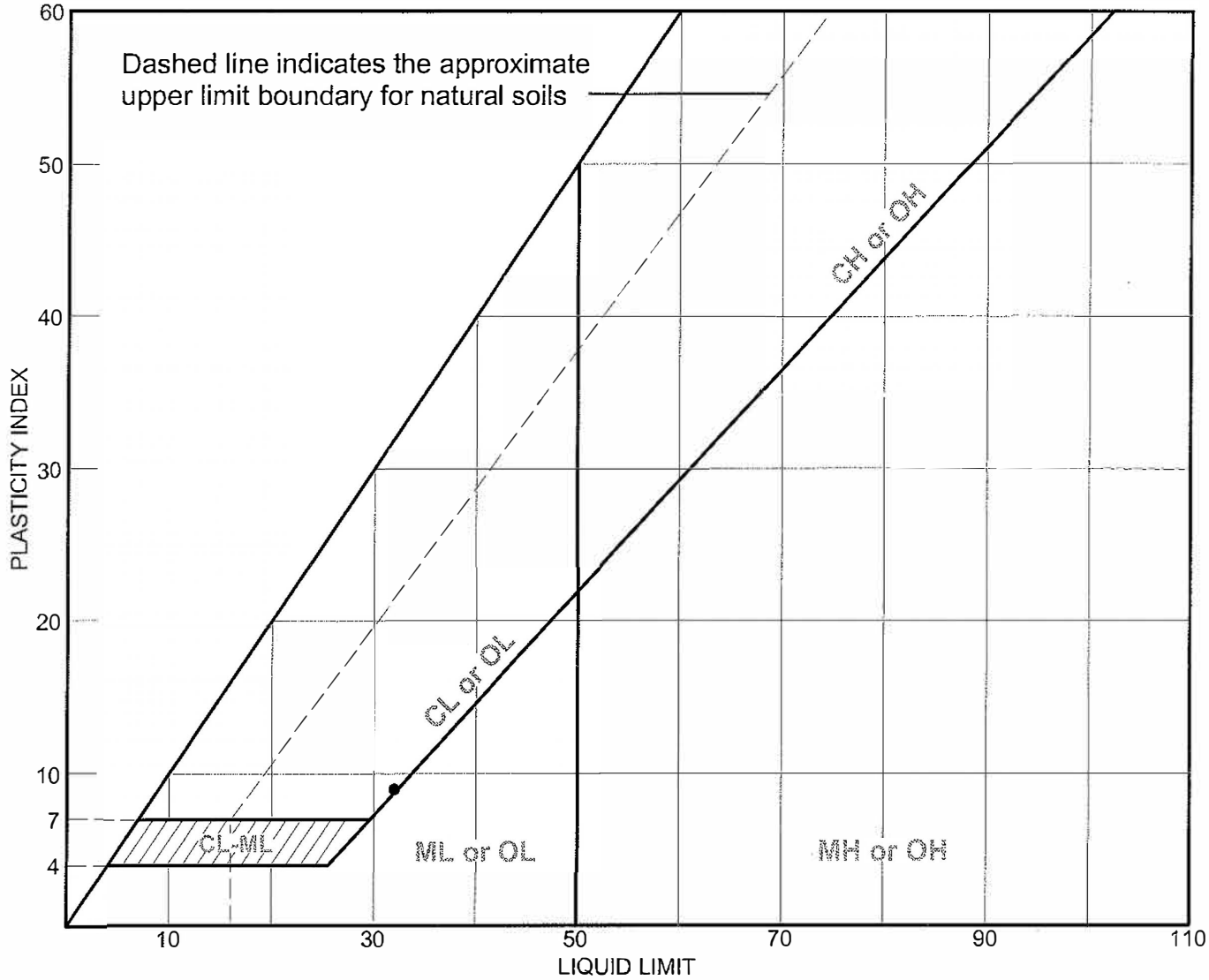
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
32	23	9

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1"	100.0
¾"	97.4
½"	90.4
¼"	72.2
#4	68.7
#10	59.4
#20	53.5
#40	49.5
#100	41.7
#200	35.5

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO5A-215-01	08-026			23	32	9	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

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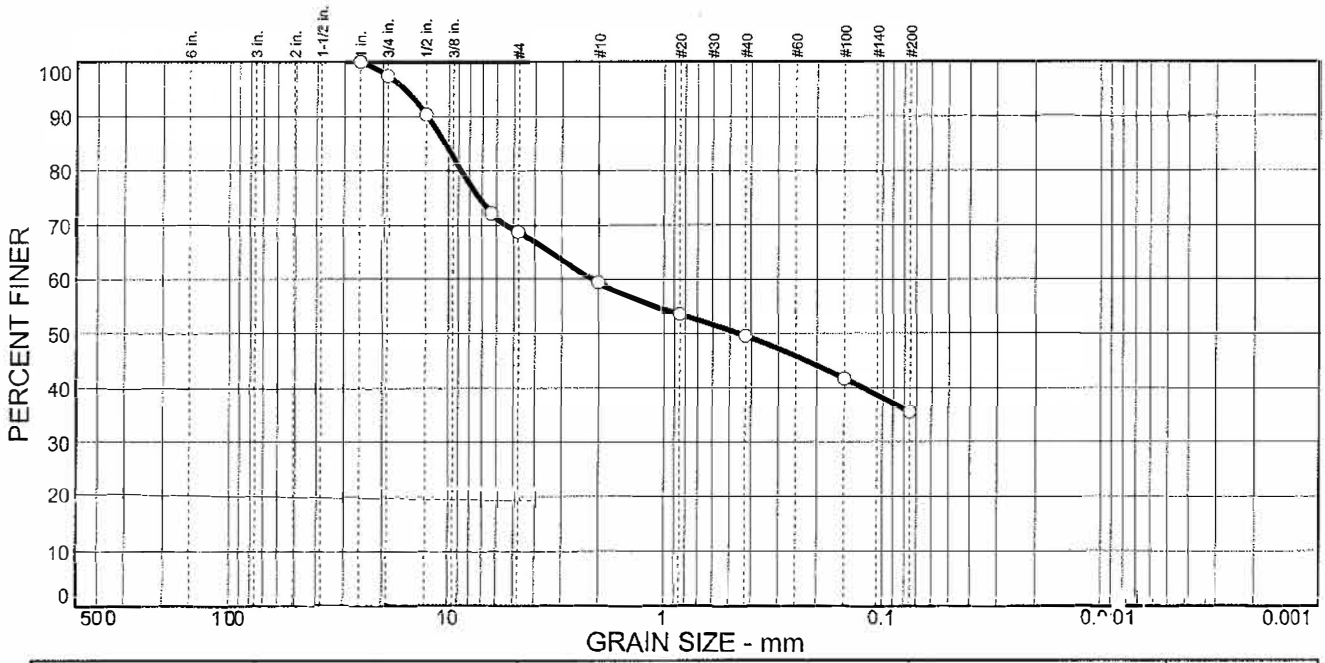
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-026 **Source of Sample:** AO5A-215-01 **Date:** 1/14/08
Location: AO5A-215-01 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	31.3	33.2	35.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	97.4		
.5 in.	90.4		
.25 in.	72.2		
#4	68.7		
#10	59.4		
#20	53.5		
#40	49.5		
#100	41.7		
#200	35.5		

* (no specification provided)

Soil Description
SAMPLE AO5A-215-01

Atterberg Limits
PL= 23 LL= 32 PI= 9

Coefficients
D_{85}= 10.4 D_{60}= 2.13 D_{50}= 0.461
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-026

Plate

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Laboratory Test Report

PROJECT: **Guterl Steel**

CLIENT: **Earth Tech**

DATE: **January 14, 2008**

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-027
Sample Identification: AO5B-001-02

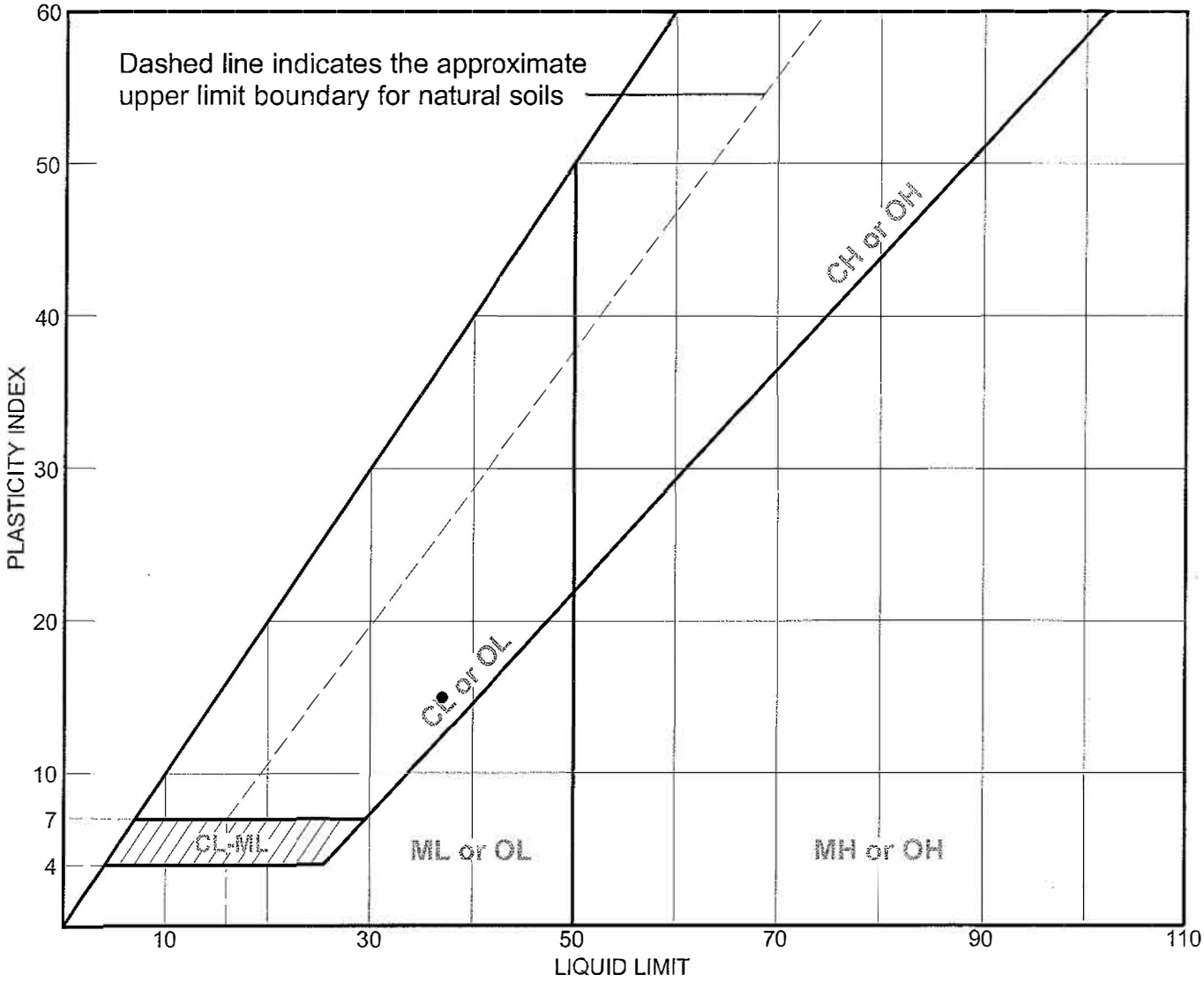
ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
37	22	15

ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
½"	100.0
¼"	98.4
#4	97.6
#10	88.3
#20	75.1
#40	63.9
#100	49.2
#200	41.0

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO5B-001-02	08-027			22	37	15	

LIQUID AND PLASTIC LIMITS TEST REPORT **SJB SERVICES, INC.**	**Client:** EARTH TECH **Project:** GUTERL STEEL **Project No.:** BD-07-069 **Plate**

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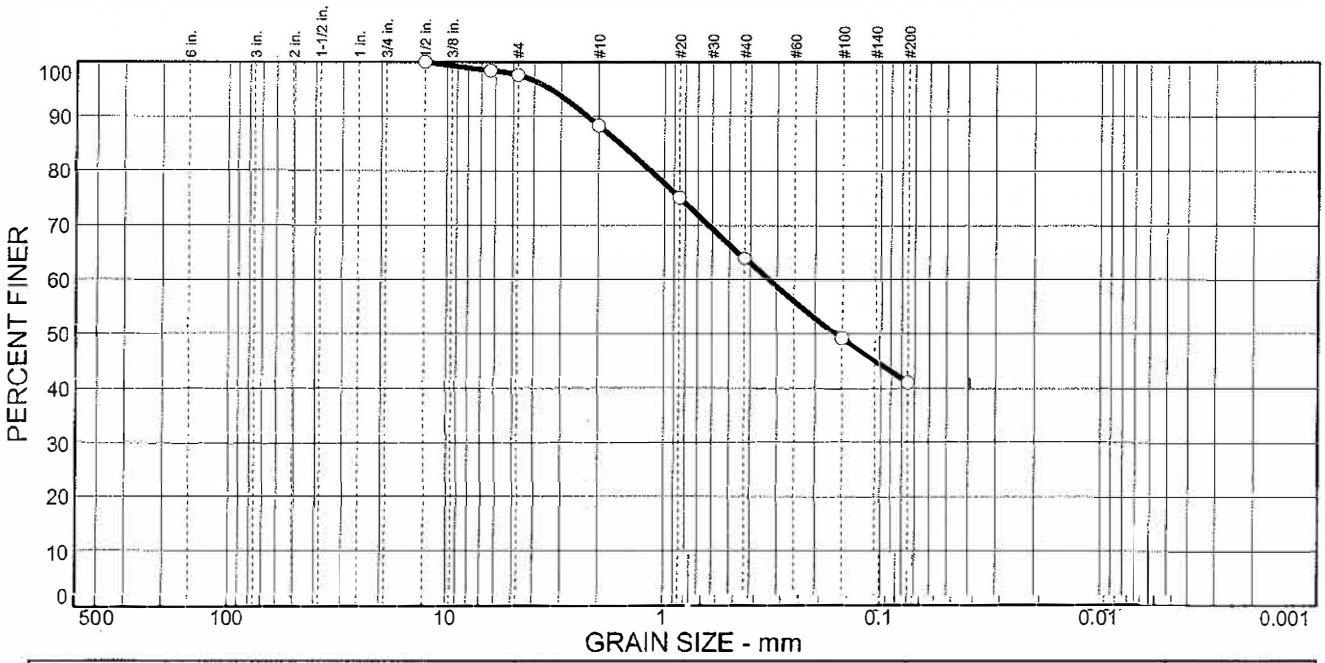
Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-027 **Source of Sample:** AO5B-001-02 **Date:** 1/14/08
Location: AO5B-001-02 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	2.4	56.6	41.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.5 in.	100.0		
.25 in.	98.4		
#4	97.6		
#10	88.3		
#20	75.1		
#40	63.9		
#100	49.2		
#200	41.0		

* (no specification provided)

Soil Description
SAMPLE AO5B-001-02

Atterberg Limits
PL= 22 LL= 37 PI= 15

Coefficients
D_{85}= 1.60 D_{60}= 0.329 D_{50}= 0.160
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-027

Plate

SJB SERVICES, INC.
Contract Drilling and Testing

BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: Guterl Steel

CLIENT: Earth Tech

DATE: January 14, 2008

PROJECT NO.: BD-07-069
REPORT NO.: LTR-1

Sample Number: 08-028
Sample Identification: AO5A-216-01

ASTM D-4318: Liquid Limit, Plastic Limit, and Plasticity Index of Soil

Liquid Limit	Plastic Limit	Plasticity Index
41	34	7

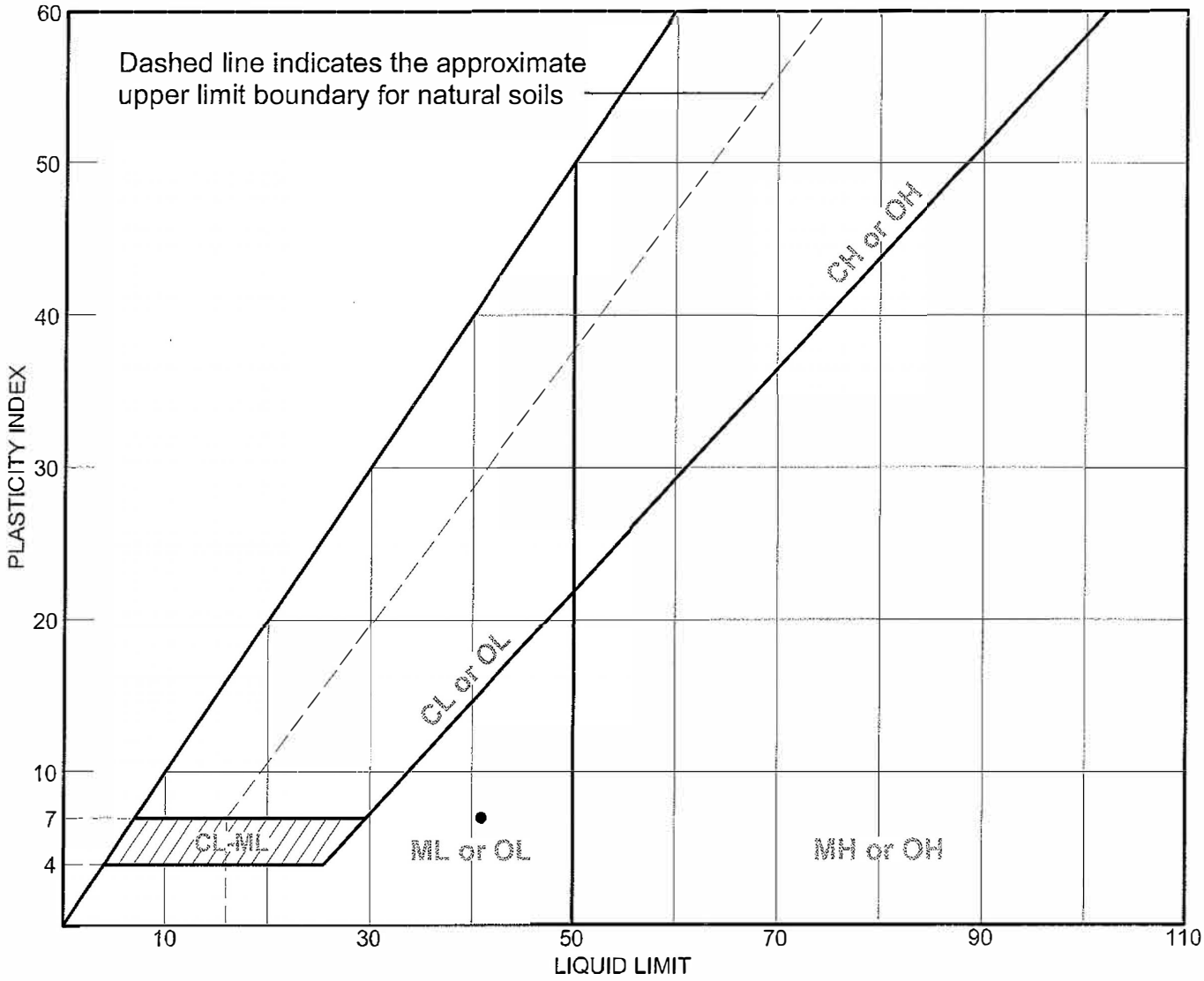
ASTM D-422: Particle Size Analysis of Soils

Sieve Size	*Percent Passing*
1"	100.0
¾"	97.1
½"	92.6
¼"	75.0
#4	67.6
#10	55.8
#20	46.2
#40	41.2
#100	35.1
#200	30.8

ASTM D-5084: Measurement of Hydraulic Conductivity of Saturated Porous Material Using a Flexible Wall Permeameter

Sample Number	Sample Identification	Coefficient of Permeability
08-029	MW-600S-3-5	1.46×10^{-6} cm/sec
08-030	MW-600S-5-7	1.23×10^{-6} cm/sec

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	AO5A-216-01	08-028			34	41	7	

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Client: EARTH TECH

Project: GUTERL STEEL

Project No.: BD-07-069

Plate

SJB SERVICES, INC.
Contract Drilling and Testing

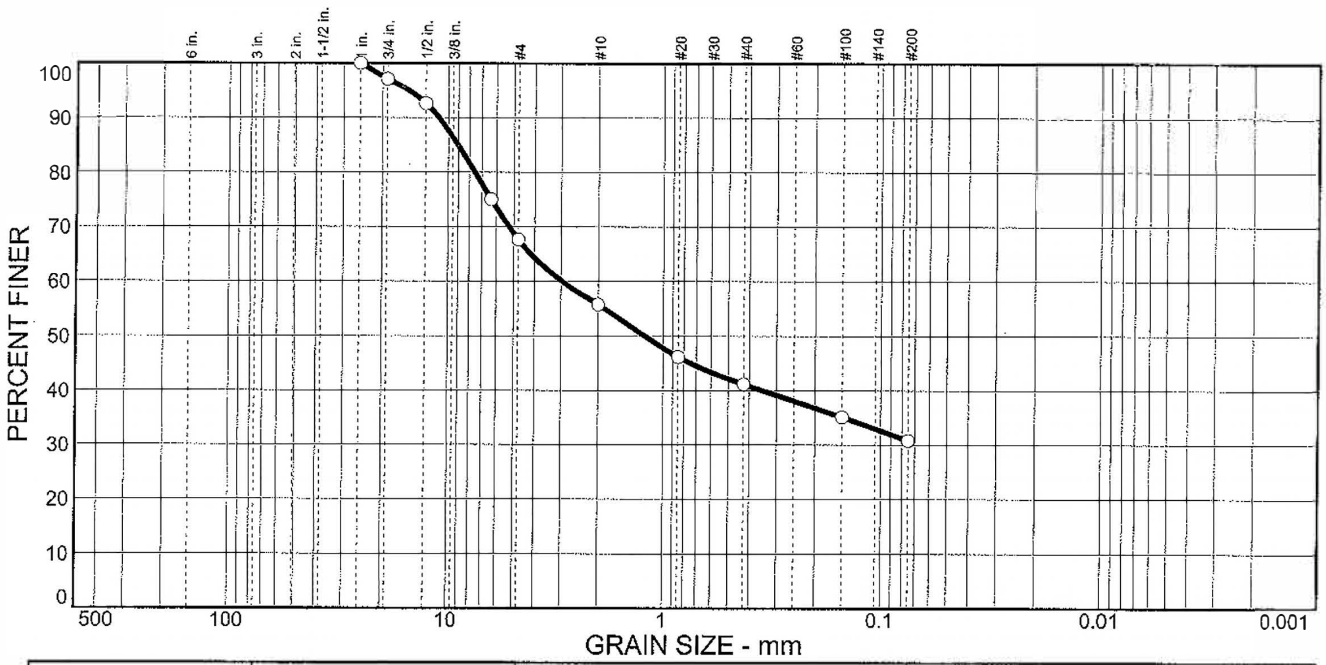
BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Particle Size Distribution Report

Project: GUTERL STEEL **Project No.:** BD-07-069

Client: EARTH TECH

Sample No: 08-028 **Source of Sample:** AO5A-216-01 **Date:** 1/14/08
Location: AO5A-216-01 **Elev./Depth:**



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	32.4	36.8	30.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	97.1		
.5 in.	92.6		
.25 in.	75.0		
#4	67.6		
#10	55.8		
#20	46.2		
#40	41.2		
#100	35.1		
#200	30.8		

* (no specification provided)

Soil Description
SAMPLE AO5A-216-01

Atterberg Limits
PL= 34 LL= 41 PI= 7

Coefficients
D_{85}= 9.05 D_{60}= 2.96 D_{50}= 1.21
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification
USCS= AASHTO=

Remarks
SAMPLE NUMBER: 08-028

Plate

PERMEABILITY TEST REPORT

TEST DATA:
Specimen Height (cm): 7.97
Specimen Diameter (cm): 7.16
Dry Unit Weight (pcf): 115.9
Moisture Before Test (%): 19.1
Moisture After Test (%): 16.7
Run Number: 1 ● 2 ▲
Cell Pressure (psi): 995.0

Sat. Pressure (psi): 80.0
Diff. Head (psi): 3.5

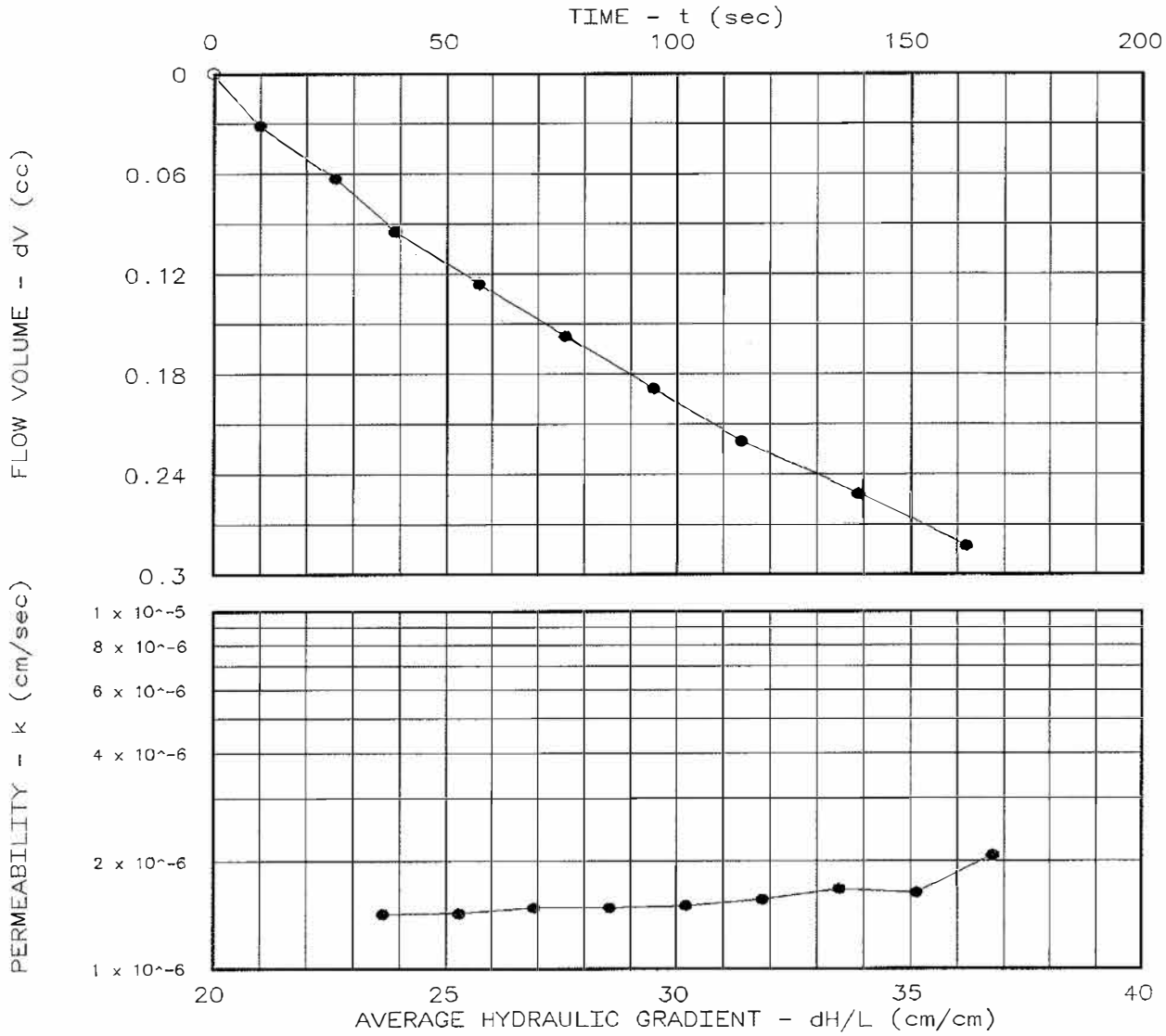
Perm. (cm/sec): 1.46 x 10^-8

SAMPLE DATA:
Sample Identification: Tube MW-600S-3-5

Visual Description: Brown silt/clay matl.
Shelby Tube MW-600S-3-5
Remarks: ASTM D5084

Maximum Dry Density (pcf):
Optimum Moisture Content (%):

Percent Compaction:
Permeameter type: Flexible Wall
Sample type: undisturbed



Project: Guterl Steel
Location:
Date: 1/15/07

PERMEABILITY TEST REPORT

SJB SERVICES, INC.

Project No.: BD-07-069
File No.: 08-029
Lab No.: 08-029
Tested by: pg
Checked by: pg
Test: CV - Constant volume

PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.87
Specimen Diameter (cm): 7.12
Dry Unit Weight (pcf): 120.3
Moisture Before Test (%): 15.6
Moisture After Test (%): 14.2
Run Number: 1 ● 2 ▲
Cell Pressure (psi): 95.0

Sat. Pressure (psi): 80.0
Diff. Head (psi): 3.0

Perm. (cm/sec): 1.23 x 10^-6

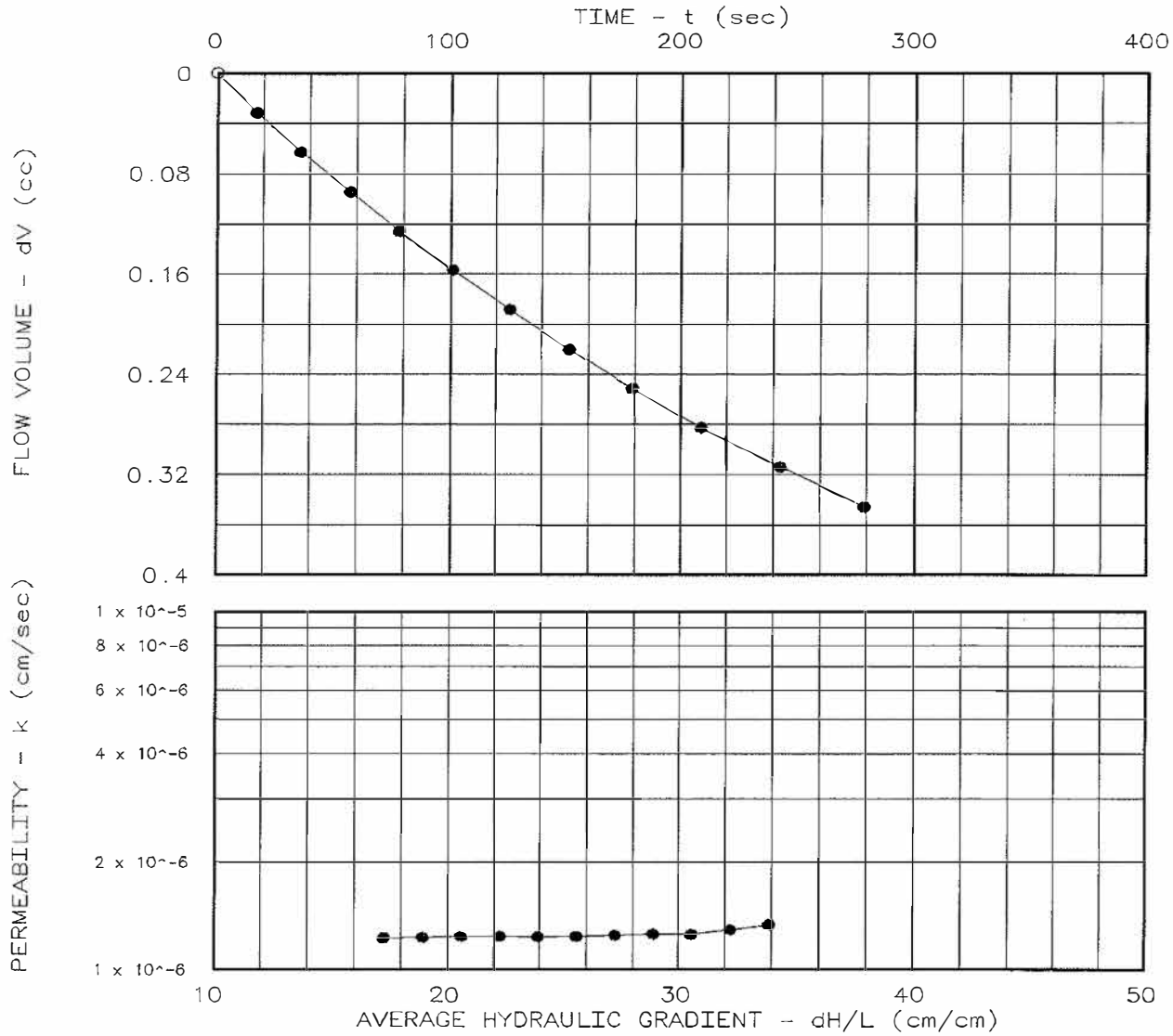
SAMPLE DATA:

Sample Identification: Tube MW-600S-5-7

Visual Description: Brown silt/clay matl.
Shelby Tube MW-600S-5-7
Remarks: ASTM D5084

Maximum Dry Density (pcf):
Optimum Moisture Content (%):

Percent Compaction:
Permeameter type: Flexible Wall
Sample type: undisturbed



Project: Guterl Steel
Location:
Date: 1/15/07

PERMEABILITY TEST REPORT

SJB SERVICES, INC.

Project No.: BD-07-069
File No.: 08-030
Lab No.: 08-030
Tested by: pg
Checked by: pg
Test: CV - Constant volume

M E M O

Date: May 20, 2008

To: Jim Kaczor **cc:** Anne Lewis-Russ

From: Carsten Floess & Dustin Winn

Subject: **Soil Parameters, Guterl Steel, ET File 100657.01.08**

We reviewed available geotechnical data and provide recommendations for representative soil parameters herein. We understand that these parameters will be used for modeling contaminate fate and transport.

Soil Description

The soil being modeled in the fate and transport studies is a glacial till. Based on available laboratory gradation test data, this soil is typically a silty and clayey sand and gravel, generally with about 20 to 40 percent fines passing the No 200 sieve size. Typical of glacial till soils, this material is well graded, with a wide range of particle sizes. Therefore, these soils have small void space and porosity because the smaller soil particles infill the void spaces between the larger particles.

Based on laboratory data, soil descriptions are summarized below:

Sample ID	% Gravel	% Sand	% Fines	Unified Symbol	Description
A04D-321-06	14.7	44.0	41.3	SC-SM	Silt/Clay and Sand
A04A-309-07	20.3	44.0	35.7	SC-SM	Silt/Clay and Sand with some Gravel
A04C-305-07	58.5	17.9	23.6	GM	Silty Gravel
A03-223-09	33.0	45.6	21.4	SM	Silty Sand
A02-208-09	10.6	64.4	25.0	SC	Clayey Sand
A04A-211-07	6.6	24.6	68.8	ML	Silt with some sand
A04B-219-05	32.9	27.9	39.2	GC	Gravel and Clay
A02-229-10	42.3	19.2	38.5	GC	Gravel and Clay
A04C-306-07	15.2	28.4	56.4	ML	Silt with some sand
A03-226-31	31.8	24.5	43.7	GM	Silt and Gravel
A05A-213-01	50.3	36.1	13.6	GM	Silty Gravel
A05A-209-01	6.5	72.6	20.9	SM	Sand with some silt
A05A-215-01	31.3	33.2	35.5	GC-SC	Sand /Gravel and clay
A05B-001-02	2.4	56.6	41.0	SC	Sand and Clay
A05A-216-01	32.4	36.8	30.8	GM-SM	Sand/Gravel with some Silt

Note that the grain size analyses were not washed. Therefore, the actual percentage of fines is probably greater than the measured values.

EarthTech
A Tyco International Ltd. Company

Porosity

The porosity of glacial till soil is typically low, on the order of 10 to 20 percent (Reference 1). However, measured moisture contents of the till soils at this site are about 15 percent, inferring that their porosity would be about 30 percent. Use 30 percent.

Hydraulic Conductivity

The hydraulic conductivity of granular soils can be estimated using grain size data. However, these correlations were developed for clean granular soils with little fines; therefore, they are not valid for these glacial till soils, which contain significant fines.

The hydraulic conductivity decreases with fines content. These glacial till soils contain on the order of 20 to 40 percent fines, and the corresponding hydraulic conductivity is therefore estimated to be on the order of 10^{-5} to 10^{-7} cm/s (Reference 2). Use 10^{-6} cm/s for modeling.

Two laboratory permeability tests were performed on the till. The measured permeability values were 1.23×10^{-6} cm/s and 1.46×10^{-6} cm/s. These values correspond well to the recommended value.

Effective Porosity

The effective porosity is an indicator of the pore volume occupied by mobile water. This parameter has been found to correlate with soil permeability. For these glacial till soils, with hydraulic conductivity on the order of 10^{-6} cm/s, the effective porosity is estimated to be about 0.5 to 1.0 percent (Reference 3). Use 0.75 percent.

Field Capacity

Field capacity is the maximum water content that the soil can retain under gravitational drainage. Based on available laboratory water content data, use 15 percent for modeling.

Conclusion

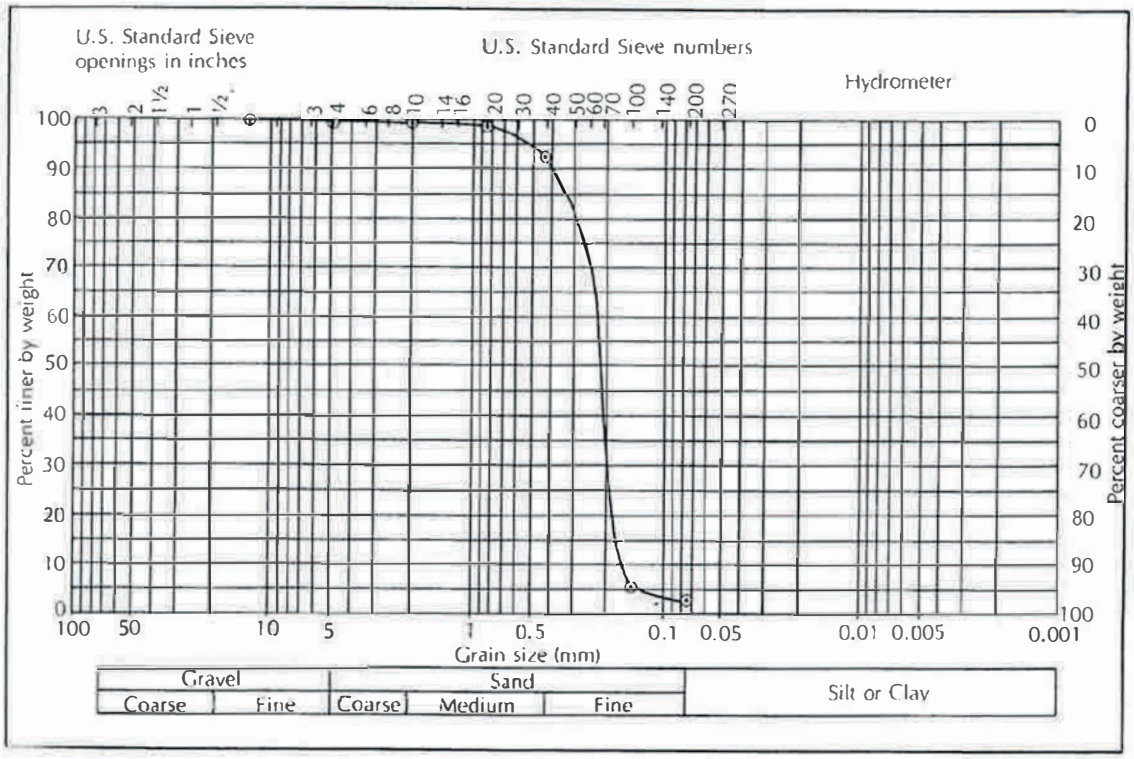
These parameters have been estimated using the limited available data. If the computer model's default values for the parameters are similar to the parameters above, the defaults should be considered acceptable. If there are significant discrepancies between the default parameters and the parameters presented above, it is recommended that the above parameters be used for the model.

References

1. Fetter, C.W, *Applied Hydrogeology*, 4th Edition, Prentice Hall, 2001

2. Dept. of the Navy, NAVFAC DM-7.1, *Soil Mechanics*, May 1982

3. Reddi, Lakshmi N., *Seepage in Soils, Principles and Applications*, Wiley, 2003



▲ FIGURE 3.5
Grain-size distribution curve of a fine sand.

Table 3.4 Porosity Ranges for Sediments

Well-sorted sand or gravel	25–50%
Sand and gravel, mixed	20–35%
Glacial till[1]	10–20%
Silt	35–50%
Clay	33–60%

Based on Meinzer (1923a); Davis (1969); Cohen (1965); and MacCary and Lambert (1962).

The general range of porosity that can be expected for some typical sediments is listed in Table 3.4.

3.2.3 Porosity of Sedimentary Rocks

Sedimentary rocks are formed from sediments through a process known as **diagenesis.** A sediment, which may be either a product of weathering or a chemically precipitated material, is buried. The weight of overlying materials and physicochemical reactions with fluids in the pore spaces induce changes in the sediment. This includes compaction, removal of material, addition of material, and transformation of minerals by replacement or change in mineral phase. Compaction reduces pore volume by rearranging the grains and deforming them. The deposition of cementing materials such as calcite, dolomite, or silica

Reference 1

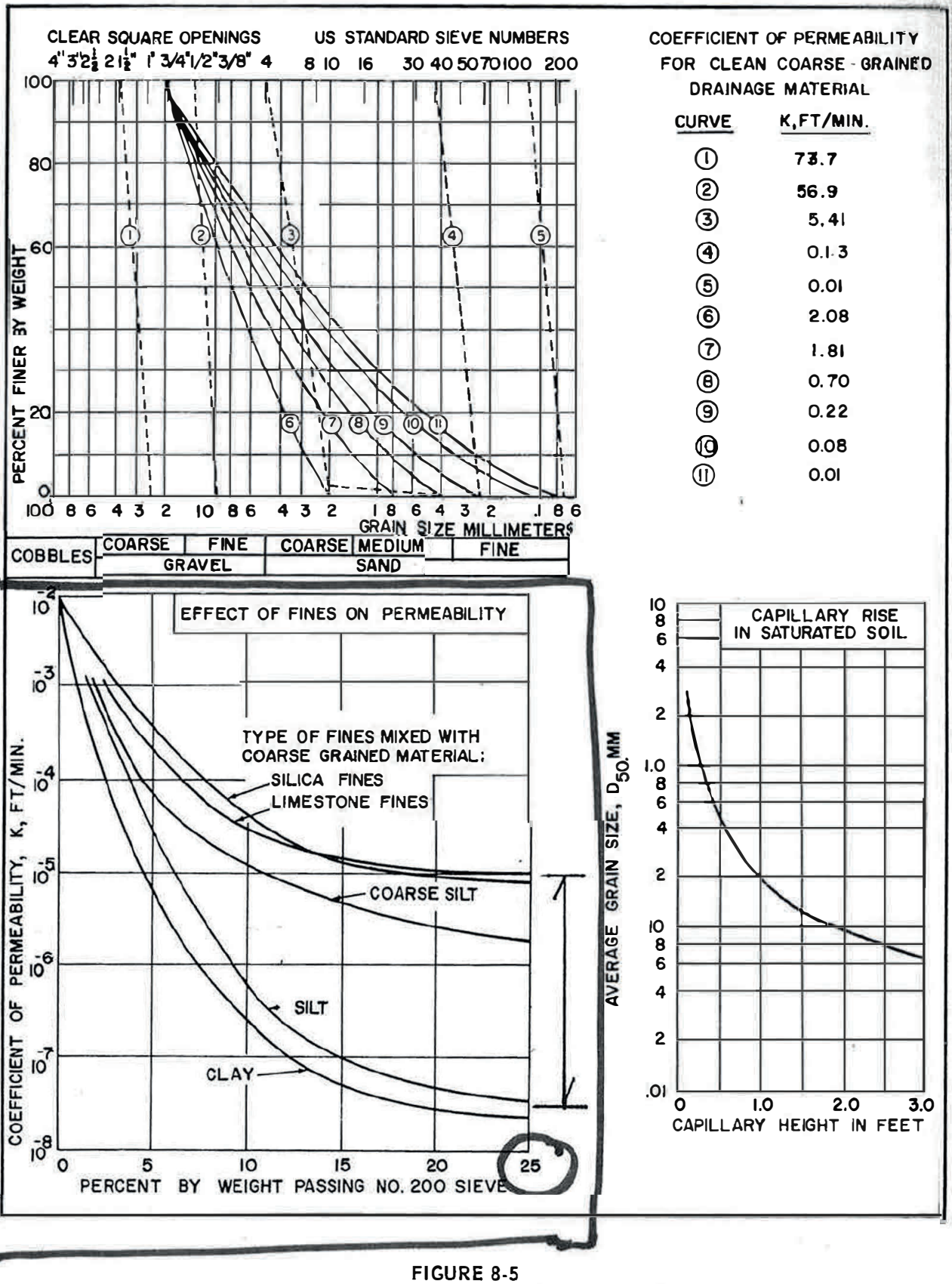


FIGURE 8-5
Permeability and Capillarity of Drainage Materials

Reference 2

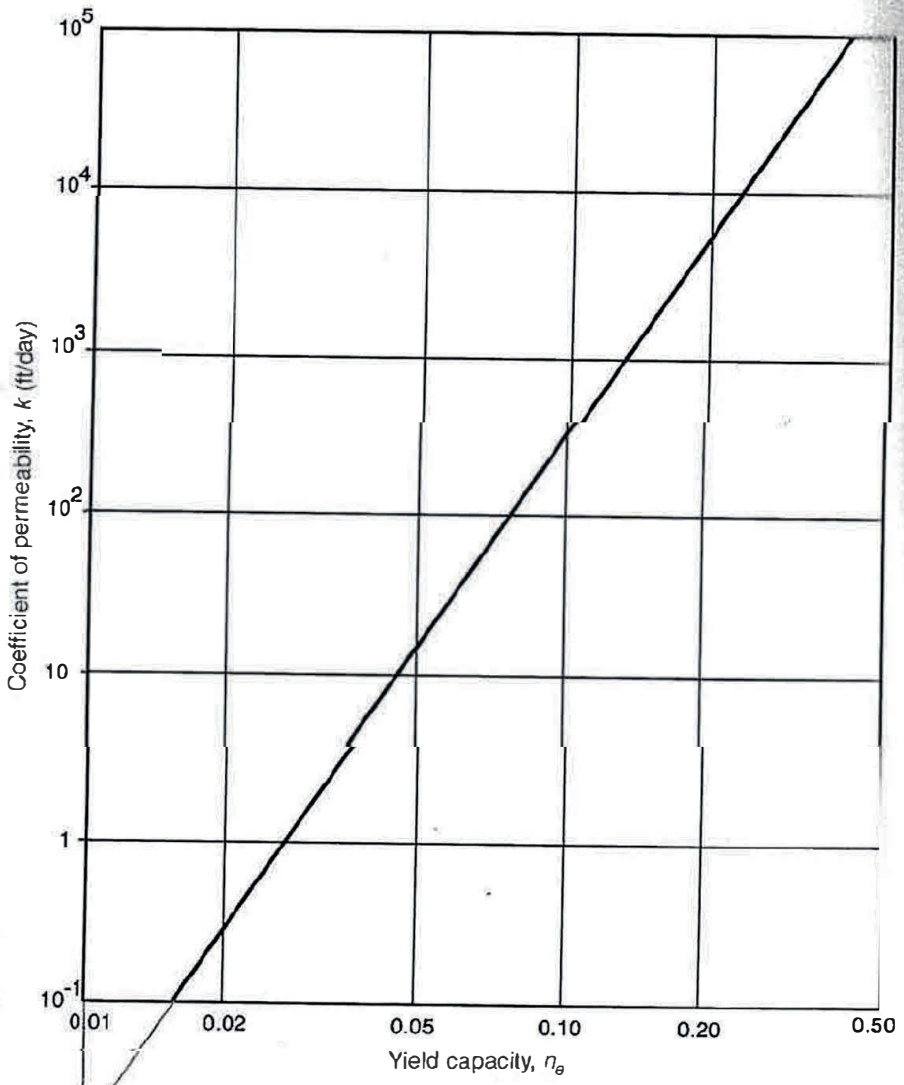


Fig. 10.16. Yield capacity (effective porosity) versus coefficient of permeability. (Adapted from Moulton, 1980.)

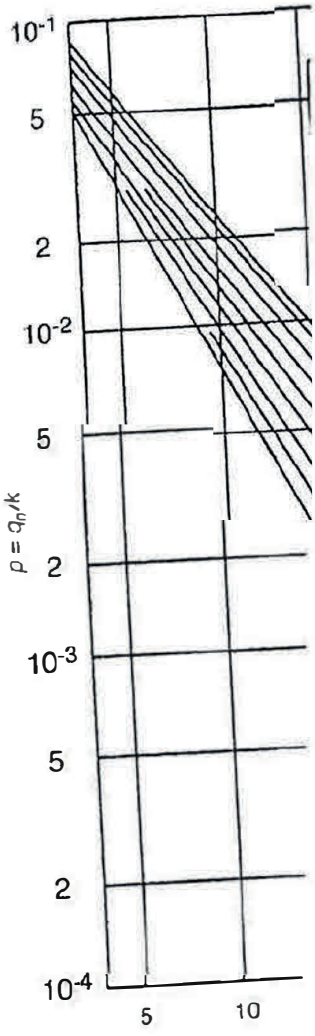


Fig. 10.17. Chart for estim from FHWA, 1992.)

According to the second criterion, the drainage layer characteristics must be chosen so that the layer is capable of draining all the inflow to a suitable collection system. To design according to this criterion, Fig. 10.17 is commonly used. In developing Fig. 10.17, it was assumed that the inflow was steady and was uniformly distributed across the surface of the pavement section. The maximum mound height in the drainage layer H_m controls the thickness of the drainage layer. It is possible to determine the permeability required of the drainage layer once the maximum mound height and the geometrical characteristics (length of flow path L and slope of drainage layer S) are known. Conversely, the r from H_m once the perme are specified.

Example 10.1 The le and 0.5 ft, respectively. material, $k = 2000$ ft/d

Reference 3

APPENDIX I

Annual Drinking Water Quality Report
For 2007

City of Lockport Department of Public Utilities
Division of Water
One Locks Plaza
Lockport, NY 14094
Public Water Supply ID# 3100564

INTRODUCTION

To comply with State and Federal regulations, the City of Lockport Water Department will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all New York State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions concerning this report or your water utility, please contact Paula Sattelberg, Director of Utilities, 433-1646 ext 302 or Peter Degnan, Chief Water Treatment Plant Operator, 433-1645 ext 303. Attending the City Common Council Meetings scheduled for the first and third Wednesday of each month afford opportunities for public participation in decisions that may affect the quality of your water.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The primary source of water for the City of Lockport is the East Branch of the Niagara River. The quantity and quality of your source of raw water is considered excellent by Niagara County Health Department standards. During 2007, our system did not experience any restriction of our water source. At the Raw Water Pumping Station (1968), chlorination is utilized for disinfection and zebra mussel control. The raw water is then pumped 13 miles through a 30-inch forced main to the Lockport Water Treatment Plant (1930) located at 220 Summit St.

The water treatment plant employs conventional treatment processes of coagulation, sedimentation, filtration, chlorination and fluoridation. Coagulation and sedimentation are used to settle out particles (dirt) before filtration. Filtration removes or filters out fine organic and inorganic particles that did not settle out of the water during the sedimentation process. Chlorine is used to disinfect the water and provide a residual disinfectant that ensures the sanitary quality of the water as it is pumped from the water treatment plant to your home. Fluoride is added to the water to help prevent dental cavities.

CITY OF LOCKPORT SWAP SUMMARY

The New York State Department of Health recently completed a draft Source Water Assessment of the supply's raw water source under the States Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels - intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of residential land in the assessment area results in elevated potential for microbials, disinfection byproduct precursors, turbidity and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in

elevated susceptibility for numerous contaminant categories. Non-sanitary wastewater could also impact source water quality. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: Chemical Bulk Storage facilities, Inactive Hazardous Waste Sites, Landfills, Toxic Release Inventory data, Municipally Operated Sewage Facilities and Resources Conservation and Recovery Act (RCRA) facilities. Limited copies of the SWAP report may be obtained at the Water Office in City Hall.

FACTS AND FIGURES

The City of Lockport Water Treatment Plant is a 12 million gallon a day plant (designed capacity of 16 million gallons) owned by and servicing the City of Lockport. Our water system serves a population of 22,500 residents through 8,000 service connections. The total water produced in 2007 was 2.47 billion gallons of water. The average daily water treated and pumped into the distribution system was 6,778,761 gallons per day. Our highest single day was 9,124,000 gallons. The amount of water delivered to customers was 1.48 billion gallons. This leaves an unaccounted for total of 993 million gallons (40% of the total amount produced). This water was used to flush mains, fight fires but the majority was lost through leakage within the City's aging water mains. The average family of four used 78,000 gallons a year (10,400 cubic feet) at a cost of $380.00 (less than 1¢ per gallon). The City of Lockport and the Niagara County Water District are interconnected via a 20-inch water main. Both water systems benefit from the ability to deliver water to one another if the need arises.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

The City of Lockport Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The contaminants detected in your drinking water are included in the following table. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. Your drinking water meets or exceeds all Federal and State requirements. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Niagara County Health Department at (716) 439-7444.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. As water travels over the surface of the land or through the ground, it dissolves many substances. Some occur naturally and some result from the presence of animals and humans. Contaminants that may be present in our source water include: microbes (ex. bateria, viruses), inorganic compounds (ex. lead, copper), organic compounds (ex. pesticides, herbicides) and ratioactive compounds (ex. alpha radiation). In order to ensure our drinking water is safe, the State and Federal Governements have prescribe regulations that limit the amount of certain contaminants in our tap water.

The table presented below lists compounds that were detected in your drinking water. The State allows us to test for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. Unless otherwise noted test results were from the period of January 1st to December 31st, 2007. Limited copies of this report may be obtained at the Water Office in City Hall or viewed on the Internet site "www.elockport.com". Click on City Government, Water and Sewer.

Table of Detected Contaminants

Contaminate	Violation Y/N	Date of Sample	Unit Measure-ment	Level Detected (Avg/Max) (Range)	MCLG	Regulatory Limit (MCL, TT, AL)	Likely Source Of Contamination
Microbiological Contaminants							
Turbidity[1] Filtration	N	8/7/07	NTU	0.3	N/A	TT=≤1 NTU	Soil Runoff
Turbidity[1] Filtration	N	1-12/07	NTU	100% ≤0.3 NTU	N/A	TT= 95% samples ≤0.3 NTU	Soil Runoff
Turbidity[1] Distribution	N	11/07	NTU	0.41	N/A	MCL=≤5 NTU Monthly Average	Soil Runoff

Table of Detected Contaminants

Contaminate	Violation Y/N	Date of Sample	Unit Measure-ment	Level Detected (Avg/Max) (Range)	MCLG	Regulatory Limit (MCL, TT, AL)	Likely Source Of Contamination
Radioactive Contaminants							
Gross Alpha (3/31/03)	N	3/03	pCi/1	0.95 ± 0.59	0	15	Erosion of natural deposits
Inorganics							
Barium	N	2/7/07	µg/l	22	2000	2000	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	N	1-12/07	mg/l	0.9 0.1[2] – 1.1	N/A	MCL=2.2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	N	6/30/05	µg/l	7[3] ND - 11	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (Inorganic)	N	2/7/07	µg/l	0.5	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills or cropland
Nitrate as Nitrogen	N	4/4/07	mg/l	0.34	10	MCL=10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	N	2/7/07	mg/l	10	N/A	AL=20.0	Naturally occurring; road salt; water softeners; animal waste
Disinfection Byproducts							
Total Trihalomethanes	N	7/07	µg/l	30.9 17.0 – 44.4	N/A	MCL=80	Byproduct of drinking water chlorination
Haloacetic Acids	N	9/07	µg/l	12.1 8.90 – 17.3	N/A	MCL=60	Byproduct of drinking water chlorination
Disinfectants							
Chlorine Residual	N	7-9/07	mg/l	0.78	N/A	MRDL= 4 [4]	Byproduct of drinking water chlorination

1- Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. State regulations require that the monthly average for distribution point turbidity must always be below 5 NTU. The regulations require that 95% of the filtered water turbidity samples have measurements below 0.3 NTU and all samples be below 1 NTU. Our highest single turbidity measurement for the year occurred on 8/7/2007 (0.3 NTU). The turbidity values of all samples collected were below 0.3 NTU 100 % of the time.

2- Fluoride is added to your drinking to promote strong teeth. It is specially important for children. From February 28 to March 26, 2007 our fluoride feed system was not operating. The sample collected March 8, 2007 represents background fluoride from our source water.

3- The level presented represents the 90th percentile of the 30 samples collected. The action level (AL) for lead and copper were not exceeded at any of the sites tested. Additionally, all copper samples were below the detection limit and therefore are not reported in this table. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water flush your tap for 30 seconds to 2 minutes before using tap water. You may also wish to have your water tested for lead. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

4- The value represents the Maximum Residual Disinfection Level (MRDL), which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.

In the above table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or **Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or **Micrograms per liter (µg/l)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or **Nanograms per liter (ng/l)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) or **Picograms per liter (pg/l) -** one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level – (AL) the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

N/A – Not applicable

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded State and Federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791). Information on Cryptosporidiosis and Giardiasis is also available by contacting the NCDOH, 5467 Upper Mountain Rd, Lockport, NY. 14094 or phone (716) 439-7444.

Water Conservation

Unlike many areas of the country, the City of Lockport has access to more than enough water to meet its current and future needs. In many areas of the country, local or regional water shortages exist, at least for parts of the year. Although our water supply source is adequate, we need to use it wisely. In an effort to promote the wise use of water, to avoid waste and reduce our energy demands, we offer the following conservation tips:

1. Fix leaking faucets. A drop a minute can amount to 2,400 gallons over the course of a year.
2. Check your toilet(s) for leaks. Leaking toilets not only waste water but also are the leading cause of high water bills. Leaking toilets can waste up to 500 gallons of water per day. To check your toilet for leaks, place a few drops of food coloring in the back of your toilet. Let it sit for approximately an hour or so without using the toilet. If the food coloring is present in the bowl, the toilet is leaking.
3. Use water saving devices such as flow restricting showerheads, low flow faucets (aerators) and low flow flush toilets.
4. Do full loads when washing clothes and dishes. Use a garbage disposal sparingly. They waste water.
5. Water your lawn only when necessary. The most effective time to water is before 10:00 am. After that time you will lose water through evaporation.
6. If you have a swimming pool, fill it during the night when demands on power and production systems are less.
7. When washing your car, use a bucket for washing and turn on the hose only for rinsing.

Revenues and Expenditures

During 2007, the City of Lockport Water Department spent $3,715,957 and received revenues of $3,725,050. A major portion of the Department's expenditures are the principal and interest payments associated with the replacement of approximately 10 miles of the 30 inch raw water transmission main between North Tonawanda and Lockport during the years 1990 - 1993.

System Improvements

In 2007, we replaced the meter that measures the amount of water we sell/buy from Niagara County. This improvement will allow us to accurately measure the amount of water we sell to the County each summer. We also initiated an aggressive leak detection program. This has resulted in less water being dispensed to the City. We are continuing to replace meters with remote read meter heads. These meter heads allow us to read meters simply by driving by the residence. In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The City's water system consists of approximately 100 miles of pipe, ranging in size from 4 to 30 inches in diameter. The majority of this pipe (60%) is 6-inch cast iron, installed in the late 19th century and early 20th century. These same pipes that deliver drinking water to your home are at or very near their life expectancy and will need to be replaced within the next 30 years. The cost of replacement will be reflected in the water rate structure. The City of Lockport Water Department faces the difficult challenge of replacing its aging infrastructure and at the same time keeping water affordable for all its residents.

Closing

Thank you for allowing us to continue to provide your family with quality drinking water. We at the City of Lockport Water Department work around the clock to provide top quality water to every tap. Your Water Department is staffed by a competent group of professional people dedicated to this task. We ask that all our customers help us protect our water sources, which are the heart of our community and our way of life. Please call our office if you have questions.

APPENDIX J

HTW DRILLING LOG

HOLE NO. 600S

PROJECT: Guterl Steel	10. HOLE LOCATION: A05B	SHEET 1 OF SHEETS 1
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: 2	DISTURBED: 0 / UNDISTURBED: 2
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DR LL NG COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 610.54 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/13/2007	18. DATE HOLE COMPLETED: 7/13/2007 (coring); 7/23/07 (pad)
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Rain; 70-85 F; moderate wind and humidity	
7. THICKNESS OF OVERBURDEN: 8.0 ft	20. DISPOSITION OF HOLE: Completed as overburden monitoring well	
8. DEPTH DR LLED INTO ROCK: 0.0 ft	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 8.0 ft	22. SIGNATURE OF INSPECTOR	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 222 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1 2 3 4 5 6 7 8 9 10									Auger to 8'. See MW-600D drilling log for geologic descriptions. Background PID: 0.0 ppm Background cpm: 41 cpm Shelby tubes - collected from pilot hole as follows: 3-5' bgs 7/23/07 10:00 am, 16" recovery 5-7' bgs 7/23/07 10:15 am, 21" recovery

HTW DRILLING LOG

HOLE NO. 600D

PROJECT: Guterl Steel	10. HOLE LOCATION: A05B	SHEET 1 OF SHEETS 2	
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A	UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2	
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 610.54 ft	15. ELEVATION DATUM: NAVD 1988	
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/12/2007	18. DATE HOLE COMPLETED: 7/23/2007	
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: 7.0 ft (in overburden)		
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind and humidity		
7. THICKNESS OF OVERBURDEN: 7.9 ft to weathered bedrock	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well		
8. DEPTH DRILLED INTO ROCK: 0.5 ft	21. NAME OF INSPECTOR: Tamara Raby		
9. TOTAL DEPTH OF HOLE: 23.4 ft	22. SIGNATURE OF INSPECTOR: [redacted]		

ELEVATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		(Native) Grayish brown clayey silt, trace organics, fine sand, trace mottling. At tip gravel pieces, dry	1.4	N/A	0.1 ppm	45 cpm @ background	N/A	3 6 7 7	Background PID: 0.1 ppm Background NaI: 45 cpm
	2									
	3		Same as above to 0.3 0.3-1.8 brown fine sandy silt, trace medium to coarse sand and fine gravel, moist	1.8	N/A	@ background		N/A	6 9 9 10	
	4									
	5		Same as above w/ tan silt pods Top 0.5 slough from above	2.0	N/A	@ background		N/A	5 7 9 12	
	6									
	7		Same as above grading to silt (water at 7.0)	1.9	N/A	@ background		N/A	9 11 21 50/0.4	
	8									
	8.4		Auger to 8.4' and set 4-inch steel casing							
	9		7/16/07 (Run 1 and Run 2) Gray dolostone (Goat Island Member of the Lockport Group), vertical fractures at 1.3-1.45, few calcite filled vugs	3.1	N/A	0.0 ppm	cpm @ background	N/A	N/A	Corebox 1 RUN 1 RQD 61% water loss: 10 gal
	10									

HTW DRILLING LOG

HOLE NO. 600D

PROJECT	Guterl Steel
SHEET	2 OF 2
1. LOCATION	Lockport, NY
21. NAME OF INSPECTOR	Tamara Raby
2. COMPANY	Earth Tech
22. SIGNATURE OF INSPECTOR	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASS FICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	P D (ppm)	Ludlum 2221/44-10 Nal (cpm)	Nal 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									RUN 1 continued
	11									
	11.9									
	13		Gray dolostone (Goat Island Member of the Lockport Group), few vugs (filled and	4.55	N/A	0.0 ppm	cpm @ background	N/A	N/A	Corebox 1 RUN 2 RQD 37%
	14		At 12.15 - 13.2 very broken gravel-sized pieces							water loss: 55 gal
	15									Overburden casing comes loose - grout up to ground surface between casing and borehole
	16									
	16.9									
	18		7/23/07 Run 3 and Run 4							
	19		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings	5.0	N/A	0.0 ppm	30 cpm @ background	N/A	N/A	Corebox 2 RUN 3 RQD 58%
	20									
	21									
	21.9									
	23		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings	1.5	N/A	0.0 ppm	30 cpm @ background	N/A	N/A	Corebox 2 RUN 4 RQD 42% Driller stated that one earlier run must have been short
	23.4									

HTW DRILLING LOG

HOLE NO. 601D

PROJECT: Guterl Steel	10. HOLE LOCATION: A04A	SHEET 1 OF SHEETS 2	
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A	UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2	
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 602.42 ft	15. ELEVATION DATUM: NAVD 1988	
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/11/2007	18. DATE HOLE COMPLETED: 7/18/2007 (coring); 7/24/07 (pad)	
5. SIZE AND TYPE OF EQU PMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.		
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind and humidity		
7. THICKNESS OF OVERBURDEN: 2.2 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well		
8. DEPTH DRILLED INTO ROCK: 2.8 ft (for socket)	21. NAME OF INSPECTOR: Tamara Raby		
9. TOTAL DEPTH OF HOLE: 20 ft	22. SIGNATURE OF INSPECTOR:		

ELEVATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		0-0.8 Fill material - black and brown cinders/slag & silt and fine sand, dry 0.8-1.5 Gray weathered bedrock (dolostone)	1.5	N/A	0.4 ppm	48 cpm @ background	N/A	6 21 37 45	Background PID: 0.3 ppm Background NaI: 48 cpm
	2									
	3		no recovery - shoe fell off in hole	0.0	N/A	N/A	NA	N/A	50/0.2	
	4		Weathered bedrock dolostone (Goat Island Member of the Lockport Group).	0.3	N/A	No readings above background		N/A	50/0.3	Auger to 5' - try to drive splitspoon, dolostone in shoe (50/0.0)
	5		coring 7/18/07							
	6		Brownish gray dolostone (Goat Island Member of the Lockport Group).	4.7	N/A	0.0 ppm @ background	32 cpm	N/A	N/A	Corebox 1 RUN 1 RQD 16%
	7		Very fractured, many vertical fractures							water loss: 10 gal
	8		8-13" gravel size pieces							
	9									
	10									

HTW DRILLING LOG

HOLE NO. 601D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF NSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF NSPECTOR:

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	2221/44-10 NaI (cpm)	2X2 - 1 min. (counts)	W COUNT	REMARKS
	10		Brownish gray dolostone (Goat Island Member of the Lockport Group). Shale partings, calcite filled vugs	5.0	N/A	0.0 ppm @ background	32 cpm	N/A	N/A	Corebox 1 RUN 2 RQD 32% water loss: 50 gal
	15		Gray dolostone (Goat Island Member of the Lockport Group).	5.0	N/A	0.0 ppm @ background	32 cpm	N/A	N/A	Corebox 2 RUN 3 RQD 58% water loss: 10 gal 100% water loss
	20									

HTW DRILLING LOG

HOLE NO. 602D

PROJECT: Guterl Steel	10. HOLE LOCATION: A04A	SHEET 1 OF SHEETS 2
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A; UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 601.15 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DR LL: CME - 75	17. DATE HOLE STARTED: 7/11/2007	18. DATE HOLE COMPLETED: 7/19/2007
5. SIZE AND TYPE OF EQU PMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DR LLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind; high humidity	
7. THICKNESS OF OVERBURDEN: 3 ft to weathered	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well	
8. DEPTH DRILLED INTO ROCK: 2.5 ft	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 20.5 ft	22. SIGNATURE OF INSPECTOR: [redacted]	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1–2		0-0.6 Black and brown slag & cinders and silty fine sand, dry 0.6-0.8 Tan fine sand, dry, trace silt (possibly native)	0.8	N/A	0.3 ppm	48 cpm	N/A	4 6 9 22	Background PID: 0.3 ppm Background NaI: 48 cpm
	3–4		0-0.2 Same as above 0.2-0.5 weathered dolostone 0.5-1.1 same as 0-0.2 1.1-1.5 weathered dolostone dry	1.5	N/A	1.7 ppm	cpm < background	N/A	28 33 50 50	
	5		0-0.3 Same as above, dry 0.3-0.5 orangish brown clayey silt, trace coarse sand, stiff, moist, trace gravel (NATIVE)	0.5	N/A	No readings above background		N/A	31 50/0.1	Drive spoon at 5' bgs; Drive spoon at 50/0.2' bgs, slough from above, ground up dolostone
	6–10		7/19/2007 Brownish gray dolostone (Goat Island Member of the Lockport Group), very fractured, especially top 1.5 feet - clay seams, few calcite filled vugs, becomes grayer with depth, several vertical fractures noted	4.5	N/A	0.0 ppm @ background	33 cpm	N/A	N/A	Auger refusal at 5.5'; set 4-inch casing Corebox 1 RUN 1 RQD 0% water loss: 20 gal

HTW DRILLING LOG

HOLE NO. 602D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF NSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF NSPECTOR

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASS FICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	P D (ppm)	Ludlum 2221/44-10 Nal (cpm)	Nal 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									Run 1 continued
	11		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few vugs with and without calcite	5.0	N/A	0.0 ppm @ background	33 cpm	N/A	N/A	Corebox 1 RUN 2 RQD 36% water loss: 50 gal
	12									
	13									
	14									
	15									
	16		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few vugs, less fractured than above	5.0	N/A	0.0 ppm @ background	33 cpm	N/A	N/A	Corebox 2 RUN 3 RQD 44% water loss: 50 gal
	17									
	18									
	19									
	20									

HTW DRILLING LOG

HOLE NO. 603D

PROJECT: Guterl Steel	10. HOLE LOCATION: A04A	SHEET 1 OF 2 SHEETS
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A; UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DR LL NG COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 597.69 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/11/2007	18. DATE HOLE COMPLETED: 7/19/2007
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind; high humidity	
7. THICKNESS OF OVERBURDEN: 3 ft to weathered bedrock	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well	
8. DEPTH DRILLED NTO ROCK: 2 ft (for socket)	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 20 ft	22. SIGNATURE OF NSPECTOR: [redacted]	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		0-0.3 Brown fine to coarse sand, slag, cinders 0.3-0.5 Tan brick, dry 0.5-0.8 Black f-c sand, slag, dry	0.8	N/A	0.1 ppm	56 cpm @ background	N/A	8 6 8 7	Background PID: 0.0 ppm Background NaI: 56 cpm
	2									
	3		0-0.1 Same as above 0.1-0.3 Tan with orange mottles silty clay, moist 0.3-0.8 weathered bedrock (dolostone) dry	0.8	N/A	0.2 ppm	56 cpm @ background	N/A	9 14 50 50/0	
	4									
	5		No recovery	0.0	N/A	N/A	N/A	N/A	N/A	Auger refusal at 5.0' set 4-inch casing
	6		Brownish gray dolostone (Goat Island Member of the Lockport Group), becomes more gray for last 2'. Very fractured, some fractures have clay infilling, few vugs	5.0	N/A	0.0 ppm @ background	36	N/A	N/A	Corebox 1 RUN 1 RQD 0.0% water loss: 50 gal
	7									
	8									
	9									
	10									

HTW DRILLING LOG

HOLE NO. 603D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF INSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF NSPECTOR

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10		Gray dolostone (Goat Island Member of the Lockport Group) few vugs calcite vein (< 1/8 ") fractured, not as much as 5-10' bgs	5.0	N/A	0.0 ppm @ background	36	N/A	N/A	Corebox 1 RUN 2 RQD 7.5% water loss: 50 gal
	15		Gray dolostone (Goat Island Member of the Lockport Group) few shale partings few vugs angled fractures at 2.5"-5", 42"-46"	5.0	N/A	0.0 ppm @ background	36	N/A	N/A	Corebox 2 RUN 3 RQD 7.5% water loss: 10 gal
	20									

HTW DRILLING LOG

HOLE NO. 604D

PROJECT: Guterl Steel	10. HOLE LOCATION: A04D	SHEET 1 OF 2 SHEETS
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A; UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 596.25 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DR LL: CME - 75	17. DATE HOLE STARTED: 7/10/2007	18. DATE HOLE COMPLETED: 7/12/2007 (coring); 7/18/07 (pad)
5. SIZE AND TYPE OF EQU PMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Rain; 70-85 F; moderate wind and humidity	
7. THICKNESS OF OVERBURDEN: 2.4 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well	
8. DEPTH DR LLED INTO ROCK: 1.8 ft (for socket) 19.2 cored	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 19.2 ft	22. SIGNATURE OF NSPECTOR	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		Brown fine sandy silt, dry to 0.6. 0.6-1.5 orangish brown fine gravel and fine sandy silt, dry	1.5	N/A	0.1 ppm	69 cpm	N/A	6 16 27 29	Background PID: 0.1 ppm Background NaI: 69 cpm
	2					No readings above background				
	3		Same as above, dry Driller grinds down to 4' bgs - weathered rock?	0.5	N/A	No readings above background		N/A	50/0.4	
	4.2		No recovery; In shoe - weathered bedrock - ground core 7/12/07	N/A	N/A	No readings above background		N/A	50/0.4	recovery in shoe only Grind to 4.2' bgs - auger to refusal
	5.7		Brownish gray dolostone (Goat Island Member of the Lockport Group), very Vertical fracture 0.35-1.2, clay present	1.5	N/A	0.0 ppm 60 cpm @ background		N/A	N/A	Corebox 1 RUN 1 RQD 0% no water loss
	7		Brownish gray grading to gray dolostone (Goat Island Member of the Lockport Group), very fractured, few shale partings, few calcite filled vugs, clay infilling observed in some fractures.	4.9	N/A	0.0 ppm 60 cpm @ background		N/A	N/A	Corebox 1 RUN 2 RQD 0% water loss: 10 gal
	8									
	9									
	10									

HTW DRILLING LOG

HOLE NO. 604D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF INSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF NSPECTOR

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									
	10.7									
	12		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few calcite filled vugs, clay	5.0	N/A	0.0 ppm @ background	60 cpm	N/A	N/A	Corebox 1 & 2 RUN 3 RQD 39% water loss: 30 gal
	13									
	14									
	15									
	15.7									
	17		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few calcite filled vugs, clay	3.4	N/A	0.0 ppm @ background	60 cpm	N/A	N/A	Corebox 2 RUN 4 RQD 60% water loss: 20 gal
	18									
	19.2									

HTW DRILLING LOG

HOLE NO. 605D

PROJECT: Guterl Steel	10. HOLE LOCATION: A04B	SHEET 1 OF SHEETS 2	
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A	UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2	
3. DR LL NG COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 598.50 ft	15. ELEVATION DATUM: NAVD 1988	
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/10/2007	18. DATE HOLE COMPLETED: 7/17/2007 (coring)	
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.		
6. NAME OF DR LLER: Tony Jakubczak	19. WEATHER: Rain; 70-85 F; moderate wind and humidity		
7. THICKNESS OF OVERBURDEN: 2.6 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well		
8. DEPTH DR LLED INTO ROCK: 0.9 ft (for socket)	21. NAME OF INSPECTOR: Tamara Raby		
9. TOTAL DEPTH OF HOLE: 18.5 ft	22. SIGNATURE OF INSPECTOR: [redacted]		

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASS FICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		Gravel top 0.2; 0.2-1.35 Brown clayey silt, trace dark orange mottling, dry to moist	1.35	N/A	0.7 ppm	52 cpm	N/A	9 9 11 13	Background PID: 0.0 ppm Background NaI: 52 cpm
	2									
	3		Orangish brown fine sandy silt, moist. Gray bedrock in tip of spoon	0.6	N/A	Nothing above background		N/A	2 50/0.1	Auger to refusal auger to 3.5 ft to set 4-inch casing
	4		coring 7/17/07 Brownish gray dolostone, filled vugs (calcite) 0.2-1.5 - gravel size zone 1.8-2.0 - vertical fracture	2.0	N/A	0.0 ppm @ background	36 cpm	N/A	N/A	Corebox 1 RUN 1 RQD 0% water loss: 10 gal
	5									
	6									
	7		Brownish gray dolostone (Goat Island Member of the Lockport Group), very fractured, few calcite and empty vugs core block	3.5	N/A	0.0 ppm @ background	36 cpm	N/A	N/A	Corebox 1 RUN 2 RQD 0% water loss: 70 gal
	8									
	9									
	10		Browish gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs	1.0	N/A	0.0 ppm @ background	36 cpm	N/A	N/A	Corebox 1 RUN 3 RQD 0%

HTW DRILLING LOG

HOLE NO. 605D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF INSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF INSPECTOR: [redacted]

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASS FICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									Run 3 continued
	11		Brownish gray dolostone (Goat Island Member of the Lockport Group). Few shale partings Top 0-0.5ft gravel sized pieces	5.0	N/A	0.0 ppm @ background	36 cpm	N/A	N/A	Corebox 1 & 2 RUN 4 RQD 0.7% water loss: 250 gal
	12									
	13									
	14									
	15									
	16		Gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs, many fractures	2.0	N/A	0.0 ppm @ background	36 cpm	N/A	N/A	Corebox 2 RUN 5 RQD 17% water loss: 40 gal
	17									
	18									

HTW DRILLING LOG

HOLE NO. 606D

PROJECT: Guterl Steel	10. HOLE LOCATION: A03	SHEET 1 OF SHEETS 2
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A; UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 598.91 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/10/2007	18. DATE HOLE COMPLETED: 7/18/2007 (grout); 7/20/07 (pad)
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind and humidity	
7. THICKNESS OF OVERBURDEN: 2.7 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well	
8. DEPTH DRILLED INTO ROCK: 0.8 ft (for socket)	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 20.5 ft	22. SIGNATURE OF INSPECTOR: [redacted]	

ELEVATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Lucium 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1		Brown fine sandy silt & organics to 0.4; 0.4-1.0 Gray fine sandy silt, some course sand, dry wood in tip	1.0	N/A	0.7 ppm	40 cpm @ background	N/A	3 15 25 8	Background PID: 0.4 ppm Background NaI: 40 cpm
	2									
	3		Gray and dark gray rock fragments to 0.4; 0.4-0.7 Tan fine sandy silt, trace clay, moist; 0.7-0.8 Dolostone fragments	0.8	N/A	0.6 ppm	cpm @ background	N/A	22 20 25 33	
	4									
	5		Weathered bedrock	0.2	N/A	0.3 ppm	cpm @ background	N/A	31 50/0.2	auger to 5.5' and set 4-inch steel casing
	6		coring 7/17/07							
	7		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few calcite filled vugs	5.0	N/A	0.2 ppm @ background	29 cpm	N/A	NA	Corebox 1 RUN 1 RQD 17% water loss: 10 gal
	8									
	9									
	10									

HTW DRILLING LOG

HOLE NO. 606D

PROJECT	SHEET		SHEETS
Guterl Steel	2	OF	2

1. LOCATION	21. NAME OF INSPECTOR
Lockport, NY	Tamara Raby
2. COMPANY	**22. SIGNATURE OF INSPECTOR**
Earth Tech	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASS FICATION OF MATERIAL	REC. (ft)	SAMPLE No. (T ME)	P D (ppm)	2221/44-10 Nal (cpm)	2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									Run 1 continued
	11		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few calcite filled vugs 13.4 - Clay infilled fracture	5	N/A	0.0 ppm	see remarks			Corebox 2 RUN 2 RQD 52% water loss: 150 gal cpm @ background except: 104 cpm & 99 cpm - 2.4-3.0 (12.9-13.5) thought to be radon gas in fractures
	12									
	13									
	14									
	15									
	16		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings, few calcite filled vugs	5.0	N/A					RUN 3 RQD 52% water loss: 100 gal
	17									
	18									
	19									
	20									

HTW DRILLING LOG

HOLE NO. 606DR

PROJECT: Guterl Steel	10. HOLE LOCATION: A03	SHEET 1 OF SHEETS 2
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A; UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2
3. DR LL NG COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 599.49 ft	15. ELEVATION DATUM: NAVD 1988
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 10/8/2007	18. DATE HOLE COMPLETED: 10/8/2007
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.	
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; >85 F; moderate wind; high humidity	
7. THICKNESS OF OVERBURDEN: 5 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well	
8. DEPTH DR LLED NTO ROCK: 6 ft set casing	21. NAME OF INSPECTOR: Tamara Raby	
9. TOTAL DEPTH OF HOLE: 21 ft	22. SIGNATURE OF INSPECTOR	

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	P D (ppm)	Ludlum 2221/44-10 Nal (cpm)	Nal 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	1–2		Dark brown silty fine sand, trace medium to coarse sand, fine gravel, and wood pieces, dry	0.5	N/A	0.0 ppm	65 cpm @ background	N/A	1 1 2 3	Background PID: 0.0 ppm Background Nal: 65 cpm
	3–4		Same as above to 0.3 0.3-0.6 tan silty clay and gravel, moist	0.6	N/A	@ background		N/A	2 3 3 5	
	5		Sample is slough from above	0.2	N/A	@ background		N/A	50/0.3 at 5' 50/0.5	Auger to 5' and take split spoon - dolostone chips Auger to 6' bgs
	6–8		Brown gray grading to gray dolostone (Goat Island Member of the Lockport Group), very fractured, shale partings	2.5	N/A	@ background		N/A	N/A	Corebox 1 RUN 1 RQD 0% water loss: 5 gal
	9–10		Gray dolostone (Goat Island Member of the Lockport Group), few shale partings	5	N/A	@ background		N/A	N/A	Corebox 1 RUN 2 RQD 24% water loss: 10 gal

HTW DRILLING LOG

HOLE NO. 606DR

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF INSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

22. SIGNATURE OF INSPECTOR: [redacted]

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	P D (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									RUN 2 continued
	11									
	12									
	13									
	14		Gray dolostone (Goat Island Member of the Lockport Group), few sahle partings.	5	N/A	@ background	N/A	N/A		Corebox 1 & 2 RUN 3 RQD 46% water loss: 5 gal
	15									
	16									
	17									
	18									
	19		Gray dolostone, few shale partings, trace vugs	2.5	N/A	@ background	N/A	N/A		Corebox 2 RUN 4 RQD 52% water loss: 5 gal
	20									
	21									

HTW DRILLING LOG

HOLE NO. 607D

PROJECT: Guterl Steel	10. HOLE LOCATION: A03	SHEET: 1 OF 2 SHEETS	
1. LOCATION: Lockport, NY	11. NO. OF OVERBURDEN GEOTECH SAMPLES: N/A	DISTURBED: N/A	UNDISTURBED: N/A
2. COMPANY: Earth Tech	12. SAMPLES FOR RADIOLOGICAL ANALYSIS: See Tables 3.7.5-1 to 3.7.5-4	13. Total Number of Core Boxes: 2	
3. DRILLING COMPANY: SJB	14. SURFACE ELEVATION AT HOLE: 597.93 ft	15. ELEVATION DATUM: NAVD 1988	
4. MANUFACTURER'S DESIGNATION OF DRILL: CME - 75	17. DATE HOLE STARTED: 7/10/2007	18. DATE HOLE COMPLETED: 7/18/2007 (coring); 7/23/07 (pad)	
5. SIZE AND TYPE OF EQUIPMENT: 2-inch splitspoon ; 6 1/4 inch ID HSA	16. DEPTH OF GROUNDWATER ENCOUNTERED: Not encountered in overburden.		
6. NAME OF DRILLER: Tony Jakubczak	19. WEATHER: Overcast; 70-85 F; moderate wind and humidity		
7. THICKNESS OF OVERBURDEN: 1.6 ft	20. DISPOSITION OF HOLE: Completed as bedrock monitoring well		
8. DEPTH DRILLED INTO ROCK: 1.3 ft (for socket)	21. NAME OF INSPECTOR: Tamara Raby		
9. TOTAL DEPTH OF HOLE: 17.9 ft	22. SIGNATURE OF INSPECTOR: [redacted]		

ELEVATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	0 – 1		Brown fine sandy silt, trace organics, dry to 0.4; 0.4-0.5 Tan fine to coarse sand and gravel, dry; In shoe, gray dolostone pieces	0.5	N/A	0.4 ppm No readings above background	40 cpm	N/A	2 8 22 50/0.1	Background PID: 0.4 ppm Background NaI: 40 cpm
	1 – 2		No recovery	0.0	N/A	N/A	N/A	N/A	N/A	Auger to 2.9' bgs & set 4-inch steel casing
	2.9 – 5.9		Brownish gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs, vertical fractures throughout	3.0	N/A	0.0 ppm	40 cpm @ background	N/A	N/A	Corebox 1 RUN 1 RQD 0% water loss: 10 gal
	5.9 – 10		Gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs, few shale partings	5.0	N/A	0.0 ppm	40 cpm @ background	N/A	N/A	Corebox 1 RUN 2 RQD 22% water loss: 20 gal

HTW DRILLING LOG

HOLE NO. 607D

PROJECT: Guterl Steel

SHEET 2 OF SHEETS 2

1. LOCATION: Lockport, NY

21. NAME OF NSPECTOR: Tamara Raby

2. COMPANY: Earth Tech

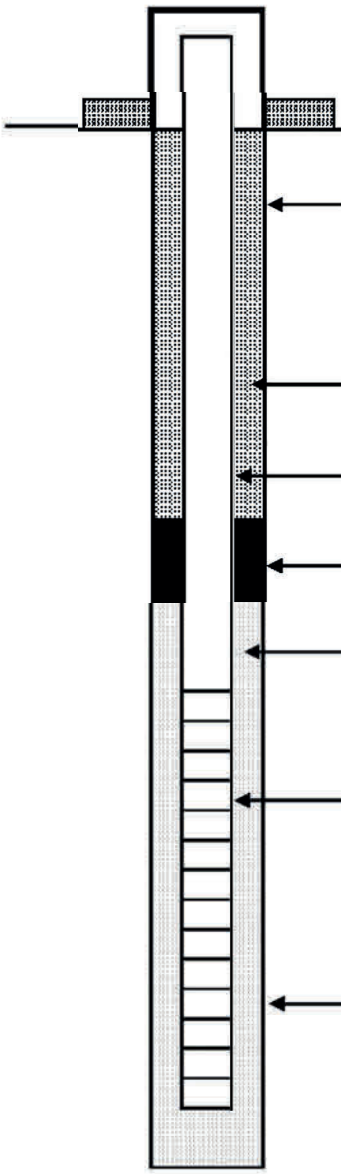
22. SIGNATURE OF NSPECTOR: [redacted]

ELEV-ATION	DEPTH (FEET)	LEGEND	CLASSIFICATION OF MATERIAL	REC. (ft)	SAMPLE No. (TIME)	PID (ppm)	Ludlum 2221/44-10 NaI (cpm)	NaI 2221 2X2 - 1 min. (counts)	BLOW COUNT	REMARKS
	10									Run 2 continued
	10.9									
	12		Gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs, few shale partings	5.0	N/A	0.0 ppm	40 cpm @ background	N/A	N/A	Corebox 2 RUN 3 RQD 20% water loss: 30 gal
	13									
	14									
	15									
	15.9									
	17		Gray dolostone (Goat Island Member of the Lockport Group), few calcite filled vugs, few shale partings	2.0	N/A	0.0 ppm	40 cpm @ background	N/A	N/A	Corebox 2 RUN 4 RQD 92%
	17.9									

APPENDIX K

Overburden Well Diagram Well No. 600S

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 610.54 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 613.45 ft	Well Permit No.: N/A			
Casing Elevation: 613.70 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/13/2007			



Locking protective stickup with concrete pad, three bollards

Inner casing stickup 2.9 ft to 0.0 ft

Ground Surface

Borehole diameter 8 inches

Cement-bentonite grout from 0.0 ft to -3.0 ft

Riser Pipe from 2.9 ft to -5.5 ft

Bentonite seal from -3.0 ft to -4.0 ft

Chocker sand (00) from -4.0 ft to -4.5 ft

Filter pack from -4.5 ft to -8.0 ft

Sand Size 0

Well screen from -5.5 ft to -7.5 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Borehole diameter 8 inches

Bottom Cap at -7.5 ft

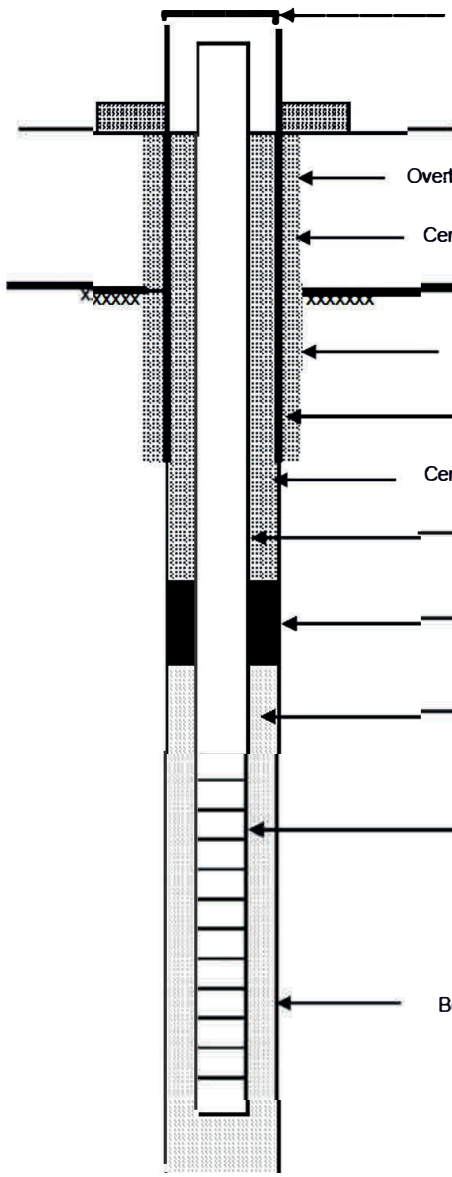
Bottom of Borehole at -8.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 600D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 610.54 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 613.29 ft	Well Permit No.: N/A			
Casing Elevation 613.50 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/12/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.8 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0.0 ft to -8.4 ft

Top of Bedrock -7.9 ft

Bedrock socket diameter 12 inches

4-inch ID steel casing [illegible] ft to [illegible] ft

Cement-bentonite grout from 0.0 ft to -7.4 ft

Riser Pipe from 2.8 ft to -13.0 ft

Bentonite seal from -7.4 ft to -11.0 ft

Chocker sand (00) from -11.0 ft to -11.5 ft

Filter pack from -11.5 ft to -23.4 ft

Sand Size 0

Well screen from -13.0 ft to -23.0 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -23.0 ft

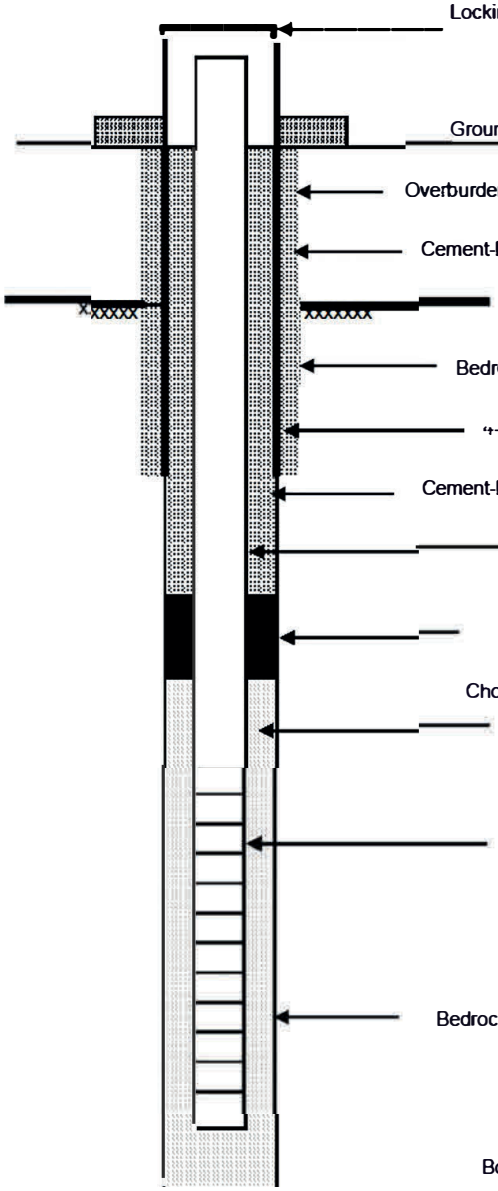
Bottom of Borehole at -23.4 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 601D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 602.42 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 604.85 ft	Well Permit No.: N/A			
Casing Elevation 605.22 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/18/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.4 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0 .0 ft to -2.8 ft

Top of Bedrock -2.2 ft

Bedrock socket diameter 12 inches

4-inch ID steel casing [illegible] ft to [illegible] ft

Cement-bentonite grout from 0 ft to -2.0 ft

Riser Pipe from 2.4 ft to -9.5 ft

Bentonite seal from -2.0 ft to -7.5 ft

Chocker sand (00) from -7.5 ft to -8.0 ft

Filter pack from -8.0 ft to -20.0 ft

Sand Size 0

Well screen from -9.5 ft to -19.5 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -19.5 ft

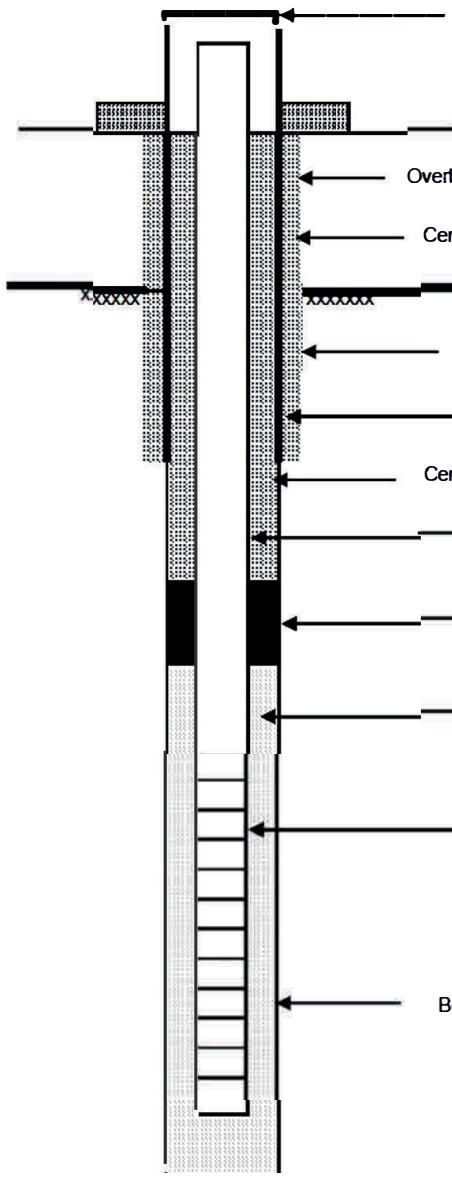
Bottom of Borehole at -20.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 602D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 601.14 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 604.01 ft	Well Permit No.: N/A			
Casing Elevation 604.30 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/19/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.9 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0 .0 ft to -5.5 ft

Top of Bedrock -3.0 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing [illegible] ft to [illegible] ft

Cement-bentonite grout from 0 ft to -4.5 ft

Riser Pipe from 2.9 ft to -10.0 ft

Bentonite seal from -4.5 ft to -8.0 ft

Chocker sand (00) from -8.0 ft to -8.5 ft

Filter pack from -8.5 ft to -20.5 ft

Sand Size 0

Well screen from -10.0 ft to -20.0 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -20.0 ft

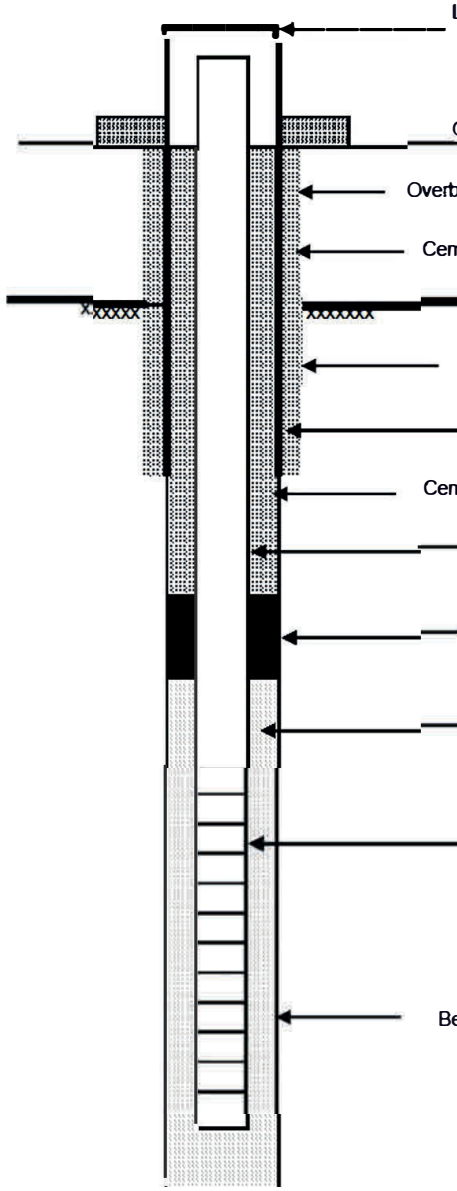
Bottom of Borehole at -20.5 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 603D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 597.69 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 600.43 ft	Well Permit No.: N/A			
Casing Elevation 600.62 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/19/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.7 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0 ft to -5.0 ft

Top of Bedrock -3.0 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing 2.9 ft to -3.0 ft

Cement-bentonite grout from 0 ft to -4.0 ft

Riser Pipe from 2.7 ft to -9.5 ft

Bentonite seal from -4.0 ft to -7.5 ft

Chocker sand (00) from -7.5 ft to -8.0 ft

Filter pack from -8.0 ft to -20.0 ft

Sand Size 0

Well screen from -9.5 ft to -19.5 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -19.5 ft

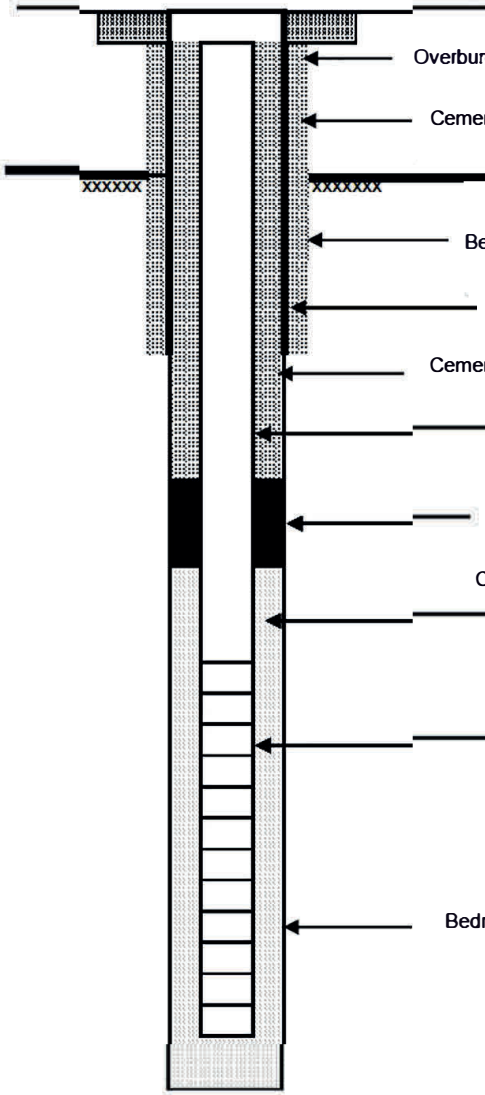
Bottom of Borehole at -20.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 604D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 596.25 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 595.98 ft	Well Permit No.: N/A			
Casing Elevation: 596.25 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/12/2007			



Locking protective flushmount with concrete pad

Inner casing flushmount -0.3 ft to NA ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from -0.5 ft to -4.2 ft

Top of Bedrock -2.4 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing -0.2 ft to -4.2 ft

Cement-bentonite grout from -0.4 ft to -6.0 ft

Riser Pipe from -0.3 ft to -8.2 ft

Bentonite seal from -6.0 ft to -7.0 ft

Chocker sand (00) from NA ft to NA ft

Filter pack from -7.0 ft to -19.0 ft

Sand Size 0

Well screen from -8.2 ft to -18.2 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -18.2 ft

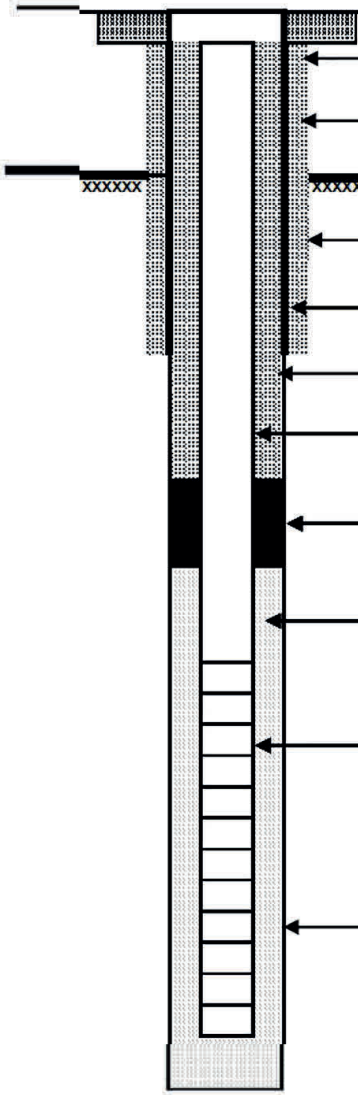
Bottom of Borehole at -19.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 605D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 598.50 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 598.11 ft	Well Permit No.: N/A			
Casing Elevation: 598.24 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/17/2007			



Locking protective flushmount with concrete pad

Inner casing flushmount -0.4 ft to NA ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0.0 ft to -3.5 ft

Top of Bedrock -2.6 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing -0.3 ft to -3.5 ft

Cement-bentonite grout from -0.5 ft to -2.5 ft

Riser Pipe from -0.4 ft to -8.0 ft

Bentonite seal from -2.5 ft to -6.0 ft

Chocker sand (00) from -6.0 ft to -7.3 ft

Filter pack from -7.3 ft to -18.5 ft

Sand Size 0

Well screen from -8.0 ft to -18.0 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -18.0 ft

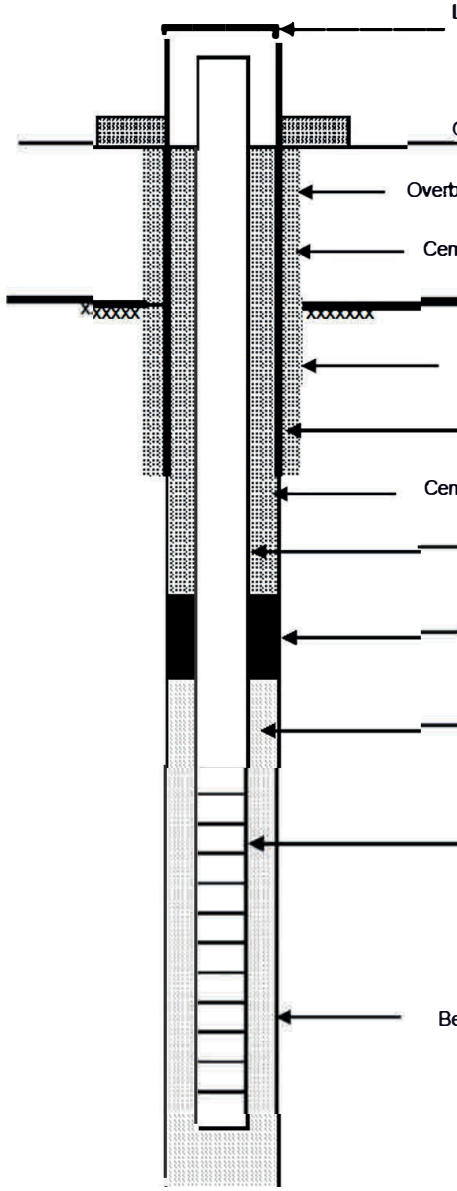
Bottom of Borehole at -18.5 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 606D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 598.91 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 601.49 ft	Well Permit No.: N/A			
Casing Elevation 601.85 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/18/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.6 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0 .0 ft to -5.5 ft

Top of Bedrock -4.7 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing 2.9 ft to -5.0 ft

Cement-bentonite grout from 0 ft to -4.5 ft

Riser Pipe from 2.6 ft to -10.0 ft

Bentonite seal from -4.5 ft to -8.0 ft

Chocker sand (00) from -8.0 ft to -8.5 ft

Filter pack from -8.5 ft to -20.5 ft

Sand Size 0

Well screen from -10.0 ft to -20.0 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -20.0 ft

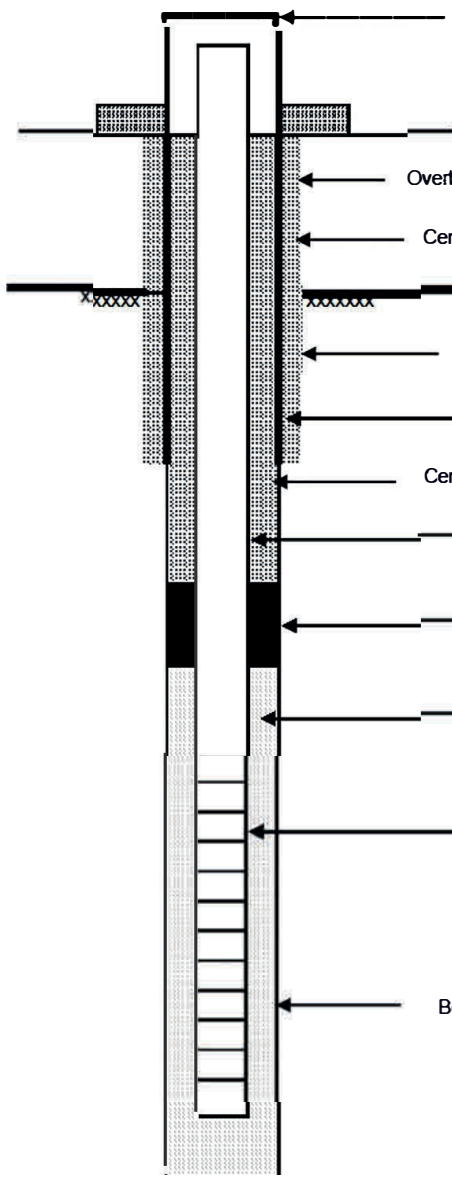
Bottom of Borehole at -20.5 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 606DR

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 599.49 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 602.21 ft	Well Permit No.: N/A			
Casing Elevation 602.50 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 10/8/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.7 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0 .0 ft to -6.0 ft

Top of Bedrock -4.0 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing [illegible] ft to [illegible] ft

Cement-bentonite grout from 0 ft to -5.0 ft

Riser Pipe from 2.7 ft to -10.5 ft

Bentonite seal from -5.0 ft to -9.5 ft

Chocker sand (00) from -9.5 ft to -10 ft

Filter pack from -10.0 ft to -21.0 ft

Sand Size 0

Well screen from -10.5 ft to -20.5 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -20.5 ft

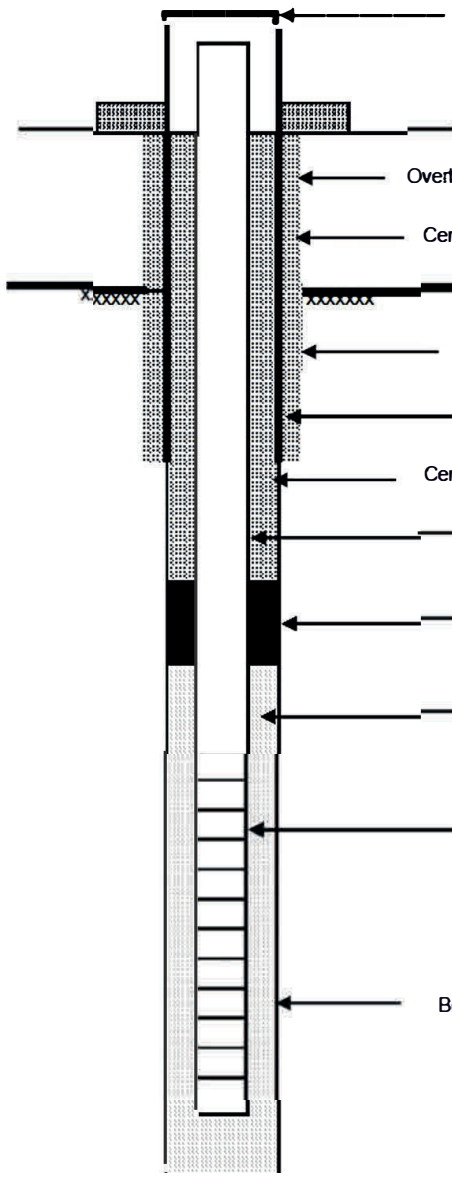
Bottom of Borehole at -21.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Bedrock Well Diagram Well No. 607D

Project: Guterl Steel RI	Location: Lockport, NY	Page 1 of 1		
Earth Tech Project No.: 100657	Subcontractor: SJB	Water Levels		
Surface Elevation: 597.93 ft	Driller: Tony Jakubczak	Date	Time	Depth
Top of PVC 600.38 ft	Well Permit No.: N/A			
Casing Elevation 600.67 ft	Earth Tech Rep.: Tamara Raby			
Datum: NAVD 1988	Date of Completion: 7/18/2007			



Locking protective stickup with concrete pad

Inner casing stickup 2.5 ft to 0.0 ft

Ground Surface

Overburden borehole diameter 12 inches (ID)

Cement-bentonite grout from 0.0 ft to -2.9 ft

Top of Bedrock -1.6 ft bgs

Bedrock socket diameter 12 inches

4-inch ID steel casing 2.7 ft to -2.9 ft

Cement-bentonite grout from 0.0 ft to -2.0 ft

Riser Pipe from 2.5 ft to -7.4 ft

Bentonite seal from -2.0 ft to -5.4 ft

Chocker sand (00) from -5.4 ft to -6.0 ft

Filter pack from -6.0 ft to -17.9 ft

Sand Size 0

Well screen from -7.4 ft to -17.4 ft

Diameter 2 inches

Slot size 0.010 inches

Type PVC

Bedrock borehole diameter 3 15/16 inches

Bottom Cap at -17.4 ft

Bottom of Borehole at -17.9 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

APPENDIX L

Monitoring Well Development Log

Date Started (mo/day/yr): 7/27/2007 Date Completed (mo/day/yr): 7/27/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 600S

Investigative Area: BKG (A05B)

Weather Conditions: overcast, showers

Air Temperature: 65-70 °F

Total Well Depth (TWD) = 10.44 1/100 ft

Depth to Ground Water (DGW) = 10.39 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 0.05 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 0.01 gallons

5 Casing Volumes = 0.04 gallons

Method of Well Development: N/A

Total Volume of Water Removed: 0 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks

COMMENTS/OBSERVATIONS: WELL IS DRY. NOT DEVELOPED.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/27/2007 Date Completed (mo/day/yr): 7/27/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 600D

Investigative Area: BKG (A05B)

Weather Conditions: overcast, showers

Air Temperature: 65-70 °F

Total Well Depth (TWD) = 24.79 1/100 ft

Depth to Ground Water (DGW) = 10.83 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 13.96 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.28 gallons

5 Casing Volumes = 11.38 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 50 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
9:00	-	-	-	-	-	-	-	-	10.83	
9:10	1	10	11.46	0.90	7.47	27.1	7.927	1230 / lt. gray	13.71	
9:15	1	15	11.55	0.41	7.51	1.6	8.031	256 / lt. gray	13.45	
9:20	1	20	11.42	2.15	7.43	-13.5	8.380	743 / lt. gray	13.49	
9:25	1	25	11.39	1.92	7.42	-21.5	8.450	180 / lt. gray	13.56	
9:30	1	30	11.45	0.79	7.37	-25.9	8.579	541 / lt. gray	13.63	
9:35	1	35	11.44	0.47	7.35	-30.0	8.574	211 / lt. gray	13.69	
9:40	1	40	11.43	0.36	7.32	-32.0	8.597	130 / lt. gray-clear	13.70	
9:45	1	45	11.42	0.34	7.3	-33.8	8.619	60 / clear	13.75	
9:50	1	50	11.43	0.30	7.29	-35.5	8.642	35 / clear	13.75	

COMMENTS/OBSERVATIONS: At 9:30, after recording parameters move pump to center of screen.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/26/2007 Date Completed (mo/day/yr): 7/26/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 601D

Investigative Area: A04A

Weather Conditions: sunny, breezy

Air Temperature: 85-90 °F

Total Well Depth (TWD) = 22.58 1/100 ft

Depth to Ground Water (DGW) = 10.7 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 11.88 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.94 gallons

5 Casing Volumes = 9.68 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 50 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
13:45	-	-	-	-	-	-	-	-	10.70	
13:55	1	10	14.36	1.05	7.67	-51.0	1.267	1125 / gray	11.89	
14:00	1	15	14.26	0.12	8.00	-71.5	1.243	342 / lt. gray	11.70	
14:05	1	20	14.34	0.08	8.01	-76.3	1.260	365 / lt. gray	11.72	
14:10	1	25	14.58	0.07	7.33	-65.4	1.199	481 / lt. gray	11.75	
14:15	1	30	14.51	0.06	7.65	-89.2	1.218	58 / lt. gray	11.82	
14:20	1	35	14.47	0.07	7.78	-96.6	1.220	38 / lt. gray	11.92	
14:25	1	40	14.51	0.05	7.63	-80.0	1.224	30 / clear	11.89	
14:30	1	45	14.54	0.05	7.60	-82.9	1.236	18 / clear	11.88	
14:35	1	50	14.51	0.05	7.54	-81.0	1.236	18 / clear	11.89	

COMMENTS/OBSERVATIONS: At 14:15, done with surge and move pump to center of screen. Air bubbles are noted in the tubing (no explanation); pump is well below water level.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/26/2007 Date Completed (mo/day/yr): 7/26/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 602D

Investigative Area: A04A

Weather Conditions: sunny, breezy

Air Temperature: 85-90 °F

Total Well Depth (TWD) = 22.10 1/100 ft

Depth to Ground Water (DGW) = 9.97 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 12.13 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.98 gallons

5 Casing Volumes = 9.89 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 50 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
14:55	-	-	-	-	-	-	-	-	9.97	
15:05	1	10	13.13	0.47	7.36	-45.0	1.683	844 / gray	13.14	
15:10	1	15	13.31	0.25	7.13	-50.1	1.727	145 / lt. gray	12.40	
15:15	1	20	13.23	0.27	7.11	-64.8	1.774	762 / lt. gray	12.59	
15:20	1	25	13.57	1.13	7.19	-75.7	1.716	1175 / lt. gray	12.14	
15:25	1	30	13.42	0.40	7.05	-78.6	1.706	392 / lt. gray	12.54	
15:30	1	35	13.38	0.26	7.04	-79.5	1.725	104 / lt. gray	12.55	
15:35	1	40	13.48	0.16	7.06	-78.2	1.731	30 / clear	12.55	
15:40	1	45	13.49	0.17	7.02	-80.2	1.728	20 / clear	12.55	
15:45	1	50	13.47	0.16	7.19	-86.2	1.731	18 / clear	12.55	

COMMENTS/OBSERVATIONS: At 15:20 after taking readings, stop surging and place pump at center of screen.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/27/2007 Date Completed (mo/day/yr): 7/27/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 603D

Investigative Area: A04A

Weather Conditions: humid cloudy + rain showers

Air Temperature: 70-75 °F

Total Well Depth (TWD) = 22.65* 1/100 ft

Depth to Ground Water (DGW) = 7.30 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 15.35** 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.50 gallons

5 Casing Volumes = 12.51 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 45 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
10:30	-	-	-	-	-	-	-	-	7.30	
10:40	stop pump and let recharge, surge while recharging					-	-	-	21.60	
10:45	start pump and surge		-	-	-	-	-	-	9.64	
10:50	stop pump and let recharge - hook up to YSI			-	-	-	-	-	21.81	
11:00	start pump and surge		-	-	-	-	-	-	7.53	
11:02	1	15	12.36	3.35	7.27	22.0	1.390	864 / gray	11.95	
11:07	1	20	11.74	2.32	7.16	18.2	1.409	663 / gray	14.90	
11:12	1	25	12.14	2.15	7.19	16.0	1.383	364 / gray	16.41	
11:17	1	30	12.2	1.70	7.15	6.1	1.268	1156 / gray	17.61	
11:22	1	35	11.95	1.09	7.06	-11.7	1.328	109 / gray	18.02	
11:27	1	40	11.96	1.01	7.06	-17.6	1.323	54 / clear	17.91	
11:32	1	45	11.96	1.01	7.05	-19.0	1.325	49 / clear	-	

COMMENTS/OBSERVATIONS: At 11:17, stopped surge and set pump at center of screen. * The Total Well Depth was 22.20 ft at the start of well development. The Total Well Depth at the end of well development was 22.65. **The ending TWD is used in calculating length of water column.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/25/2007 Date Completed (mo/day/yr): 7/25/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 604D

Investigative Area: A04D

Weather Conditions: partly cloudy and windy

Air Temperature: 75-80 °F

Total Well Depth (TWD) = 18.08 1/100 ft

Depth to Ground Water (DGW) = 5.92 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 12.16 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.98 gallons

5 Casing Volumes = 9.91 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 100 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
14:36	<1	20	14.16	0.94	7.58	128.0	1.691	1161 / gray	9.52	
14:46	<1	30	14.39	1.59	7.34	86.0	1.688	640 / gray	9.72	
14:56	<1	40	14.38	1.78	7.09	81.0	1.668	227 / gray	9.72	
15:01	<1	45	14.48	1.17	7.09	82.4	1.659	92 / gray	9.74	
15:06	<1	50	14.4	0.75	7.27	88.7	1.651	100 / gray	9.78	
15:13	<1	55	14.28	0.54	7.34	89.0	1.645	75 / gray	9.78	
15:20	<1	60	14.4	0.44	7.48	94.5	1.637	44 / clear	9.78	
15:27	>1	65	14.38	0.35	7.66	78.1	1.627	58 / clear	9.78	*start truck
15:36	>1	75	14.3	0.35	7.32	87.1	1.612	298 / gray	10.72	
15:45	>1	85	14.29	0.20	7.19	66.4	1.616	249 / gray	10.75	
15:54	>1	95	14.26	0.18	7.18	48.3	1.604	205 / clear	10.68	
15:59	>1	100	14.32	0.20	7.22	48.9	1.599	117 / clear	10.73	

COMMENTS/OBSERVATIONS: * At 15:27, started truck which caused the pump to pump faster.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/19/2007 Date Completed (mo/day/yr): 7/19/2007

Field Personnel: Jeffrey Rowley and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 605D

Investigative Area: A04B

Weather Conditions: muggy and cloudy

Air Temperature: 75 °F

Total Well Depth (TWD) = 18.5 1/100 ft

Depth to Ground Water (DGW) = 3.8 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 14.7 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.40 gallons

5 Casing Volumes = 11.98 gallons

Method of Well Development: surge with surge block; purge with electric submersible pump

Total Volume of Water Removed: 55 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
14:30	1	2	16.80	-	7.74	-	0.957	5.46	-	
14:48	1	9.5	17.90	1.43	7.75	-34.3	0.890	gray-cloudy	-	
15:02	1	14.5	16.08	3.19	7.56	-44.4	0.851	964 / gray-turbid	-	
15:07	1	19.5	16.28	1.21	7.46	-34.0	0.832	137 / gray-clearing	5.00	
15:11	1	24.5	15.72	0.78	7.35	-22.1	0.840	>1000 / gray	4.93	
15:20	1	35	15.46	0.01	7.27	-13.4	0.834	>1000 / gray	4.95	
15:25	1	40	16.87	0.51	7.29	-2.7	0.789	866 / gray	4.95	
15:30	1	45	16.57	0.61	7.31	29.0	0.800	93 / lt. gray	5.02	
15:35	1	50	16.41	0.48	7.12	41.4	0.803	39.1 / clear	5.02	
15:40	1	55	16.38	0.50	7.09	45.0	0.806	28.0 / clear	5.02	

COMMENTS/OBSERVATIONS: Used surge block, purged (raising and lowering pump during purging). Water clears if pump sits in place and is not surged. At 15:30 moved pump to middle of screen.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/26/2007 Date Completed (mo/day/yr): 7/26/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 606D

Investigative Area: A03

Weather Conditions: sunny, lt. breeze

Air Temperature: 75-80 °F

Total Well Depth (TWD) = 22.6 1/100 ft

Depth to Ground Water (DGW) = 7.81 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 14.79 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.41 gallons

5 Casing Volumes = 12.05 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 50 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conduc ivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
10:20	-	-	-	-	-	-	-	-	7.81	
10:30	1	10	13.72	2.86	7.73	-75.2	1.399	655 / brown	10.36	hook up YSI
10:35	1	15	13.37	2.69	7.35	-83.0	1.390	435 / brown	10.38	
10:40	1	20	14.14	2.77	7.4	-86.4	1.450	1075 / brown	10.29	
10:45	1	25	13.54	2.69	7.38	-102.7	1.512	1094 / brown	10.46	
10:50	1	30	13.73	0.97	7.35	-108.1	1.538	360 / brown	10.52	
10:55	1	35	13.72	0.59	7.36	-114.5	1.554	275 / lt. brown-gray	10.55	
11:00	1	40	13.73	0.34	7.35	-119.1	1.569	244 / lt. brown-gray	10.56	
11:05	1	45	13.7	0.18	7.41	-129.3	1.589	177 / lt. brown-gray	10.58	
11:10	1	50	13.7	0.07	7.33	-133.7	1.605	139 / lt. brown-gray	10.60	

COMMENTS/OBSERVATIONS: At 10:45 after readings, place pump at center of screen.

Monitoring Well Development Log

Date Started (mo/day/yr): 10/11/2007 Date Completed (mo/day/yr): 10/11/2007

Field Personnel: Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 606DR

Investigative Area: A03

Weather Conditions: cool, partly cloudy

Air Temperature: 60 °F

Total Well Depth (TWD) = 20.90 1/100 ft

Depth to Ground Water (DGW) = 7.81 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 13.09 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.13 gallons

5 Casing Volumes = 10.67 gallons

Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 60 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
9:55	-	-	-	-	-	-	-	-	7.81	
9:56	-	-	-	-	-	-	-	-		Dry, stop pump
10:00	-	-	-	-	-	-	-	-	11.00	start pump
10:04	-	-	-	-	-	-	-	-	20.90	Dry, stop pump
10:16	-	-	-	-	-	-	-	-	7.72	start pump
10:20	1	20	-	-	-	-	-	-	20.50	stop pump
10:30	1	25	12.78	3.04	9.05	-90.0	2.012	1130 / gray	11.80	pump on, hook up YSI
10:35	1	30	13.44	1.61	9.13	-88.3	1.909	1102 / gray	15.96	
10:40	1	35	13.08	1.40	9.23	-94.4	1.981	405 / gray	17.38	
10:45	1	40	13.00	2.43	9.26	-96.4	2.015	160 / lt. gray	17.80	
10:50	1	45	13.02	1.54	9.19	-95.8	2.058	44.5 / lt. gray	17.56	
10:55	1	50	13.07	1.53	9.14	-95.0	2.035	28.5 / lt. gray	17.70	slight sulfur smell
11:00	1	55	13.06	1.56	9.12	-93.1	2.047	26.8 / lt. gray	17.84	
11:05	1	60	13.05	1.47	9.06	-93.4	2.05	23.4 / lt. gray	17.81	

COMMENTS/OBSERVATIONS: Surged for 25 gallons. At 10:40 after readings, set pump at center of screen.

Monitoring Well Development Log

Date Started (mo/day/yr): 7/26/2007 Date Completed (mo/day/yr): 7/26/2007

Field Personnel: Tamara Raby and Emily Laity

Site Name: Guterl Steel

Earth Tech Job #: 100657

Well ID #: 607D

Investigative Area: A03

Weather Conditions: sunny, breezy

Air Temperature: 70-80 °F

Total Well Depth (TWD) = 19.78 1/100 ft

Depth to Ground Water (DGW) = 8.03 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 11.75 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.92 gallons

5 Casing Volumes = 9.58 gallons

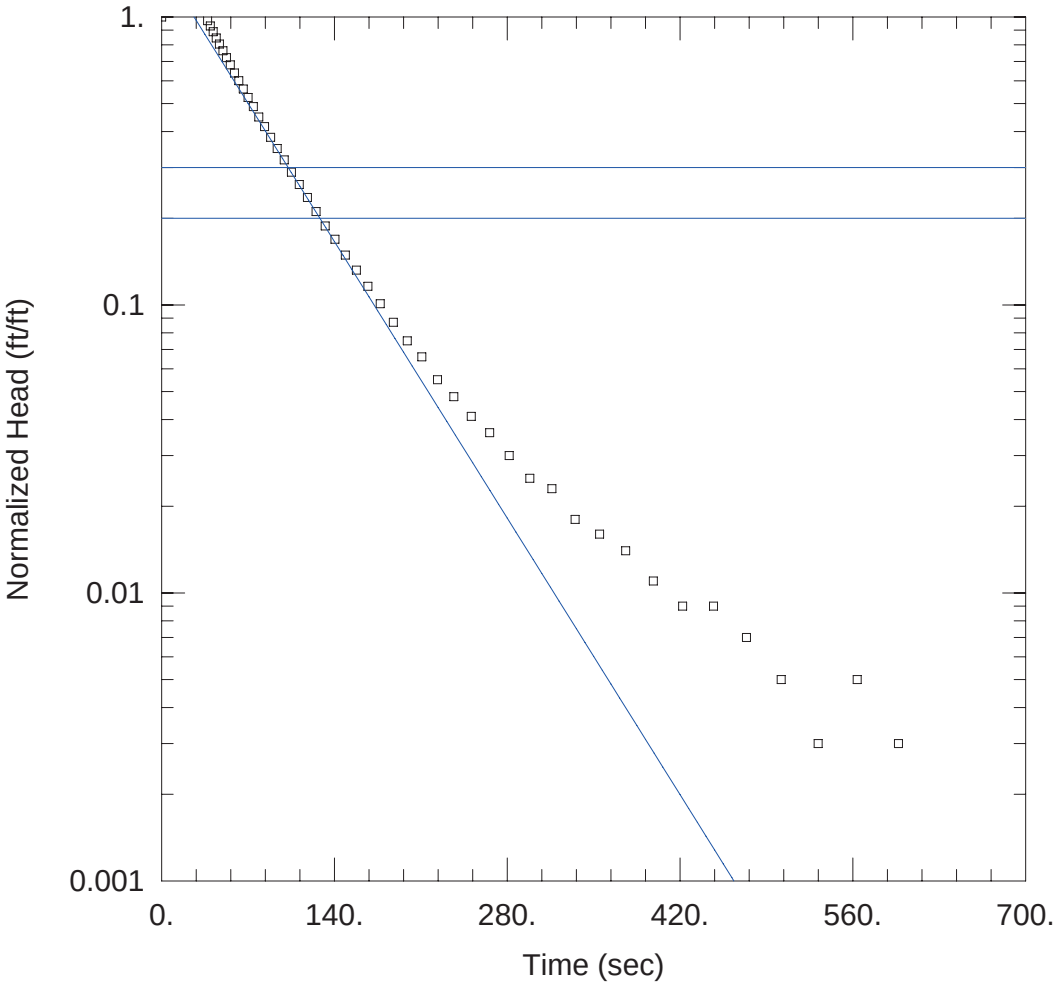
Method of Well Development: purge/surge with electric submersible pump

Total Volume of Water Removed: 50 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	DO (%)	pH	ORP (mV)	Specific Conductivity (µmhos/cm)	Turbidity (NTU)/Color	Water Level (ft BTIC)	Remarks
9:04	-	-	-	-	-	-	-	-	8.03	
9:14	1	10	12.8	0.33	7.68	-160.4	1.289	1160 / gray	12.86	hook up YSI
9:19	1	15	13.48	0.26	7.64	-167.1	1.284	606 / gray	12.52	
9:24	1	20	13.43	0.21	7.55	-169.3	1.286	300 / gray	12.29	
9:29	1	25	13.40	0.19	7.48	-170.8	1.290	200 / gray	12.29	
9:34	1	30	13.39	0.19	7.4	-172.9	1.293	126 / lt. gray	12.31	
9:39	1	35	13.39	0.23	7.38	-176.1	1.295	88 / lt. gray	12.36	
9:44	1	40	13.39	0.28	7.34	-178.1	1.298	72 / lt. gray	12.34	
9:49	1	45	13.37	0.25	7.32	-180.6	1.300	67 / lt/ gray	12.36	
9:54	1	50	13.37	0.24	7.31	-183.2	1.303	49 / lt. gray	12.38	

COMMENTS/OBSERVATIONS: At 9:14 noted sulfur smell. At 9:19 after readings set pump in the center of the screen. Background 30 cpm. Well surged on 7/20/07, surged for 15 gallons on 7/26/07 then placed pump in center of screen. *Surge block (2 in. diameter PVC, 6 in. in length) stuck in the bottom of this well.

APPENDIX M



WELL TEST ANALYSIS

Data Set: MW-01a.aqt
Date: 10/20/07 Time: 17:32:25

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-01
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

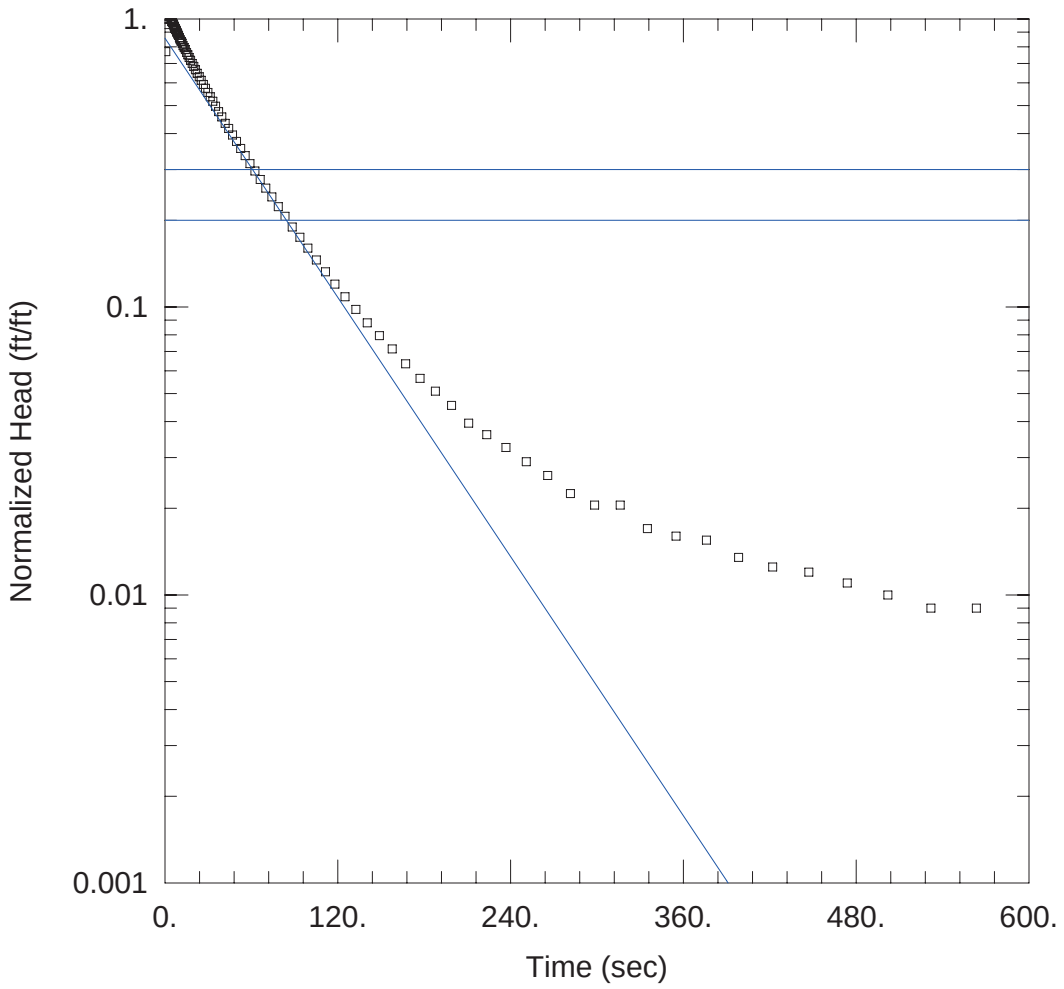
WELL DATA (MW-01)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002114 cm/sec y0 = 1.514 ft



WELL TEST ANALYSIS

Data Set: MW-01b.aqt
Date: 10/20/07 Time: 18:31:33

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-01
Test Date: 18 September 2007

AQUIFER DATA

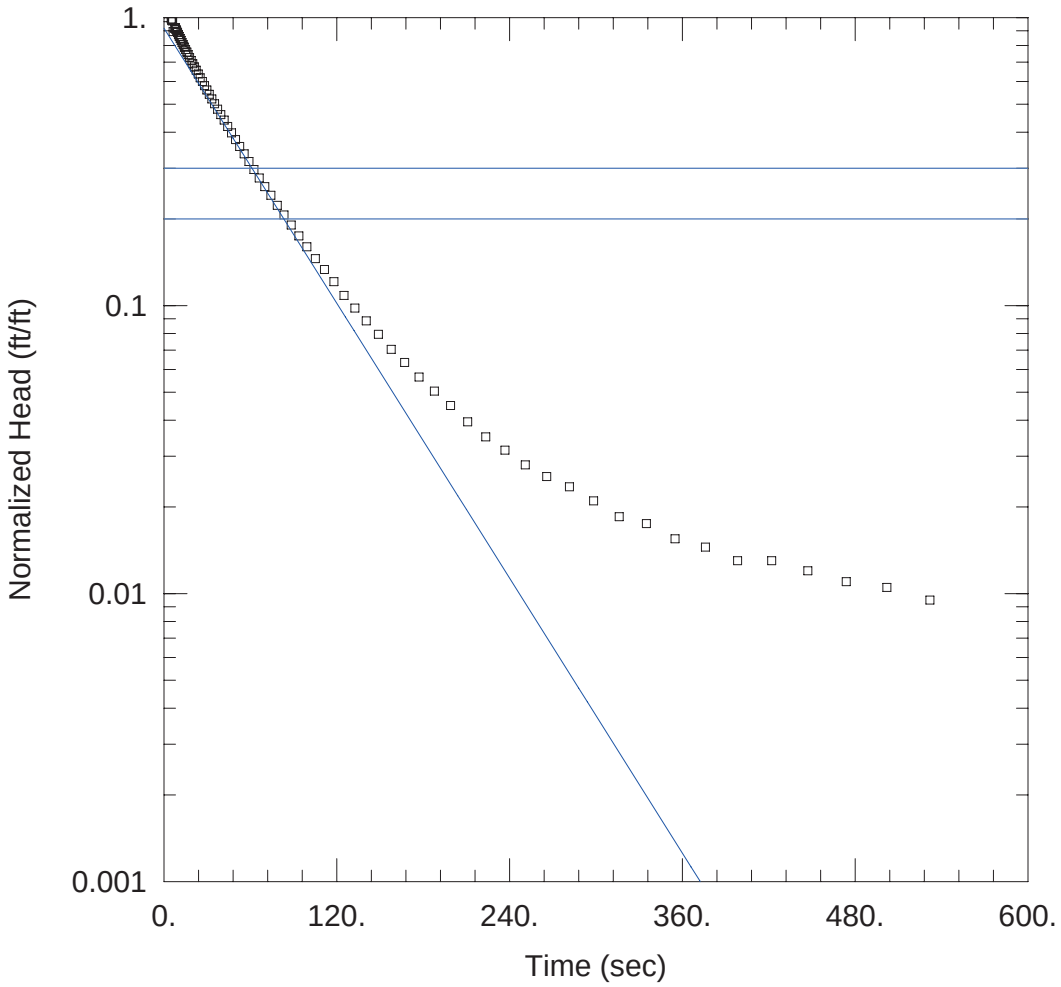
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-01)

Initial Displacement: 2. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002652 cm/sec
y0 = 1.715 ft



WELL TEST ANALYSIS

Data Set: MW-01c.aqt
Date: 10/20/07 Time: 17:43:14

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-01
Test Date: 18 September 2007

AQUIFER DATA

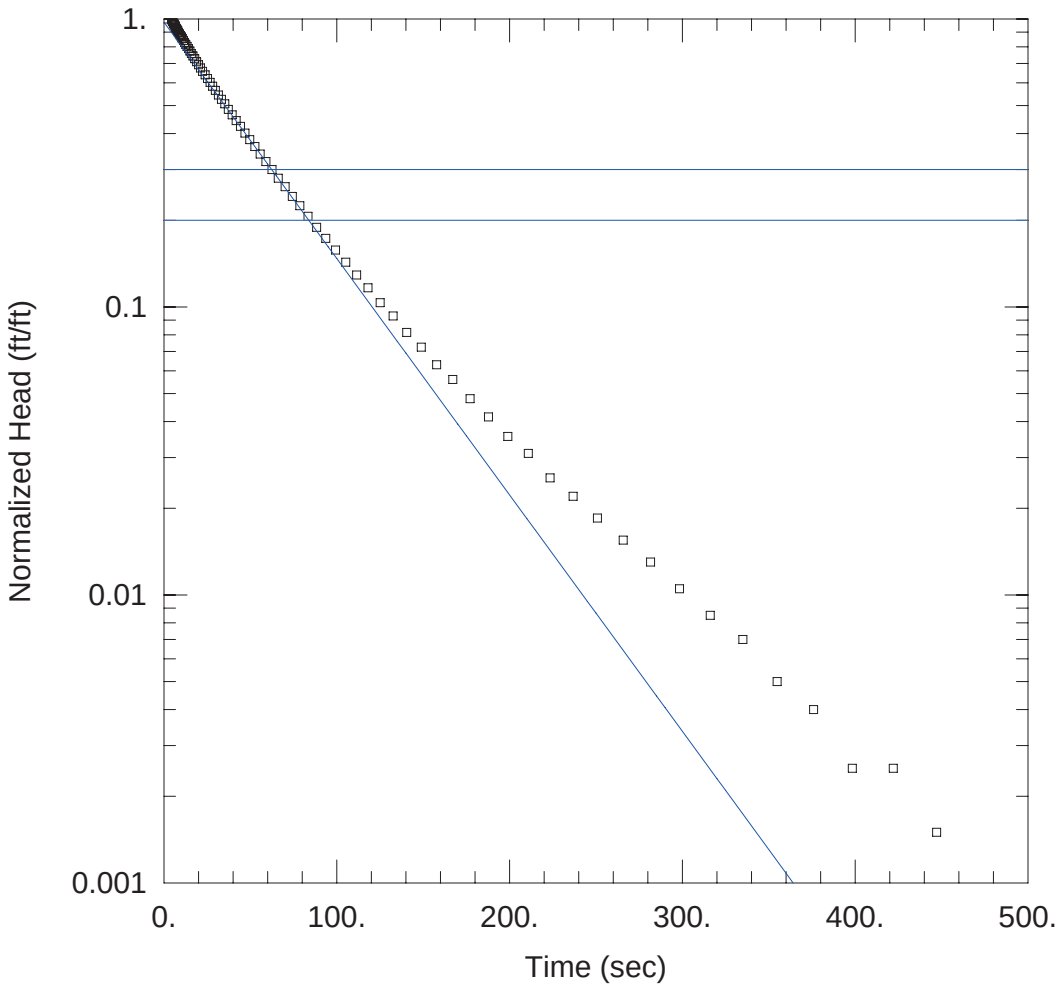
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 2. ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002452 cm/sec
y0 = 1.837 ft



WELL TEST ANALYSIS

Data Set: MW01d.aqt
Date: 10/20/07 Time: 18:07:45

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-01
Test Date: 18 September 2007

AQUIFER DATA

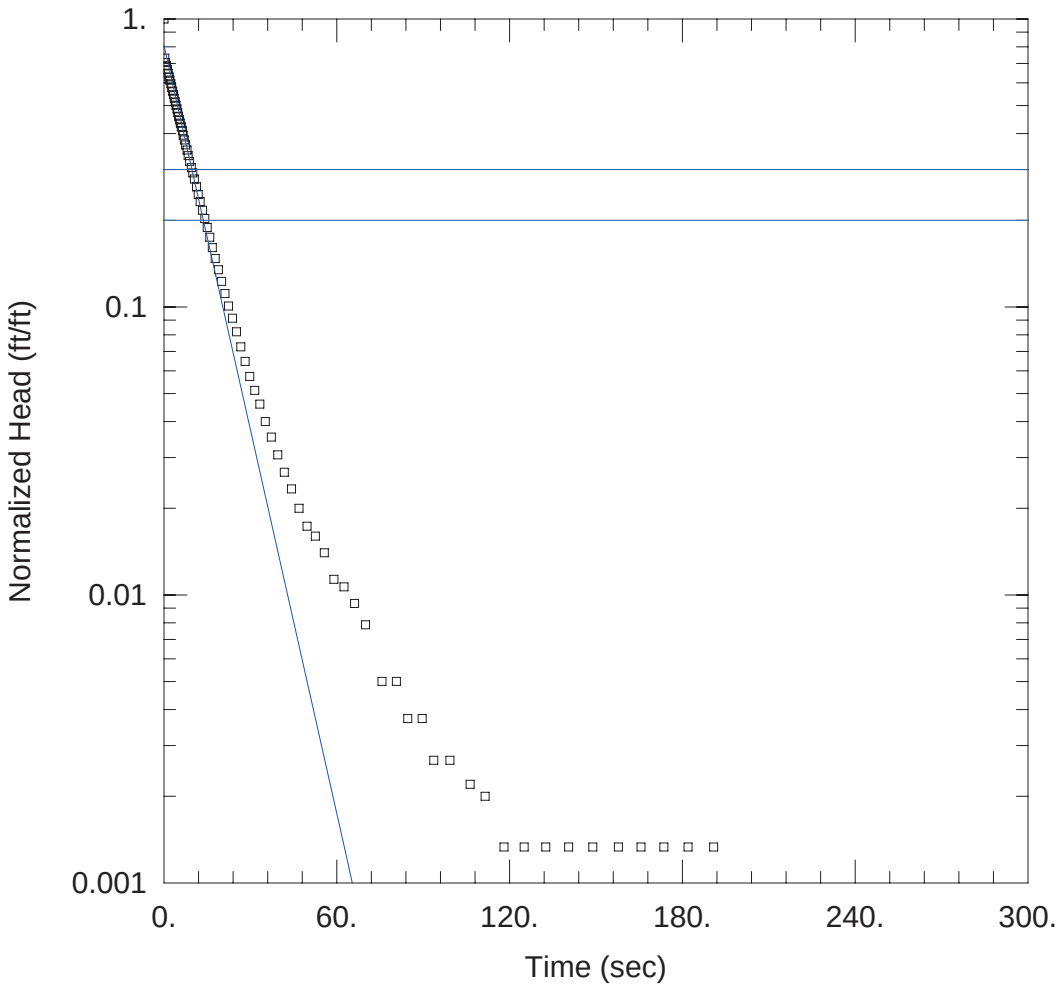
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-01)

Initial Displacement: 2. ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002529 cm/sec
y0 = 1.948 ft



WELL TEST ANALYSIS

Data Set: MW-02a.aqt
Date: 10/20/07 Time: 17:08:16

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-02
Test Date: 18 September 2007

AQUIFER DATA

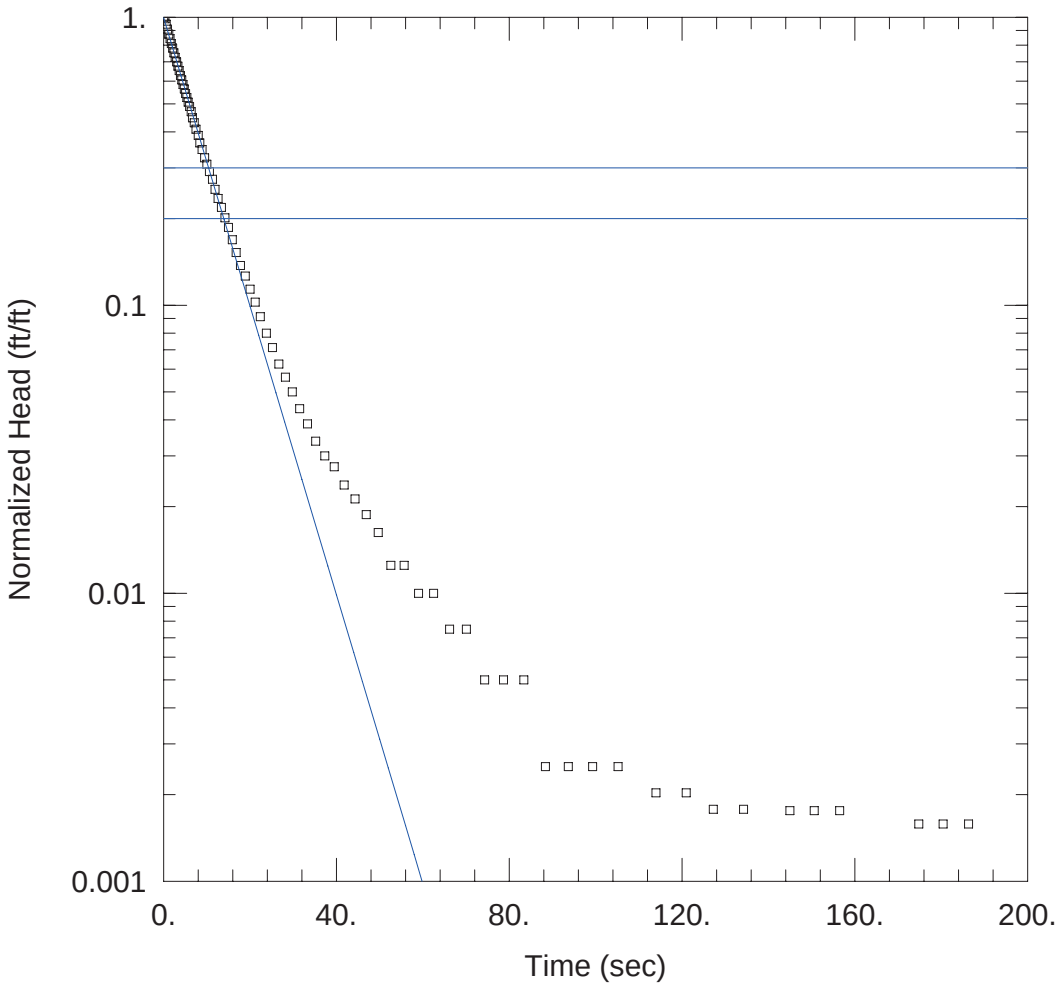
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-02)

Initial Displacement: 1.5 ft
Total Well Penetration Depth: 14. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00386 cm/sec
y0 = 1.213 ft



WELL TEST ANALYSIS

Data Set: MW-02b.aqt
Date: 10/20/07 Time: 17:23:57

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-02
Test Date: 18 September 2007

AQUIFER DATA

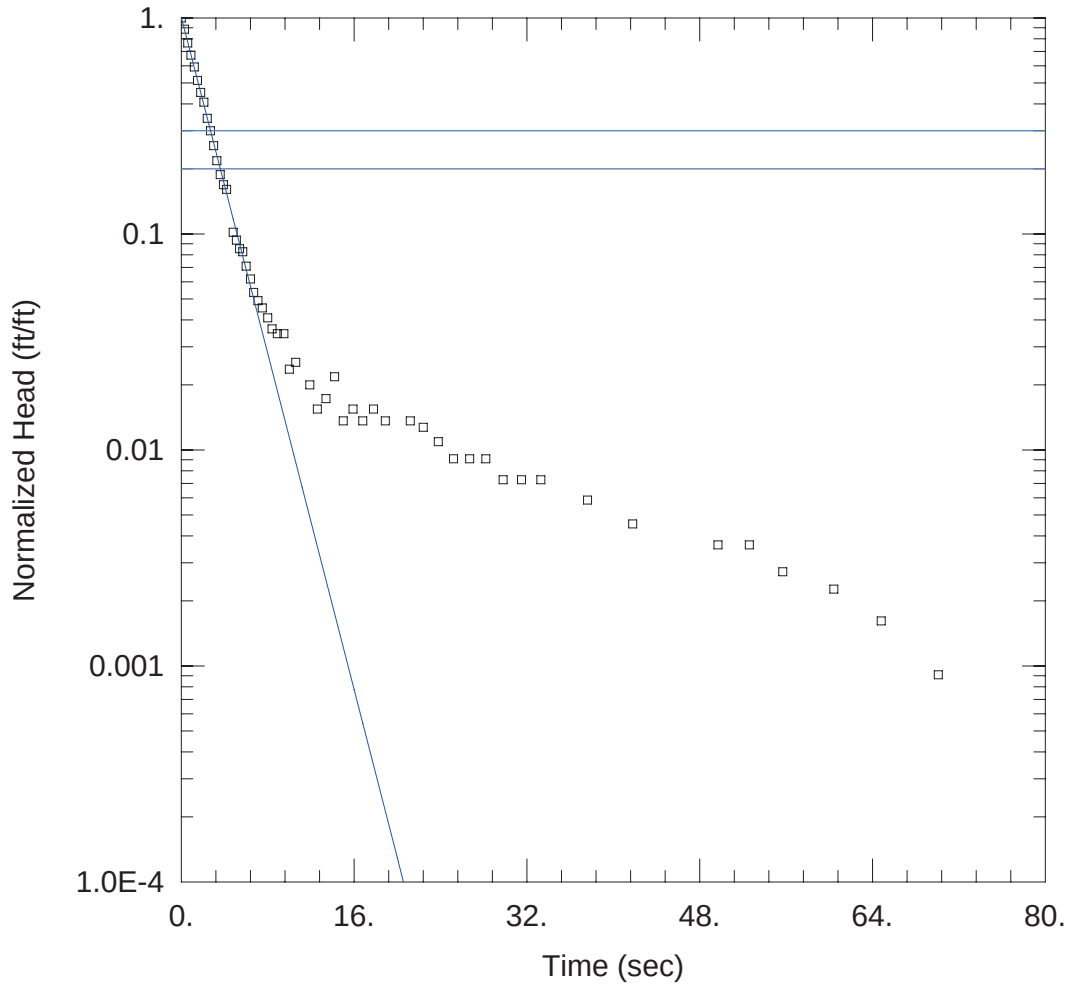
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-02)

Initial Displacement: 0.8 ft
Total Well Penetration Depth: 14. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00355 cm/sec
y0 = 0.7966 ft



WELL TEST ANALYSIS

Data Set: MW-03a.aqt
Date: 10/20/07 Time: 17:42:05

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-03
Test Date: 18 September 2007

AQUIFER DATA

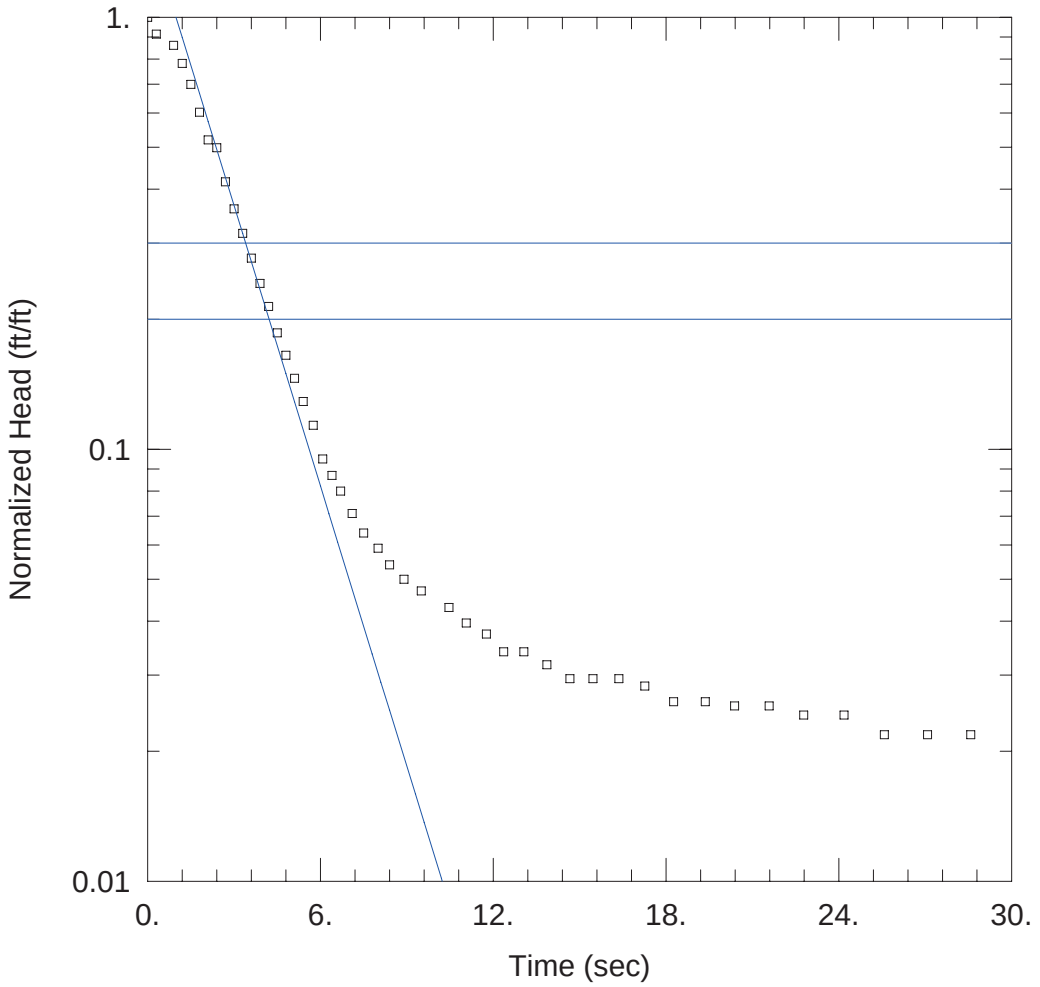
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-03)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0896 cm/sec
y0 = 1.109 ft



WELL TEST ANALYSIS

Data Set: MW-03b.aqt
Date: 10/20/07 Time: 17:45:42

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-03
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

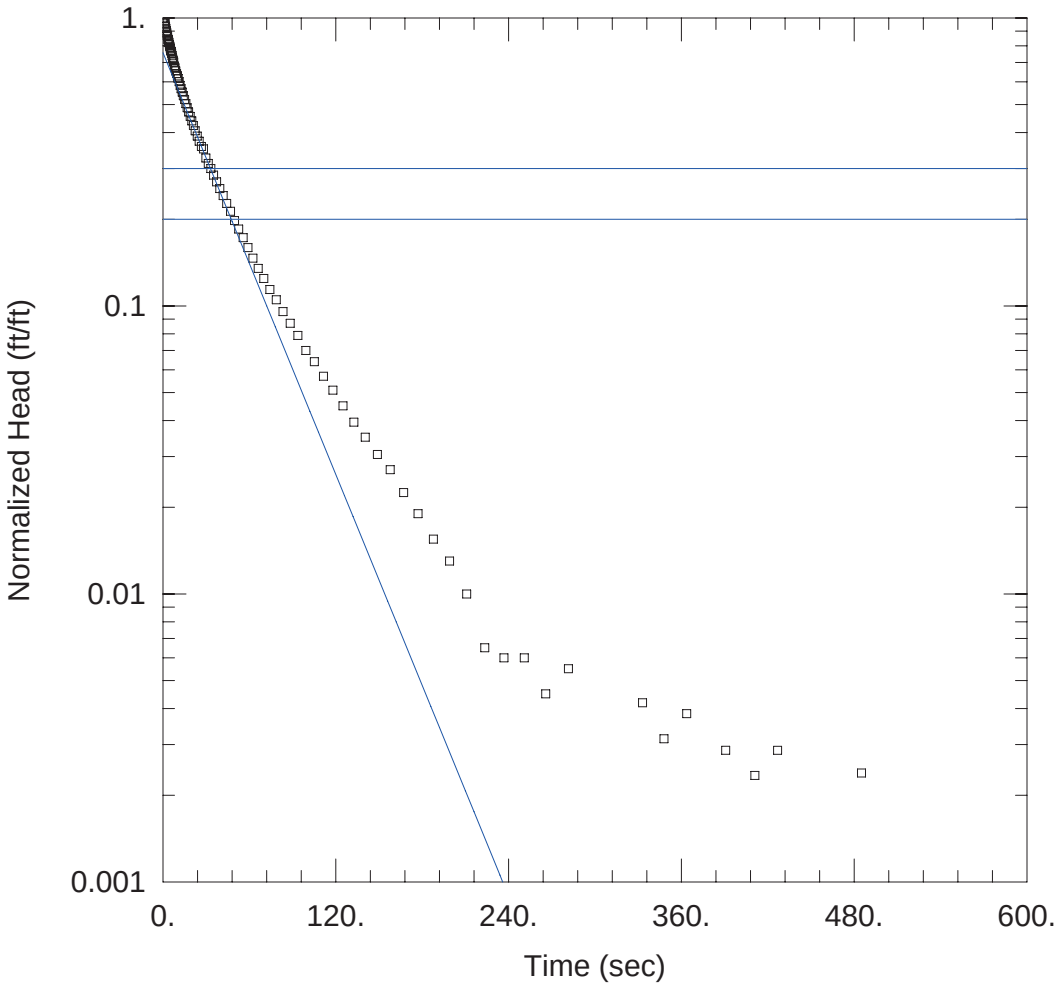
WELL DATA (MW-03)

Initial Displacement: 1. ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.06554 cm/sec y0 = 1.633 ft



WELL TEST ANALYSIS

Data Set: MW-4a.aqt
Date: 10/20/07 Time: 17:21:04

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-4
Test Date: 18 September 2007

AQUIFER DATA

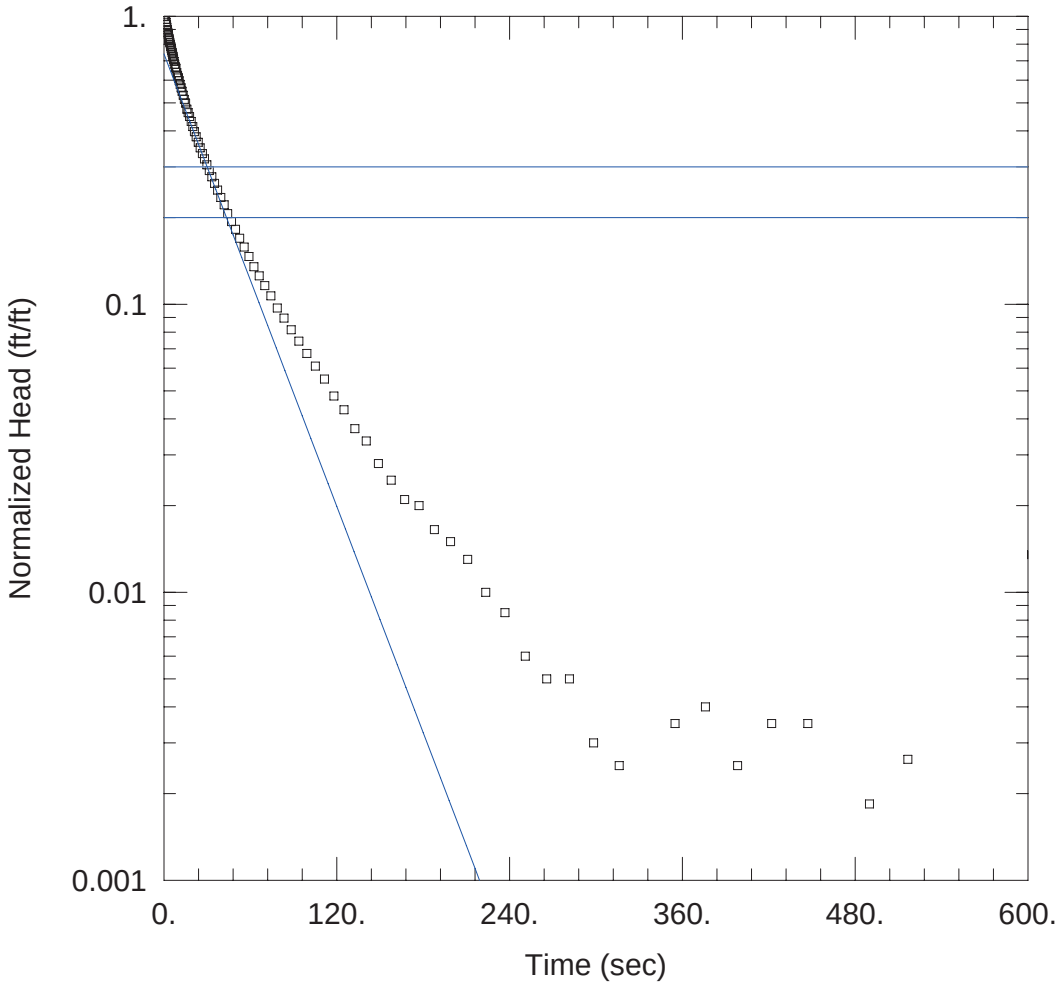
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-4)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00256 cm/sec
y0 = 1.514 ft



WELL TEST ANALYSIS

Data Set: MW-04b.aqt
Date: 10/20/07 Time: 17:21:47

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-04
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

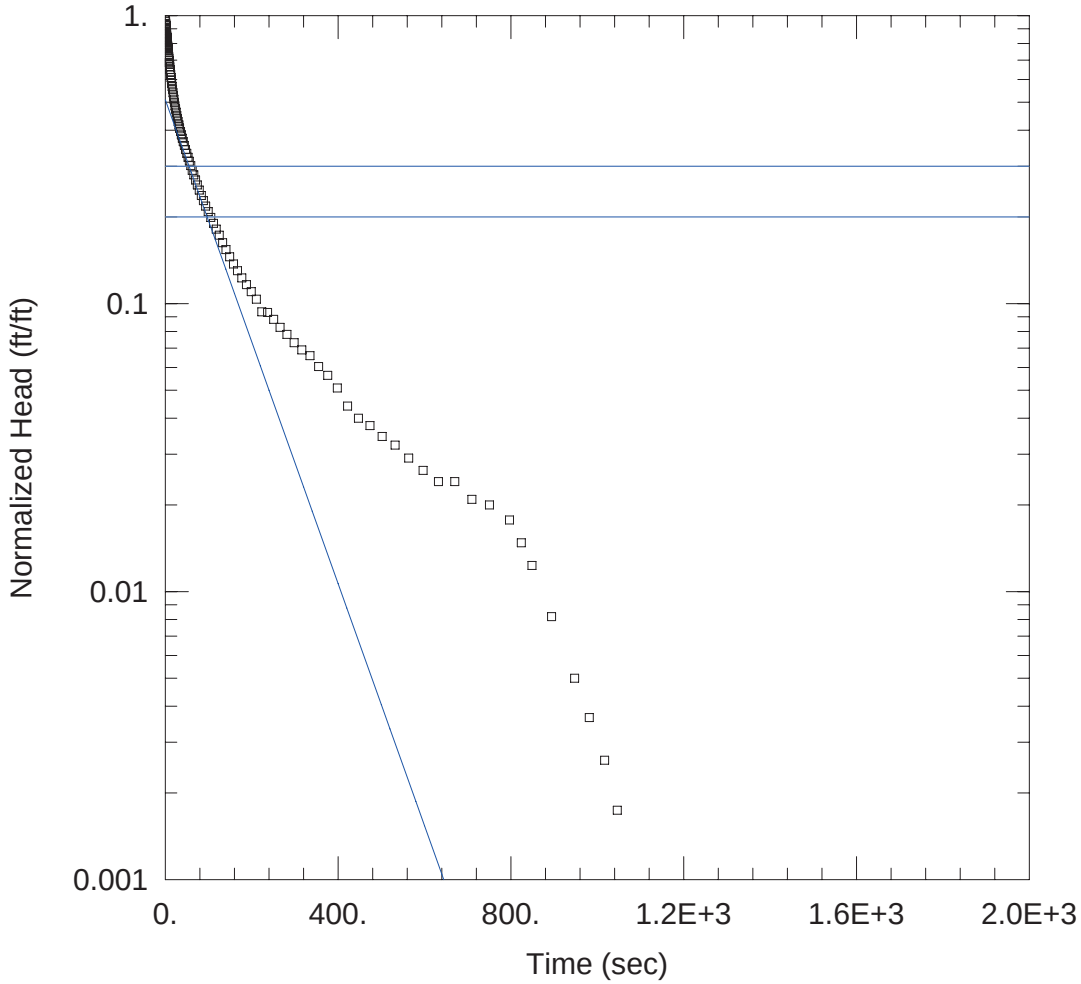
WELL DATA (MW-04)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002499 cm/sec y0 = 1.479 ft



WELL TEST ANALYSIS

Data Set: MW-05a.aqt
Date: 10/20/07 Time: 17:33:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-05
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

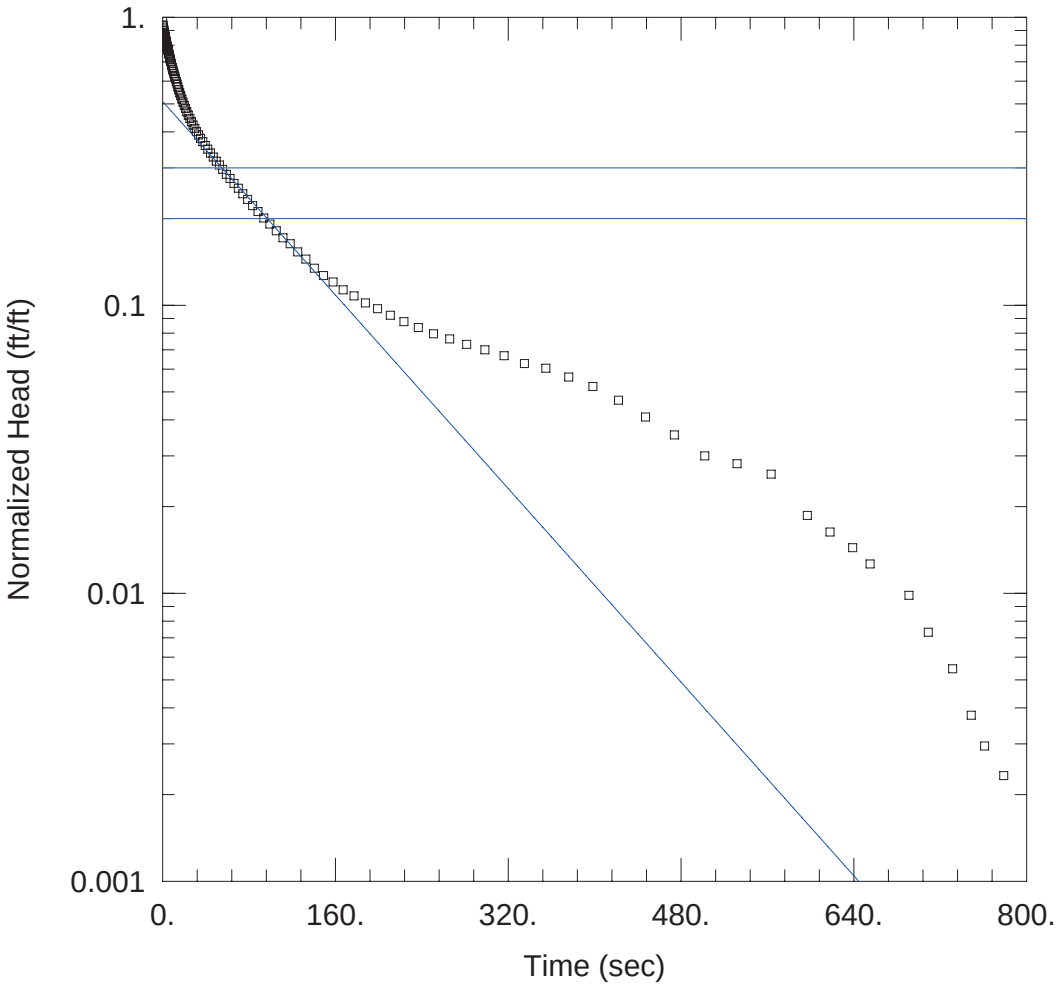
WELL DATA (MW-05)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 15 ft.
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.007894 cm/sec y0 = 1.122 ft



WELL TEST ANALYSIS

Data Set: MW-05b.aqt
Date: 10/20/07 Time: 17:35:21

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-05
Test Date: 18 September 2007

AQUIFER DATA

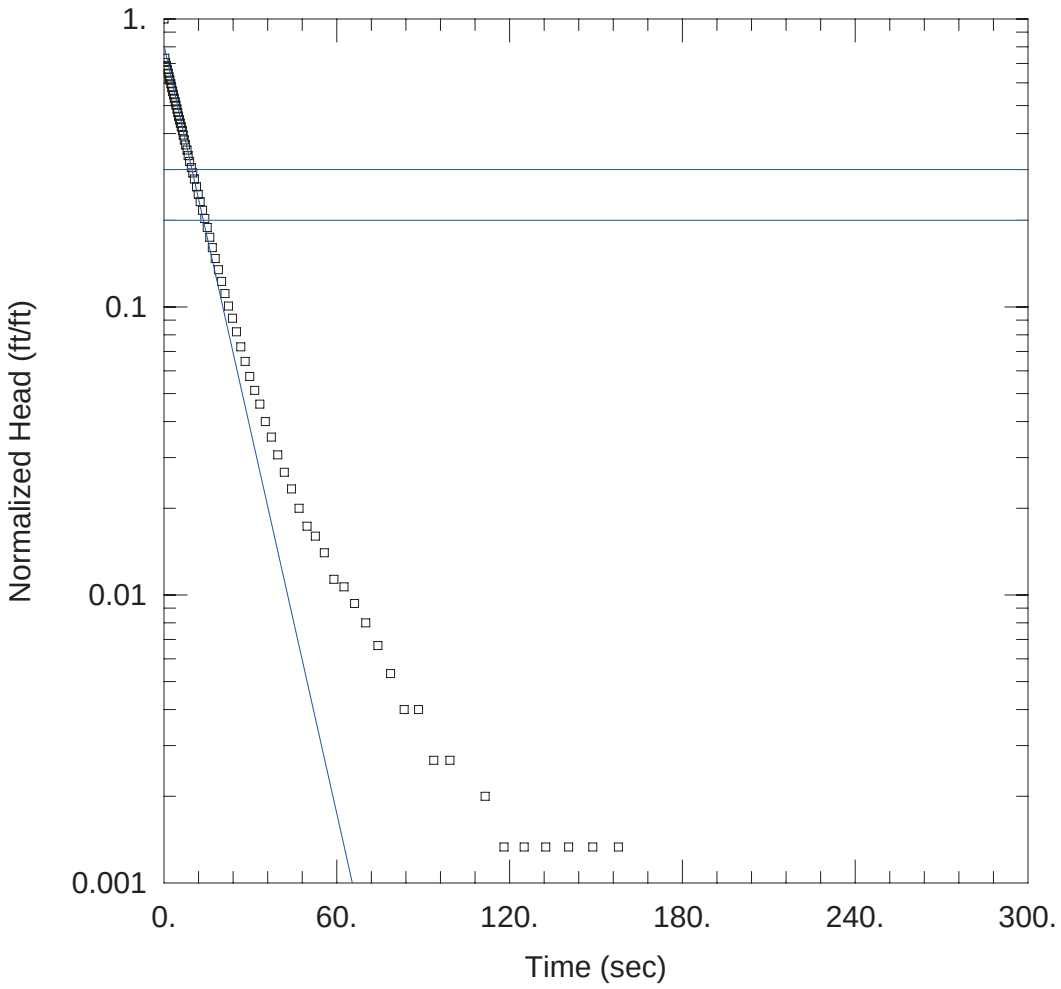
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-05)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 5. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.007264 cm/sec
y0 = 1.122 ft



WELL TEST ANALYSIS

Data Set: MW-06a.aqt
Date: 10/20/07 Time: 19:08:16

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-06
Test Date: 18 September 2007

AQUIFER DATA

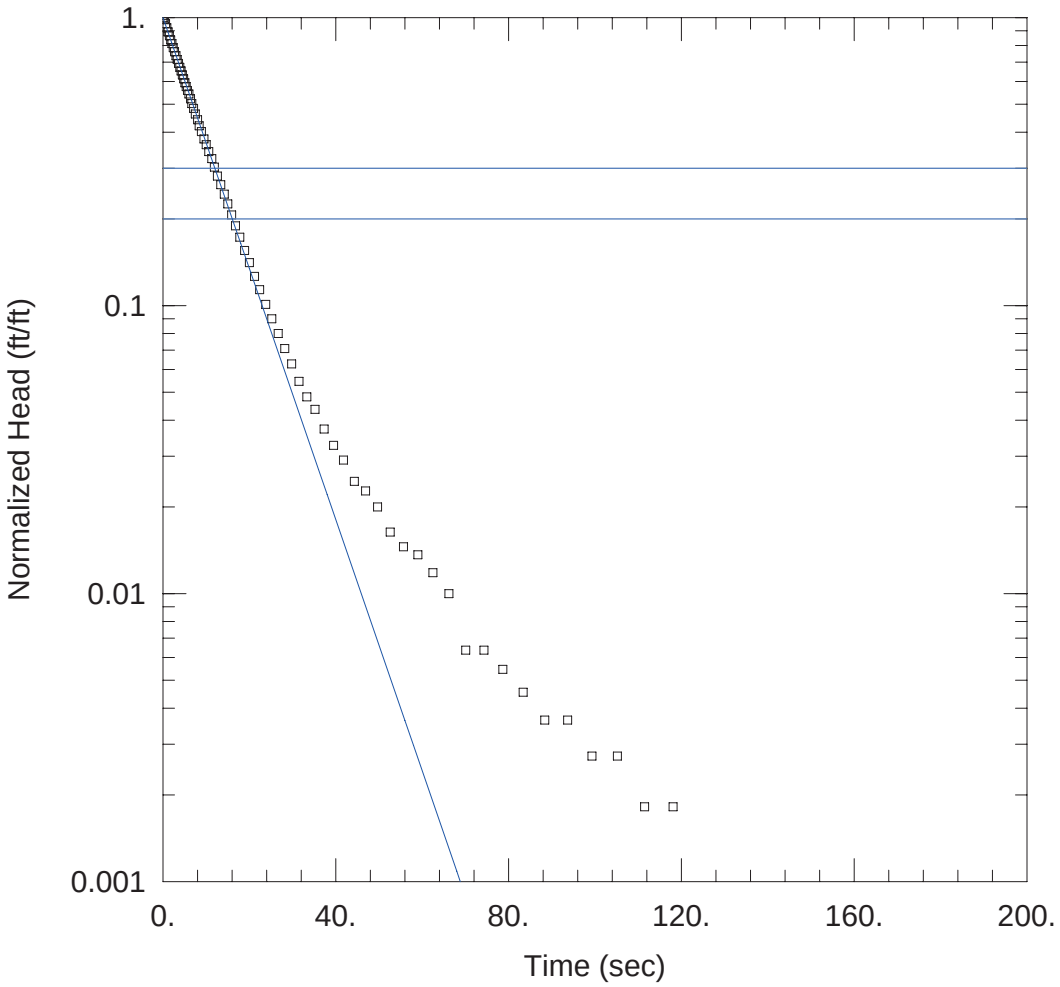
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-06)

Initial Displacement: 1.5 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01386 cm/sec
y0 = 1.213 ft



WELL TEST ANALYSIS

Data Set: MW-06b.aqt
Date: 10/20/07 Time: 19:16:15

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-06
Test Date: 18 September 2007

AQUIFER DATA

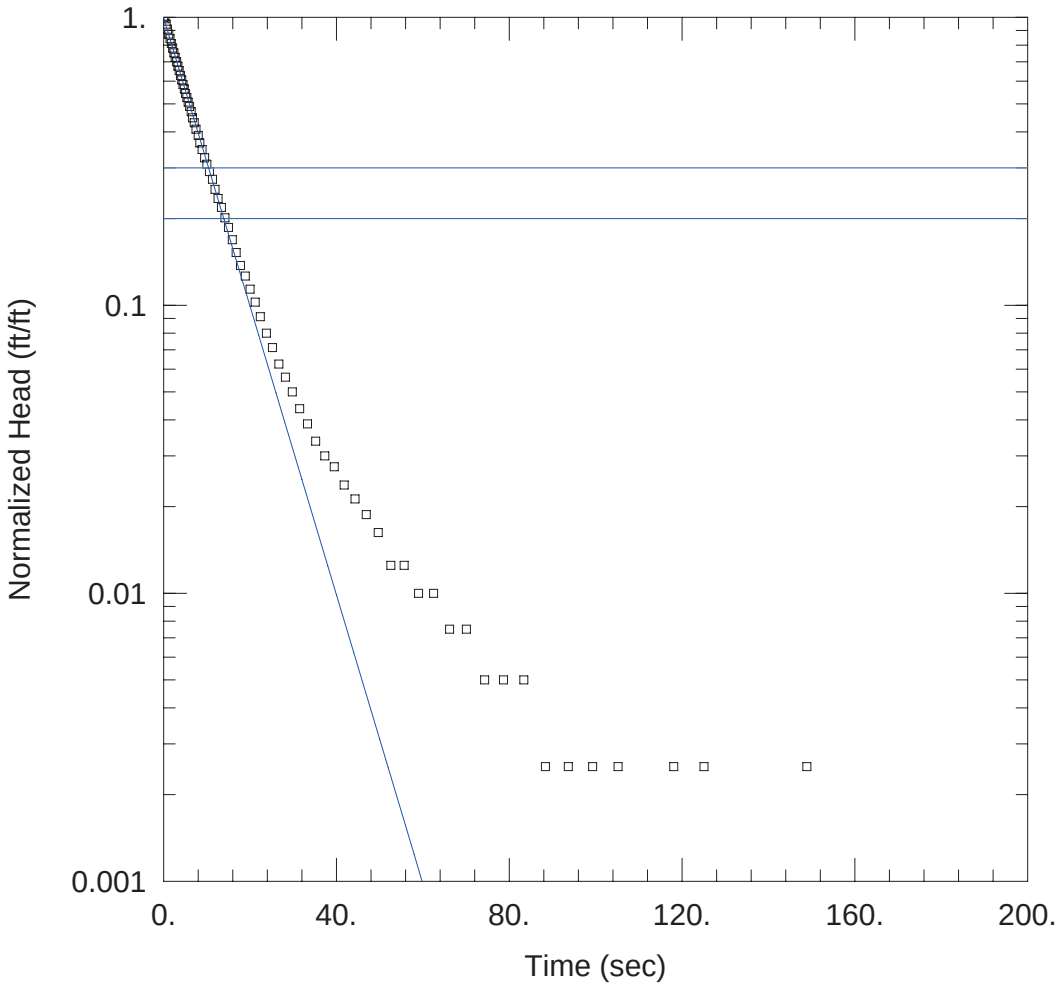
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-06)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01359 cm/sec
y0 = 1.1 ft



WELL TEST ANALYSIS

Data Set: MW-06c.aqt
Date: 10/20/07 Time: 19:23:57

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-06
Test Date: 18 September 2007

AQUIFER DATA

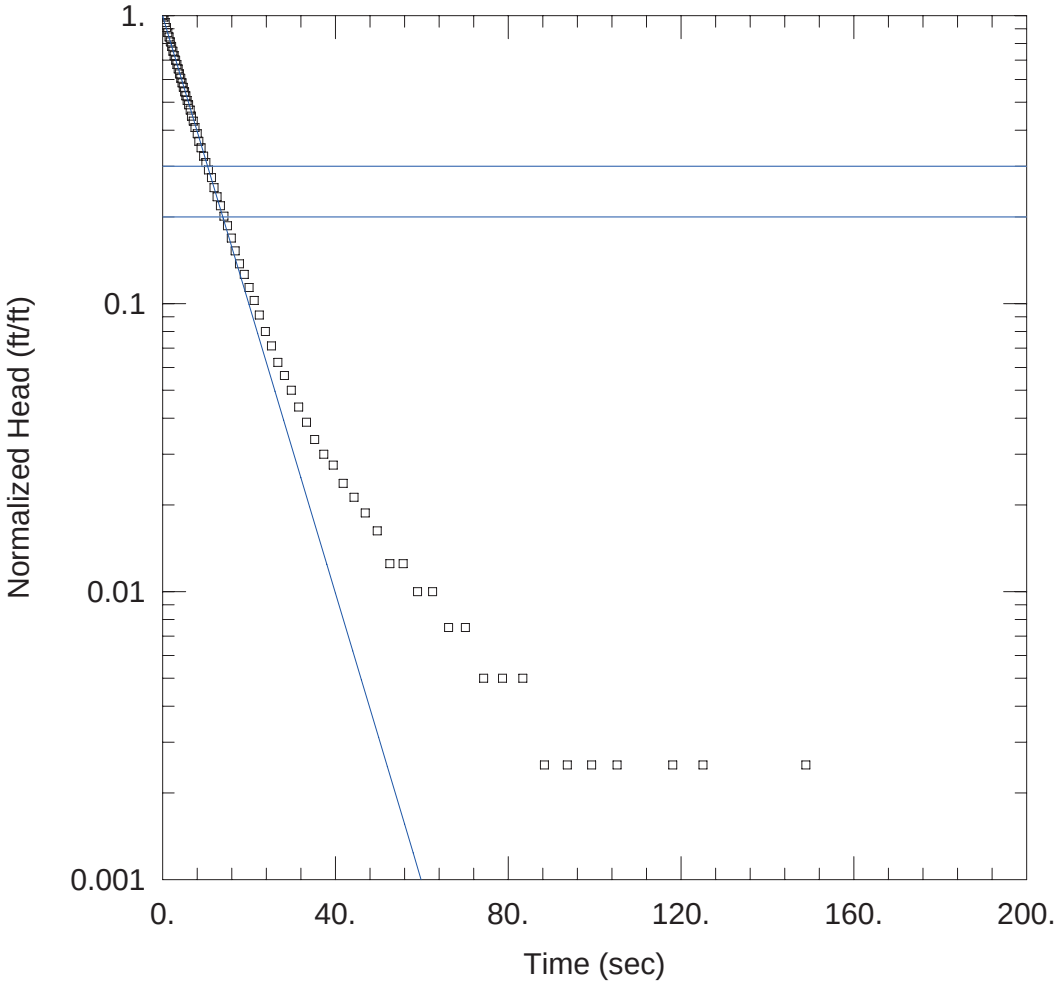
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-06)

Initial Displacement: 0.8 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01055 cm/sec
y0 = 0.7966 ft



WELL TEST ANALYSIS

Data Set: MW-08a.aqt
Date: 10/20/07 Time: 19:27:32

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-08
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

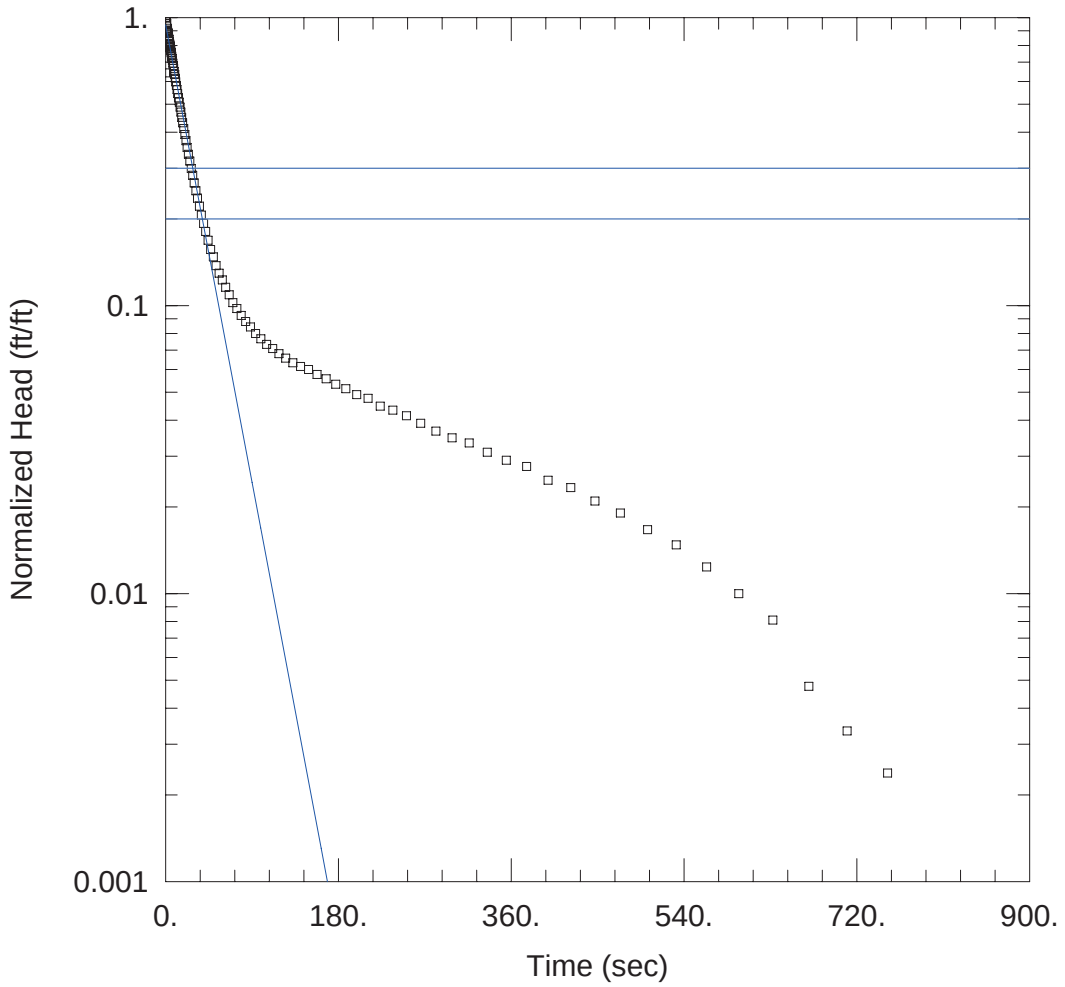
WELL DATA (MW-08)

Initial Displacement: 0.8 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0101 cm/sec y0 = 0.7966 ft



WELL TEST ANALYSIS

Data Set: MW-08b.aqt
Date: 10/20/07 Time: 19:30:56

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-08
Test Date: 18 September 2007

AQUIFER DATA

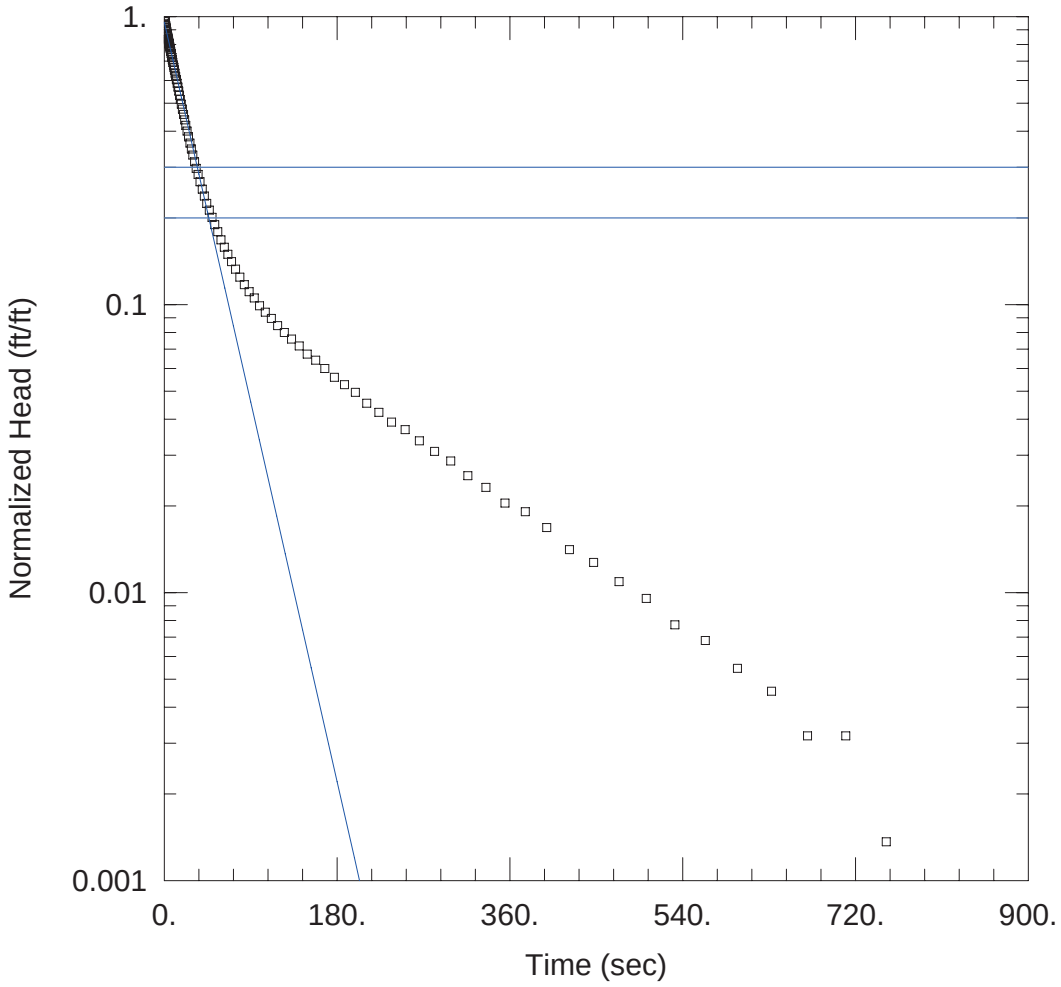
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-08)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.003558 cm/sec
y0 = 1.982 ft



WELL TEST ANALYSIS

Data Set: MW-8c.aqt
Date: 10/20/07 Time: 19:35:39

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-08
Test Date: 18 September 2007

AQUIFER DATA

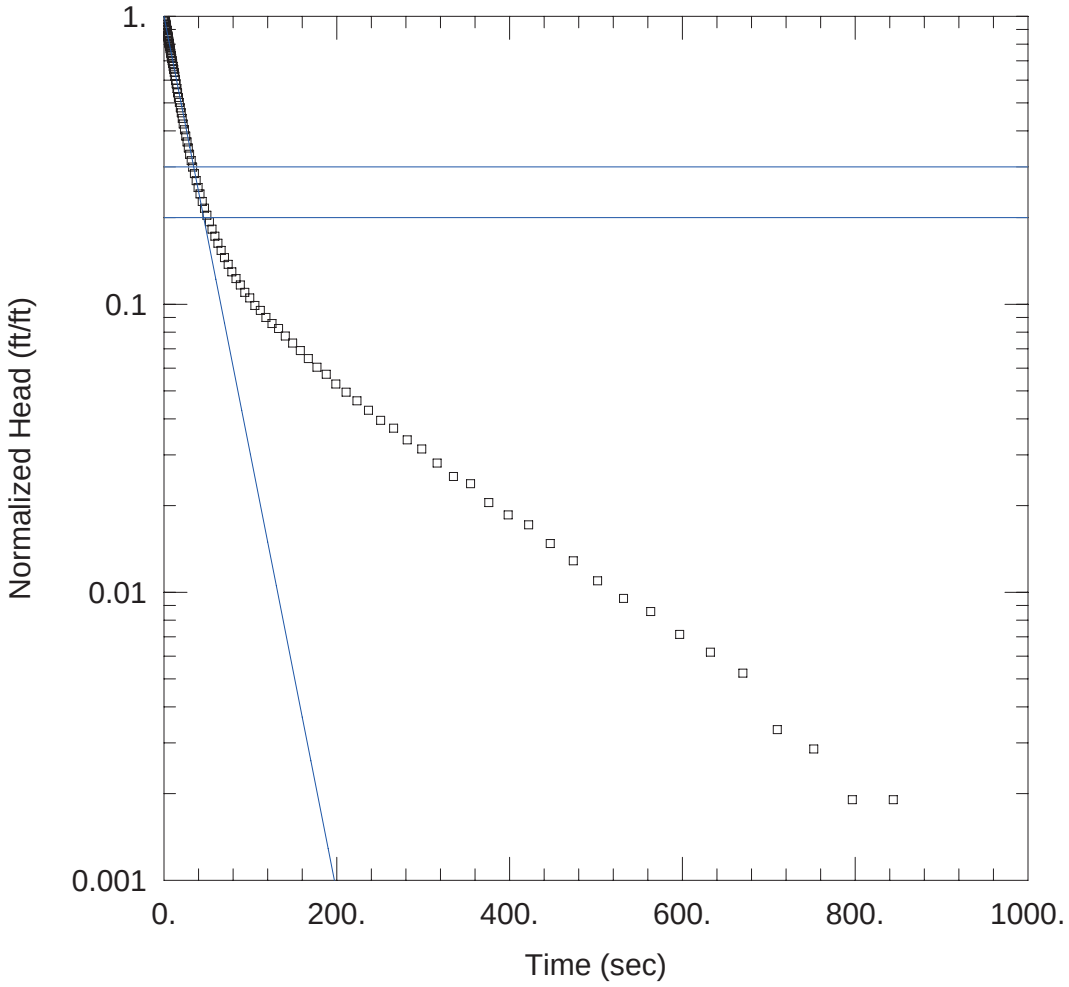
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-08)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002954 cm/sec
y0 = 2.102 ft



WELL TEST ANALYSIS

Data Set: MW-08d.aqt
Date: 10/20/07 Time: 19:37:45

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-08
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

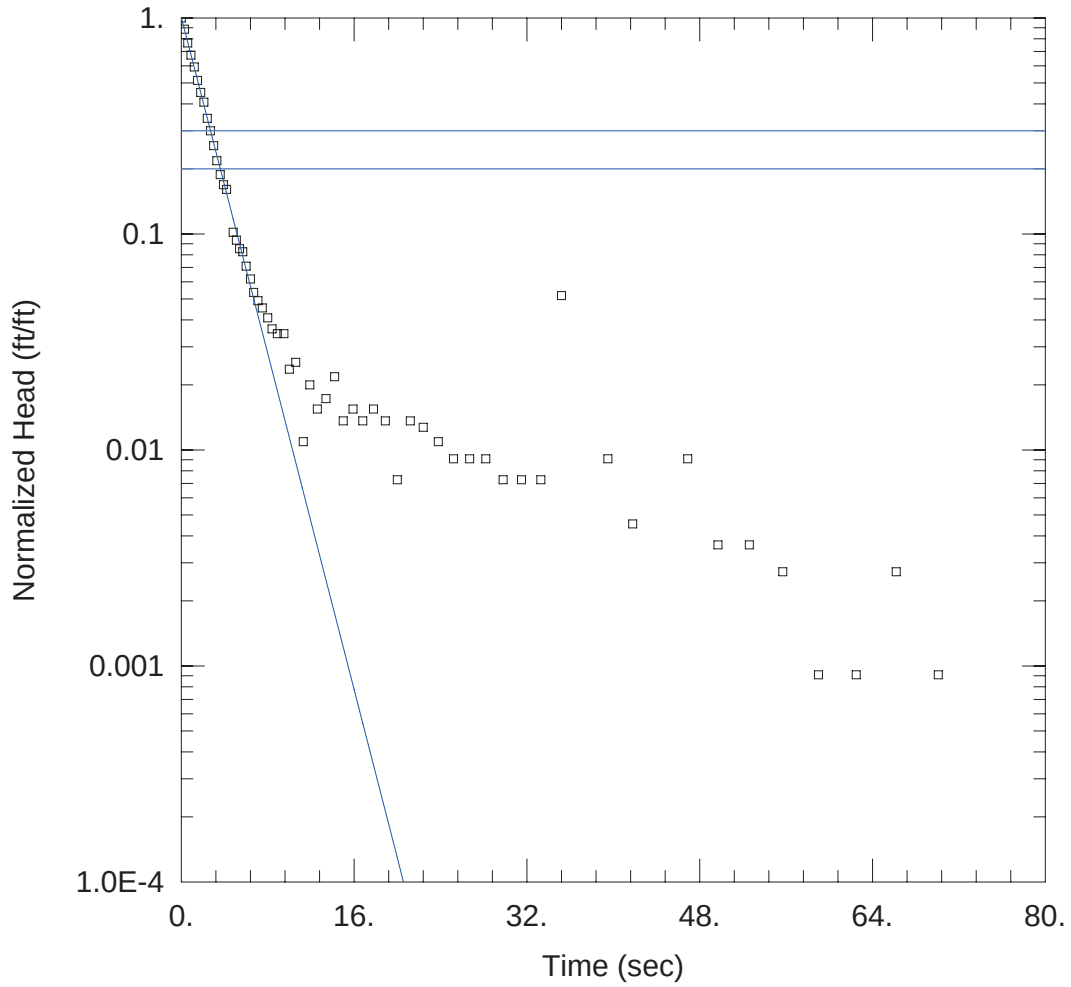
WELL DATA (MW-08)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.003066 cm/sec y0 = 2.098 ft



WELL TEST ANALYSIS

Data Set: MW-09a.aqt
Date: 10/20/07 Time: 19:42:05

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-09
Test Date: 18 September 2007

AQUIFER DATA

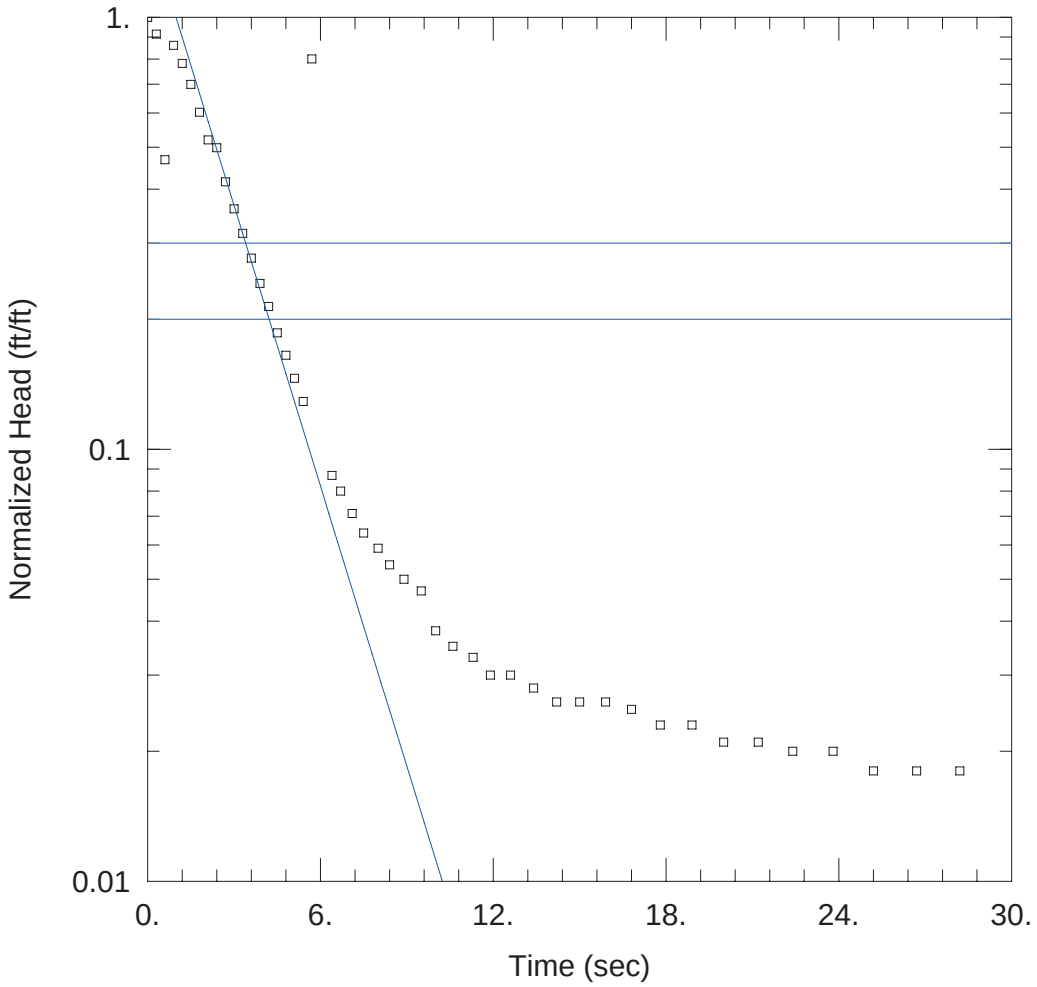
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-09)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.04096 cm/sec
y0 = 1.109 ft



WELL TEST ANALYSIS

Data Set: MW-09b.aqt
Date: 10/20/07 Time: 19:45:42

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-09
Test Date: 18 September 2007

AQUIFER DATA

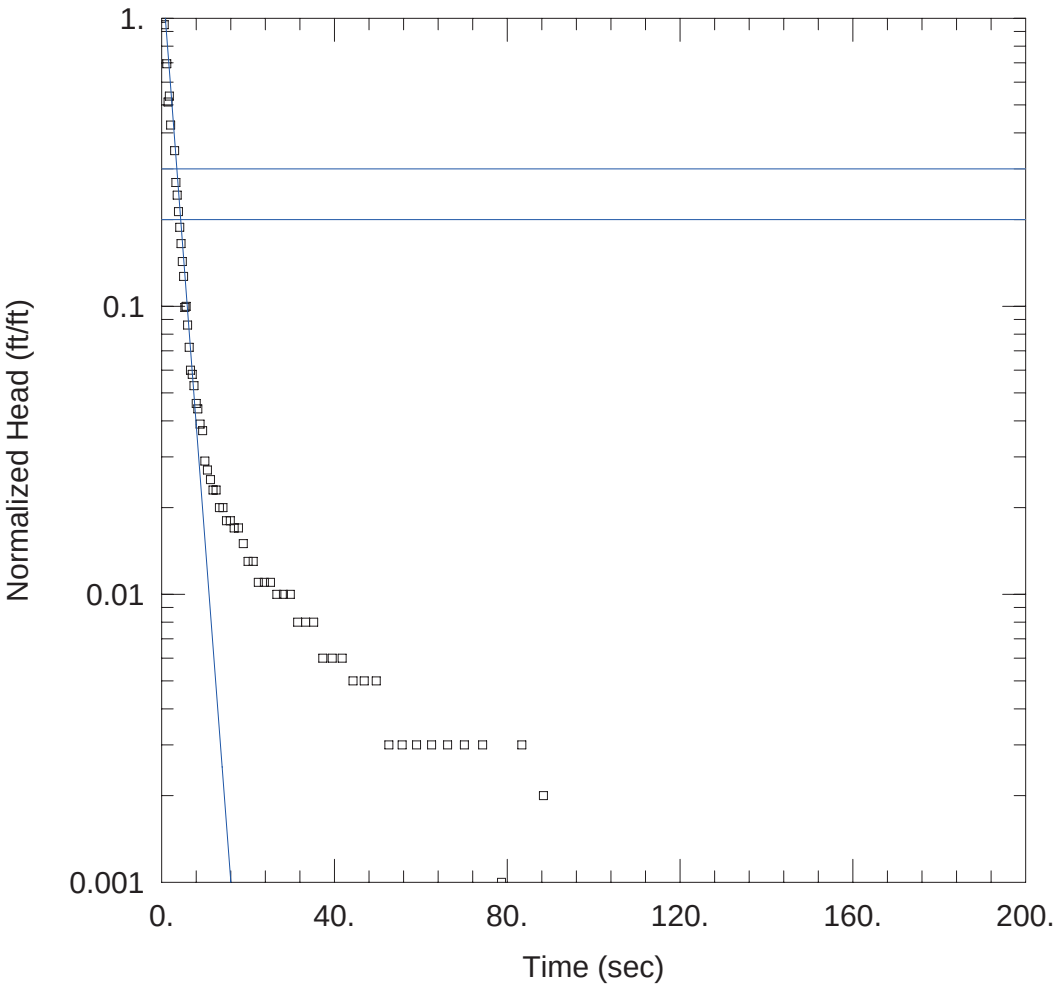
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-09)

Initial Displacement: 1. ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.04554 cm/sec
y0 = 1.633 ft



WELL TEST ANALYSIS

Data Set: MW-09c.aqt
Date: 10/20/07 Time: 19:48:36

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-09
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

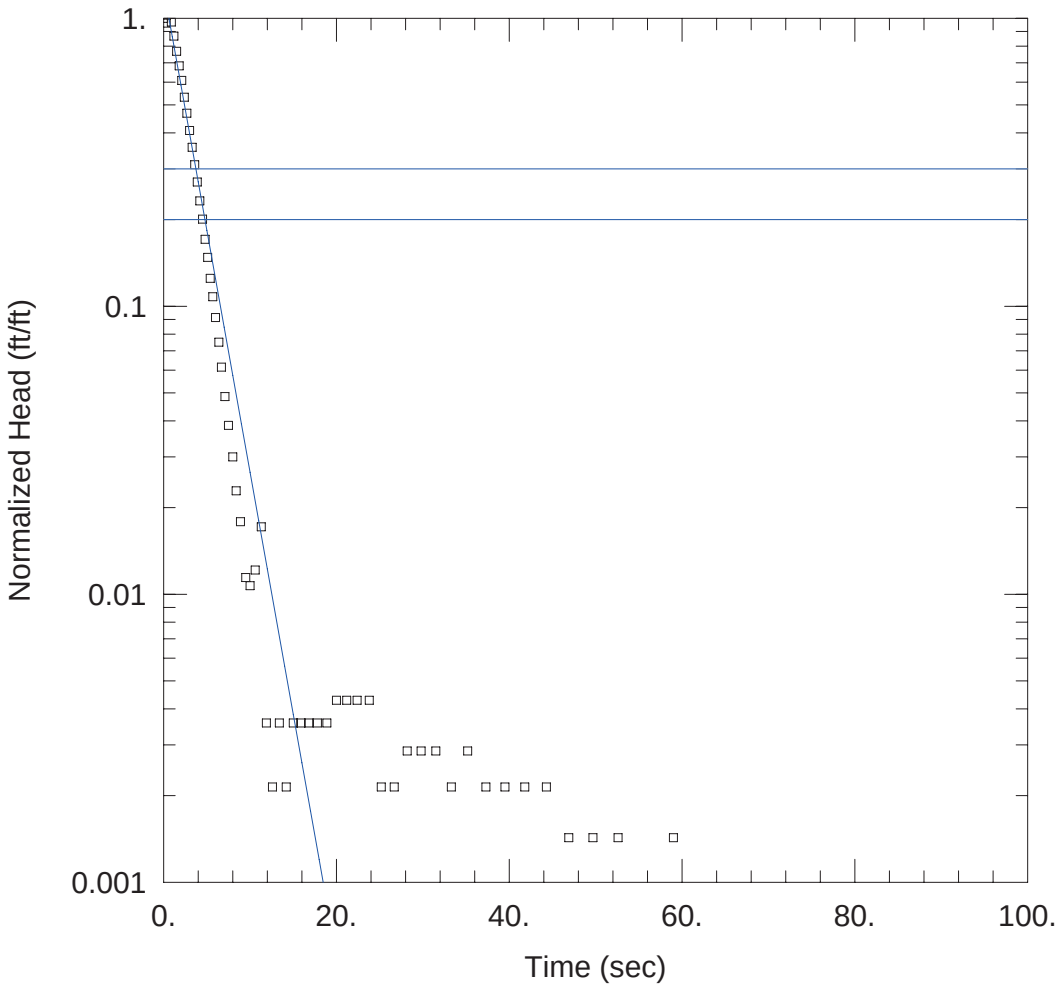
WELL DATA (MW-09)

Initial Displacement: 1. ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.04171 cm/sec y0 = 1.492 ft



WELL TEST ANALYSIS

Data Set: MW-09d.aqt
Date: 10/20/07 Time: 19:51:02

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-09
Test Date: 18 September 2007

AQUIFER DATA

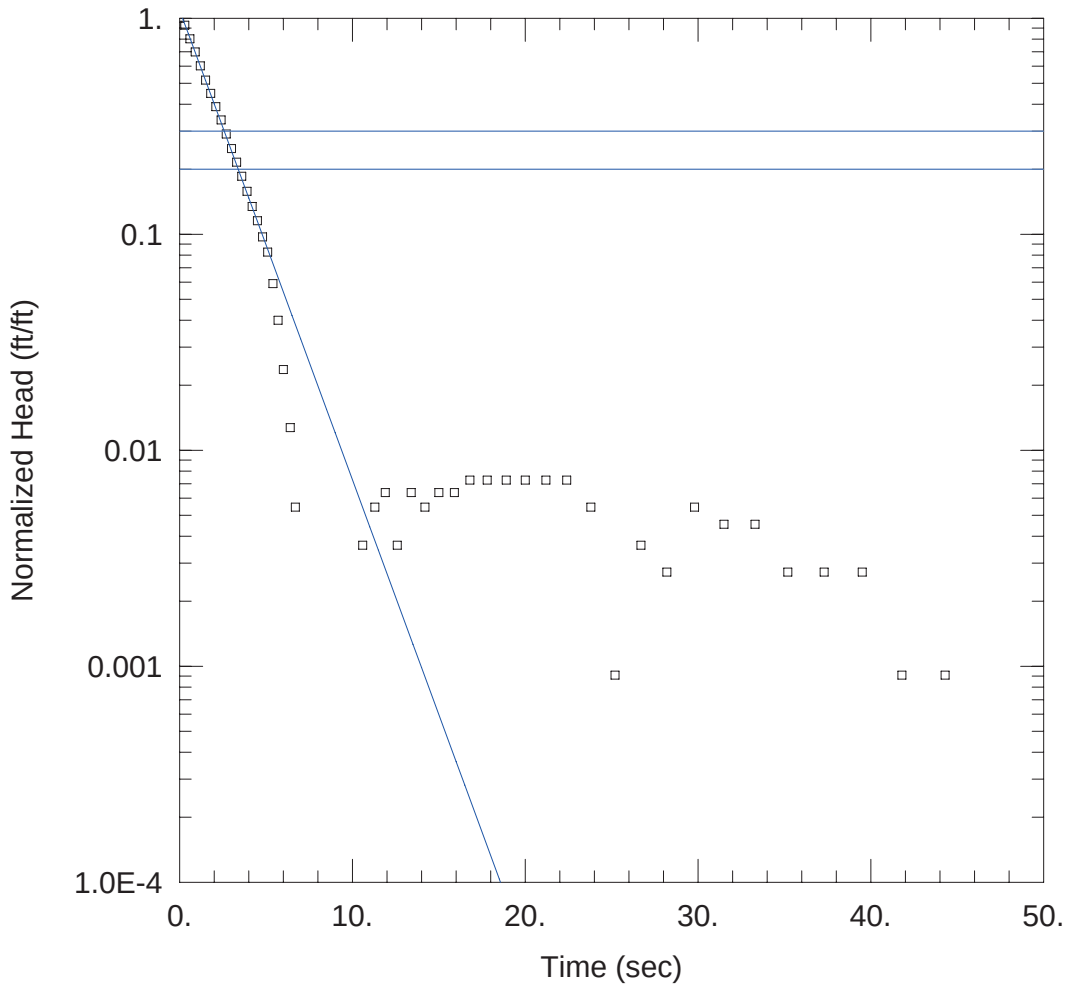
Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-09)

Initial Displacement: 1.4 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.03538 cm/sec
y0 = 1.779 ft



WELL TEST ANALYSIS

Data Set: MW-09e.aqt
Date: 10/20/07 Time: 19:53:59

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-09
Test Date: 18 September 2007

AQUIFER DATA

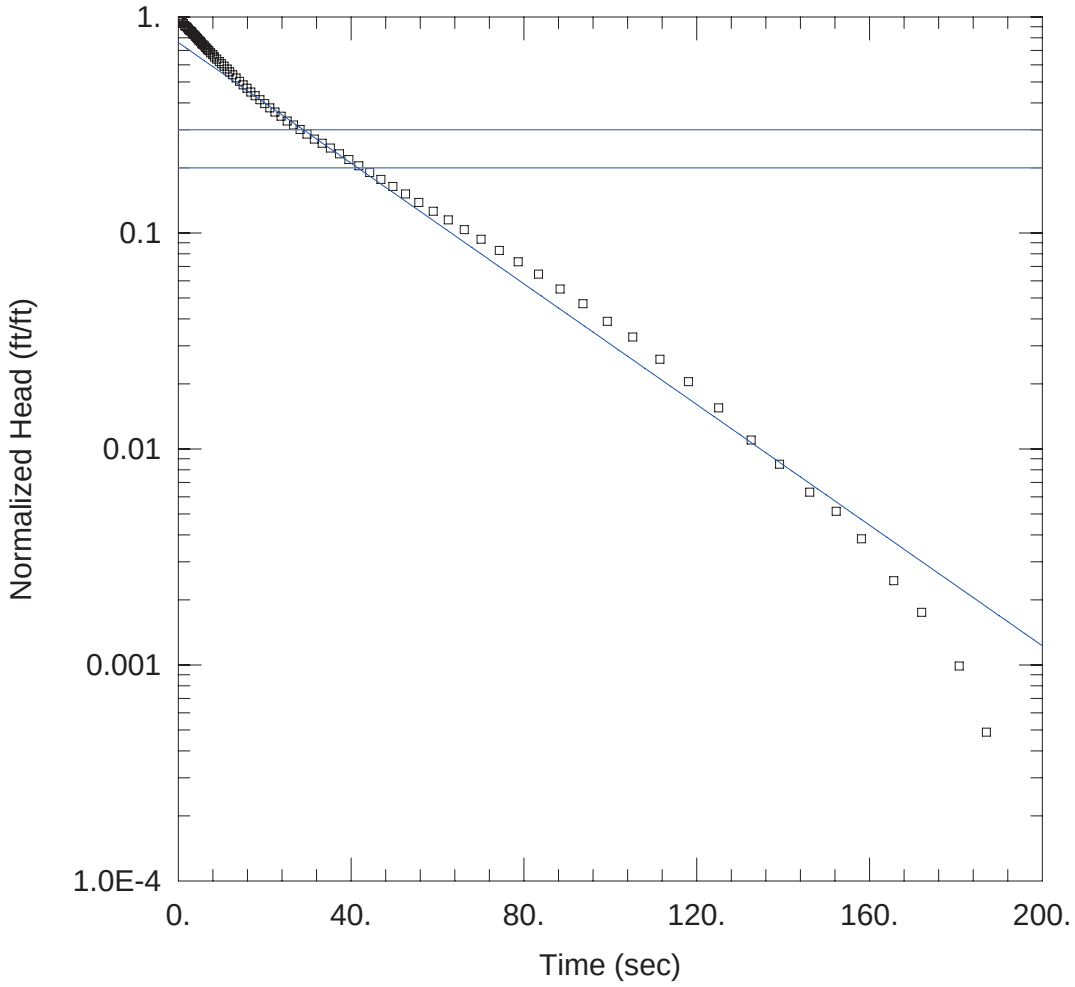
Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-09)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.04578 cm/sec
y0 = 1.201 ft



WELL TEST ANALYSIS

Data Set: MW-11a.aqt
Date: 10/20/07 Time: 17 :04:14

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-11
Test Date: 18 September 2007

AQUIFER DATA

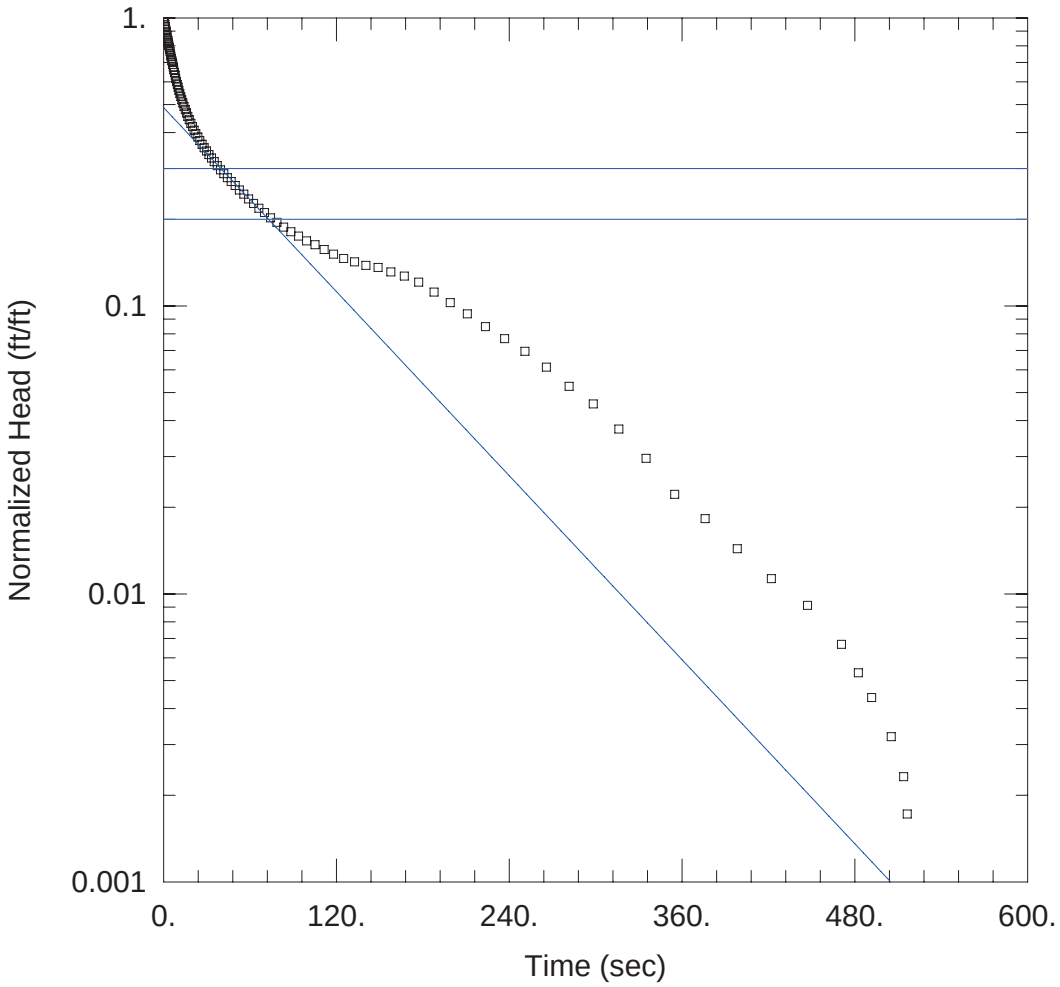
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 2. ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00494 cm/sec
y0 = 1.522 ft



WELL TEST ANALYSIS

Data Set: MW-11b.aqt
Date: 10/20/07 Time: 17:14:44

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-11
Test Date: 18 September 2007

AQUIFER DATA

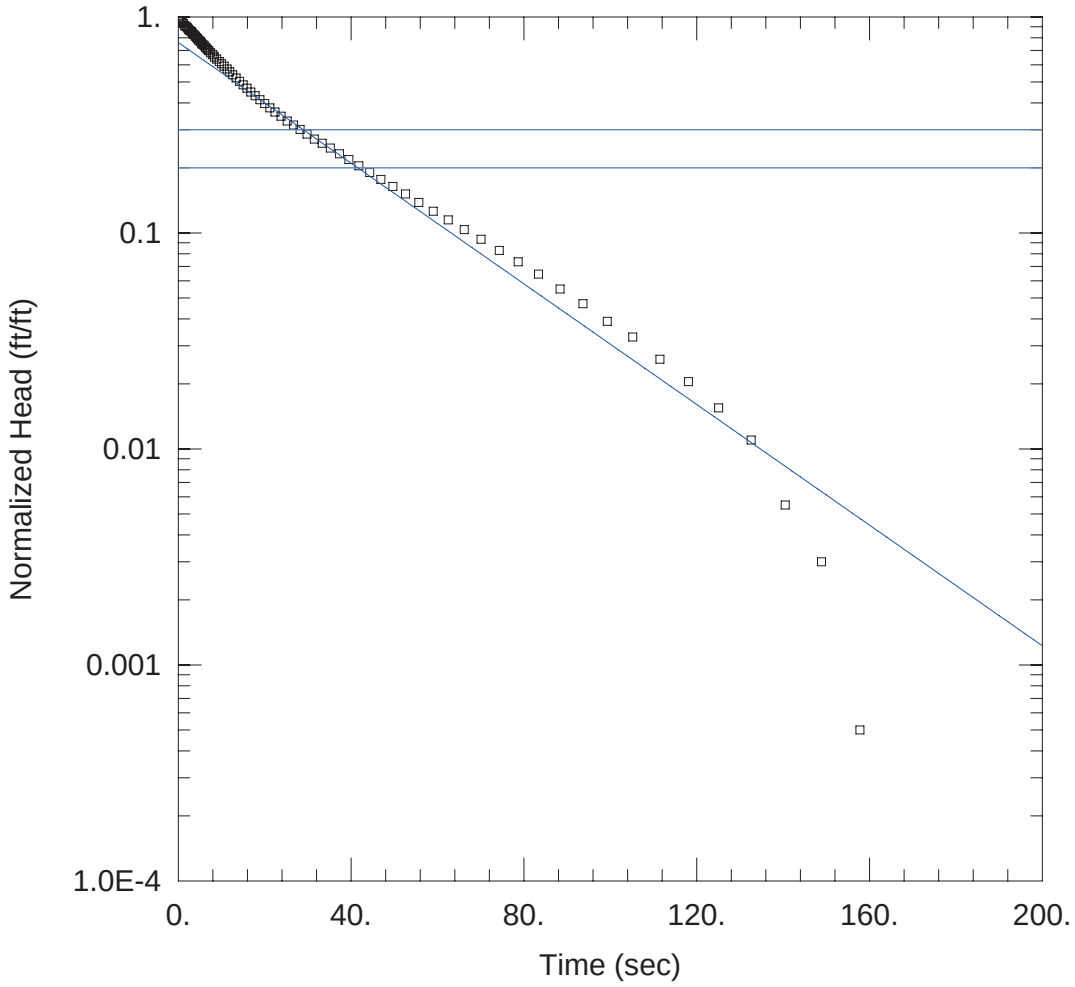
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 2.3 ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.005121 cm/sec
y0 = 1.123 ft



WELL TEST ANALYSIS

Data Set: MW-13Da.aqt
Date: 10/20/07 Time: 20:04:14

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-13D
Test Date: 18 September 2007

AQUIFER DATA

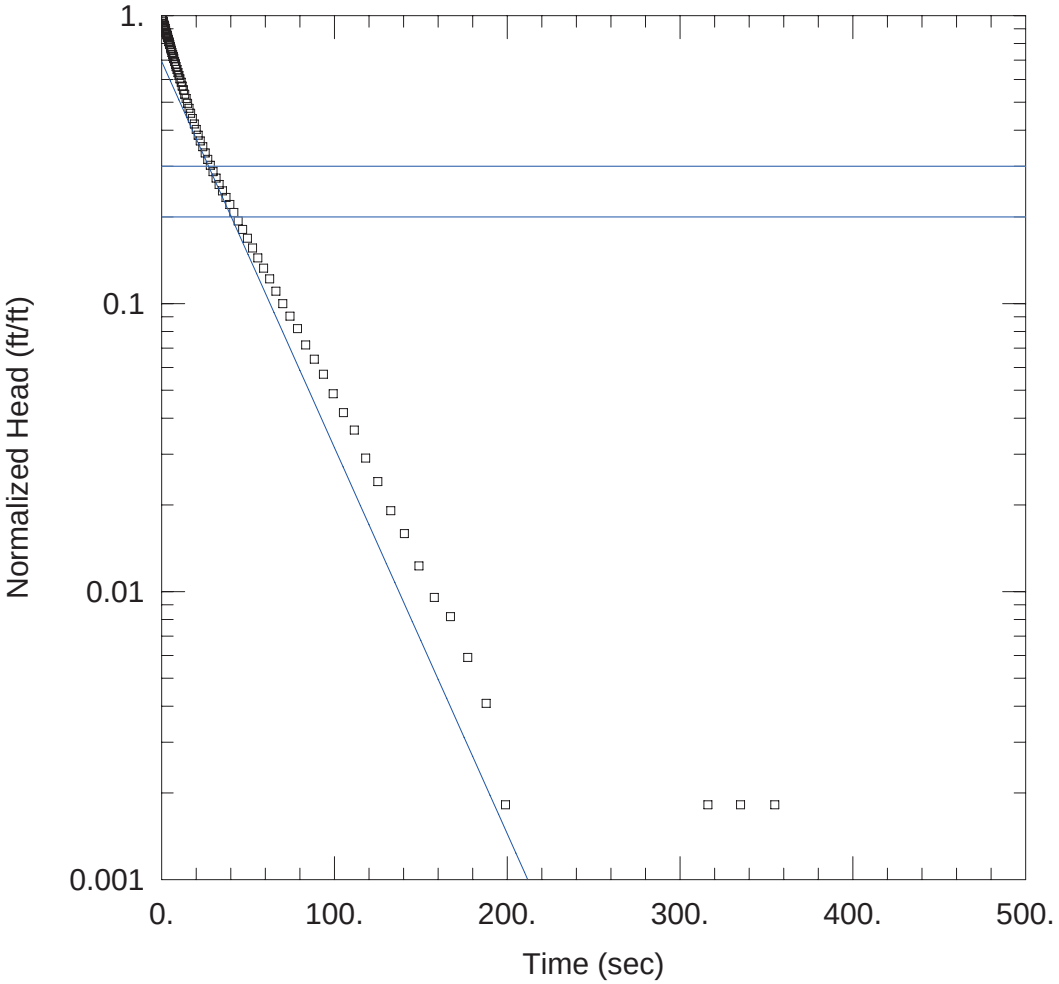
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13D)

Initial Displacement: 2. ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00294 cm/sec
y0 = 1.522 ft



WELL TEST ANALYSIS

Data Set: MW-13Db.aqt
Date: 10/20/07 Time: 20:07:17

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-13D
Test Date: 18 September 2007

AQUIFER DATA

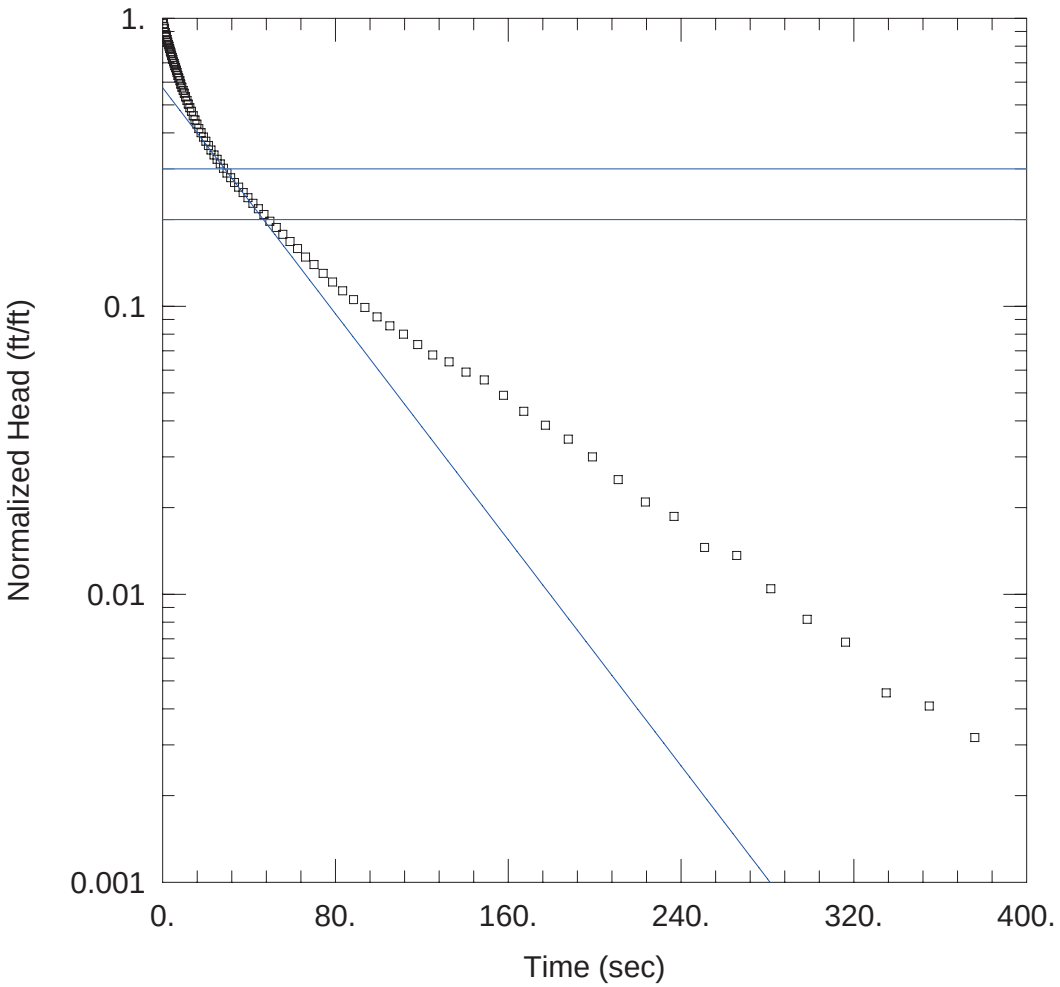
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13D)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002823 cm/sec
y0 = 1.525 ft



WELL TEST ANALYSIS

Data Set: MW-14a.aqt
Date: 10/20/07 Time: 20:10:57

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-14
Test Date: 18 September 2007

AQUIFER DATA

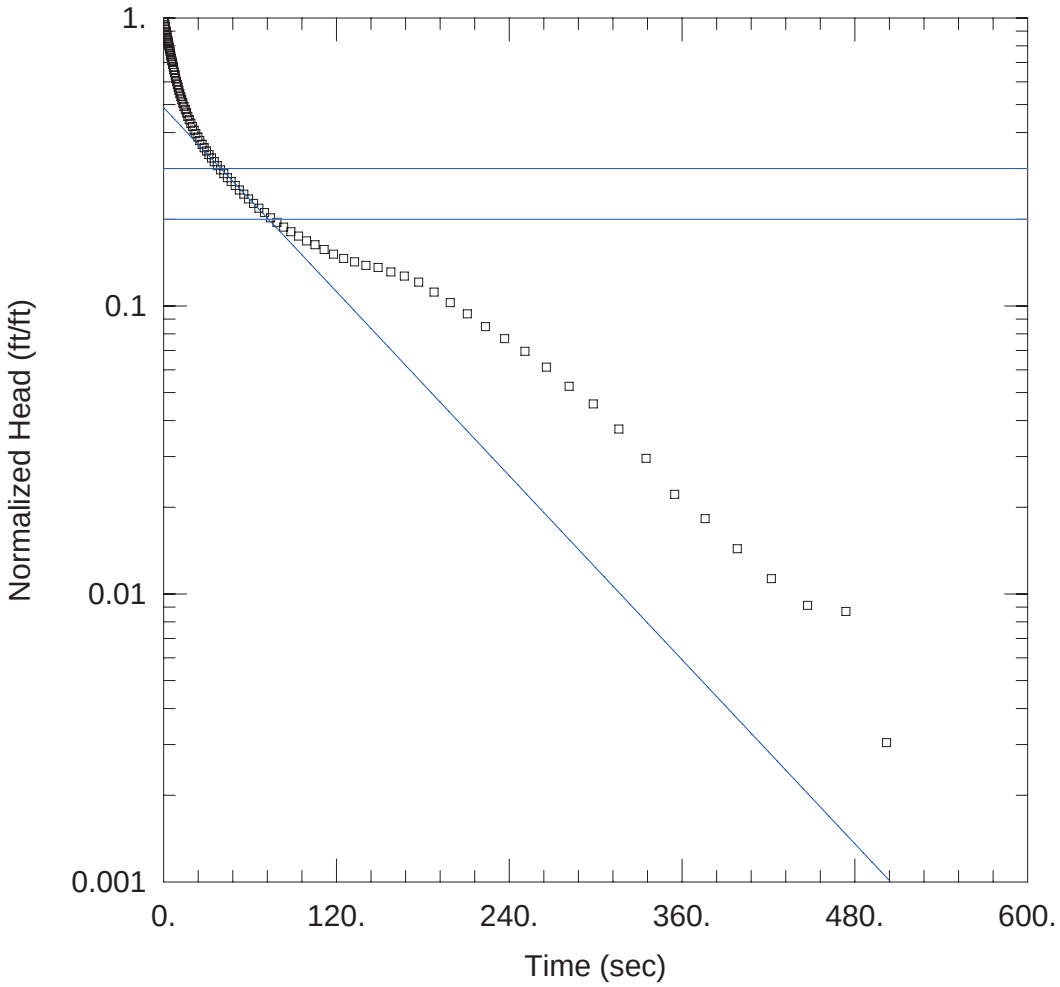
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-14)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002065 cm/sec
y0 = 1.262 ft



WELL TEST ANALYSIS

Data Set: MW-14b.aqt
Date: 10/20/07 Time: 20:14:44

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-14
Test Date: 18 September 2007

AQUIFER DATA

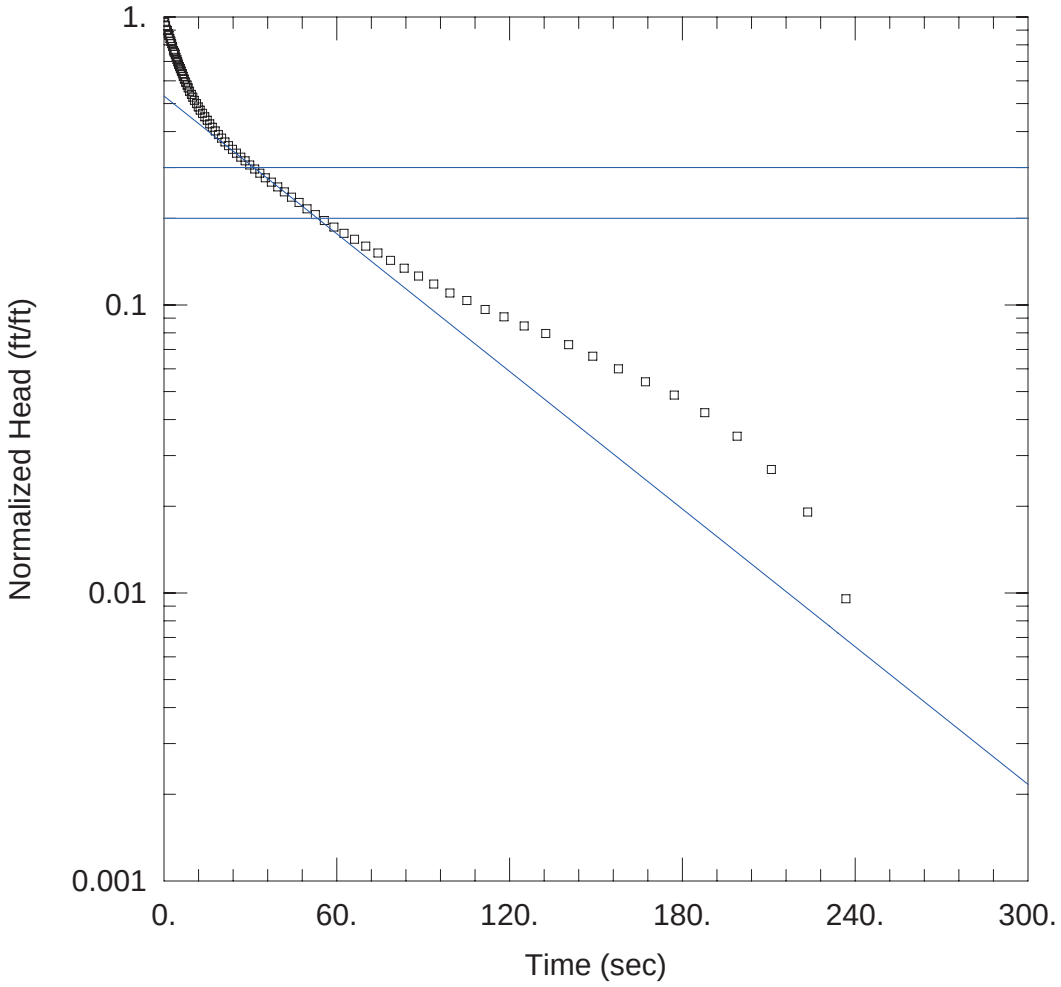
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-14)

Initial Displacement: 2.3 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001121 cm/sec
y0 = 1.123 ft



WELL TEST ANALYSIS

Data Set: MW-14c.aqt
Date: 10/20/07 Time: 20:16:40

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-14
Test Date: 18 September 2007

AQUIFER DATA

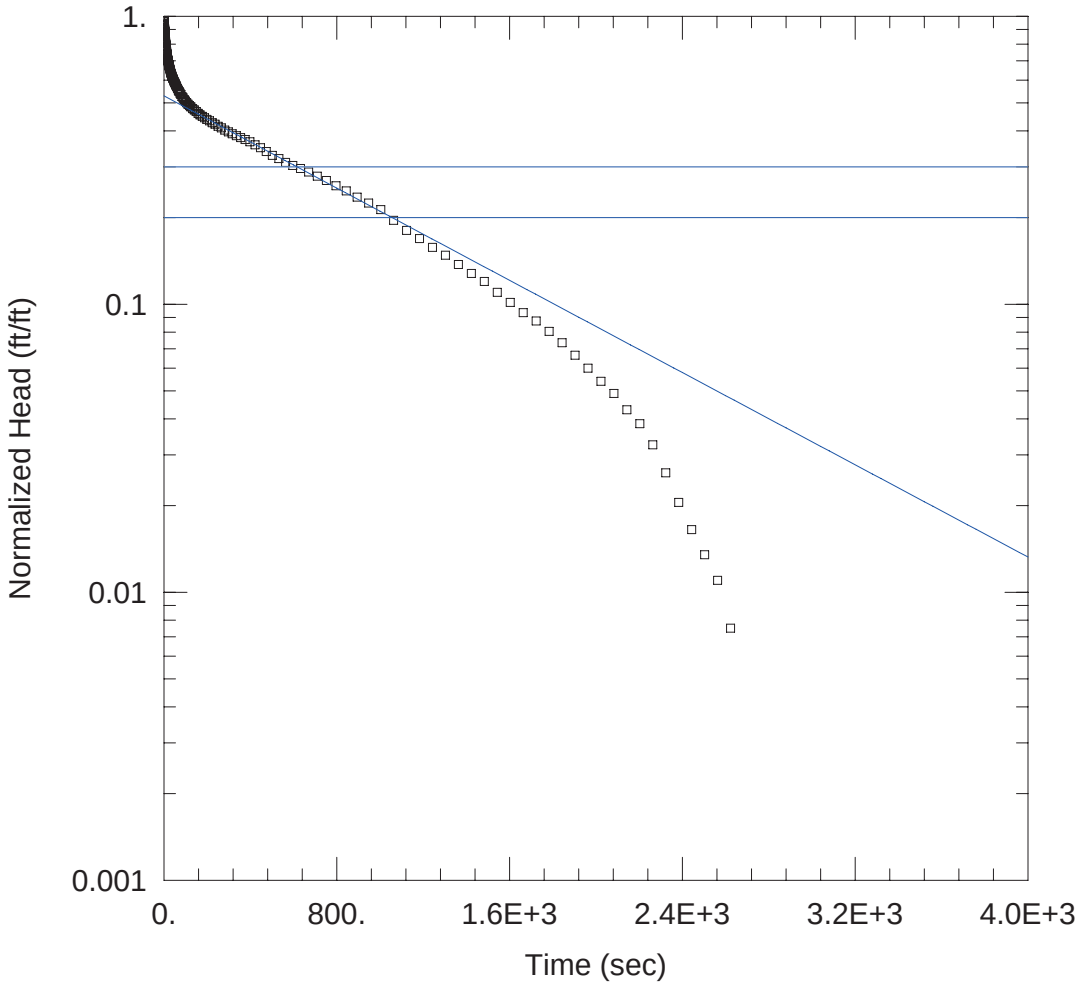
Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-14)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001677 cm/sec
y0 = 1.168 ft



WELL TEST ANALYSIS

Data Set: MW-15.aqt
Date: 10/20/07 Time: 20:19:35

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-15
Test Date: 18 September 2007

AQUIFER DATA

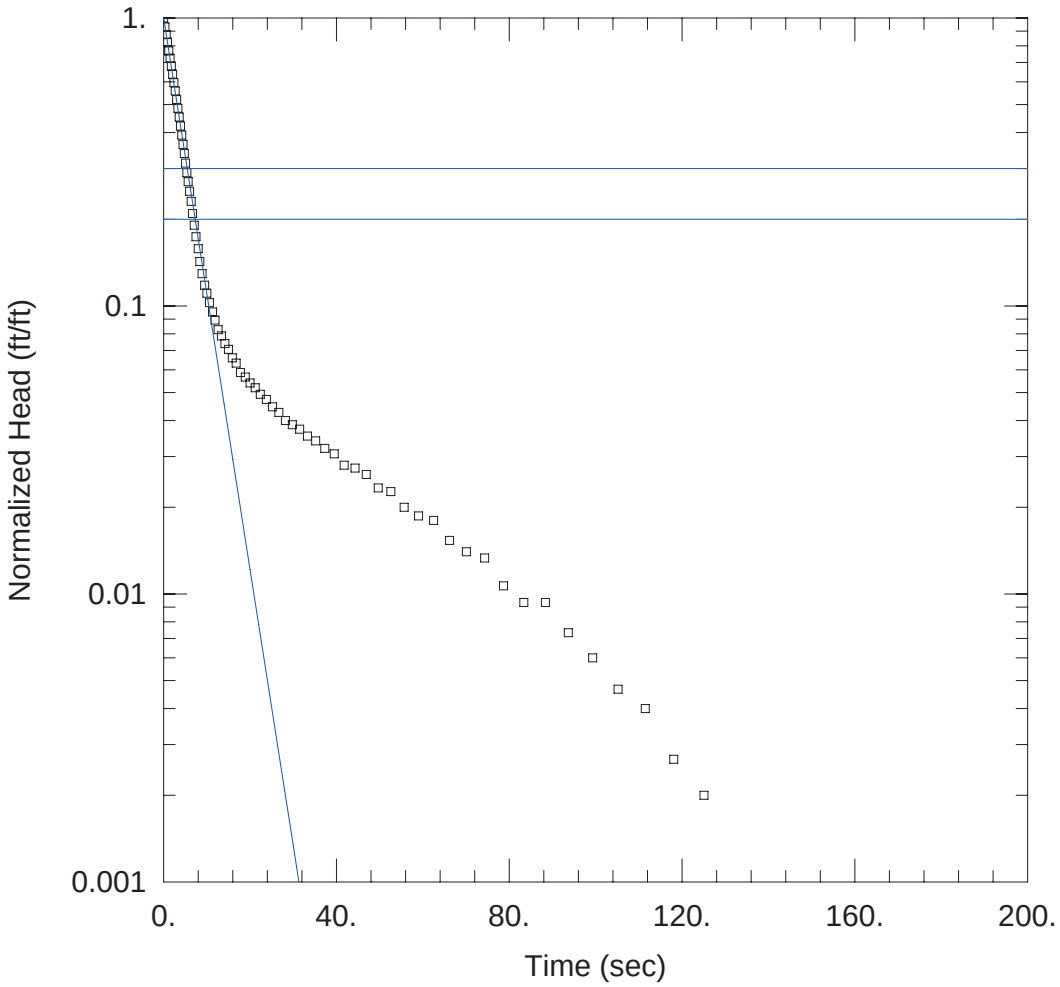
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-15)

Initial Displacement: 2. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 7.17E-5 cm/sec
y0 = 1.058 ft



WELL TEST ANALYSIS

Data Set: MW-16a.aqt
Date: 10/20/07 Time: 20:23:48

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-16
Test Date: 18 September 2007

AQUIFER DATA

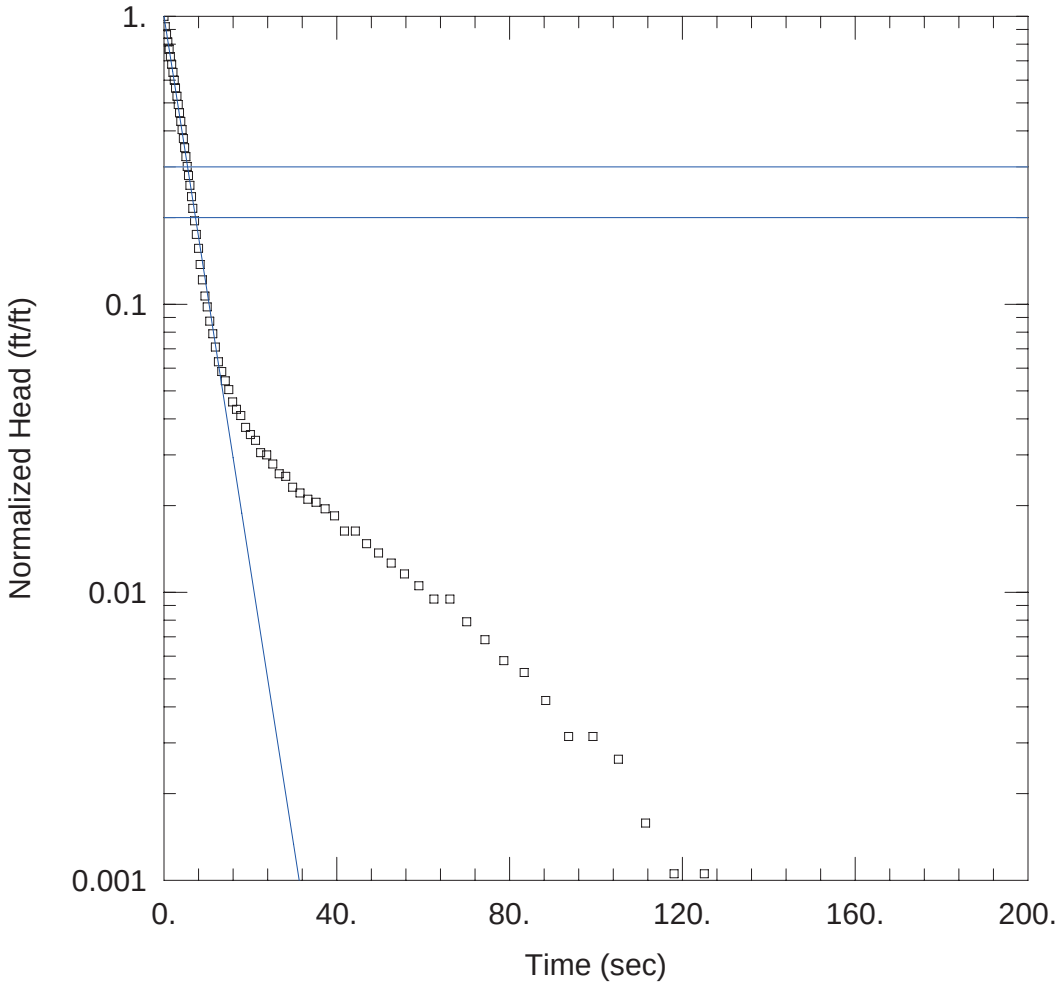
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-16)

Initial Displacement: 1.5 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01931 cm/sec
y0 = 1.498 ft



WELL TEST ANALYSIS

Data Set: MW-16b.aqt
Date: 10/20/07 Time: 20:25:56

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-16
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

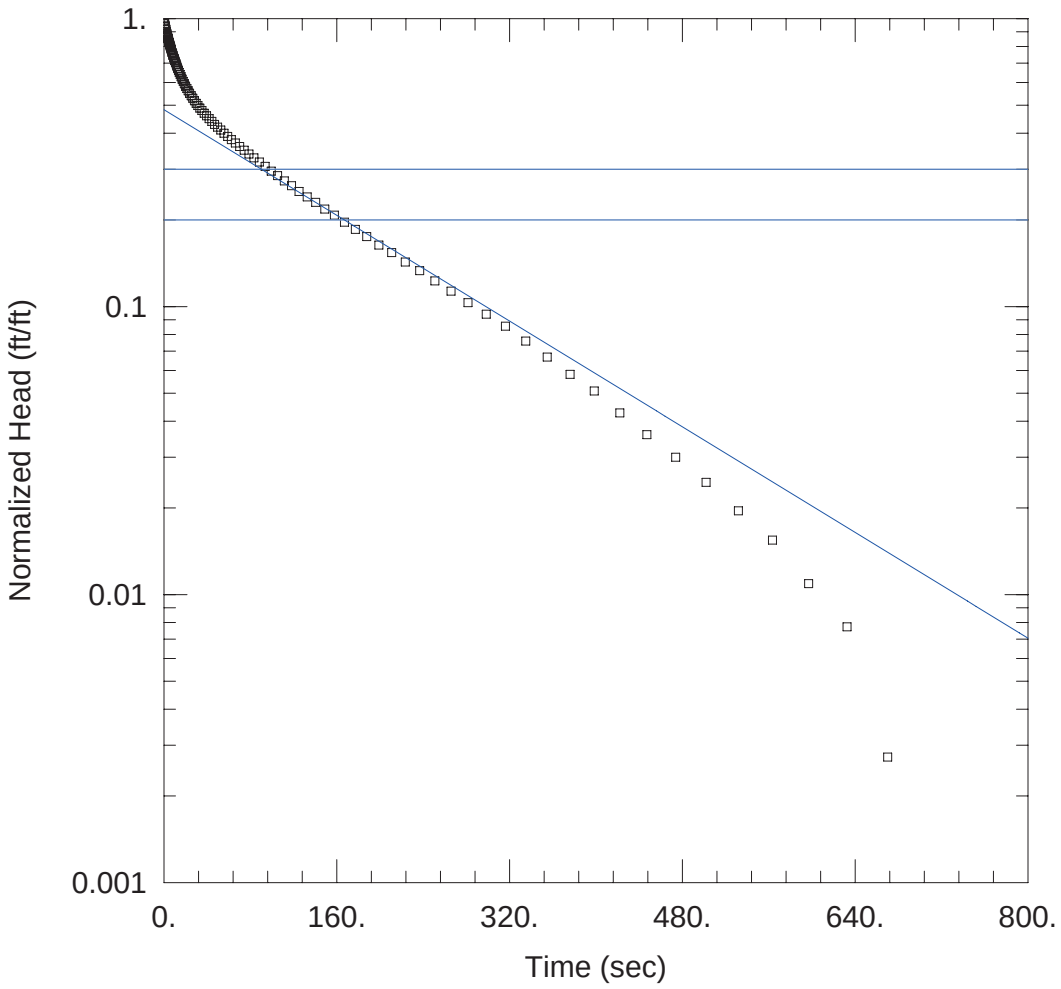
WELL DATA (MW-16)

Initial Displacement: 1.9 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01932 cm/sec y0 = 1.901 ft



WELL TEST ANALYSIS

Data Set: MW-17a.aqt
Date: 10/20/07 Time: 20:28:47

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-17
Test Date: 18 September 2007

AQUIFER DATA

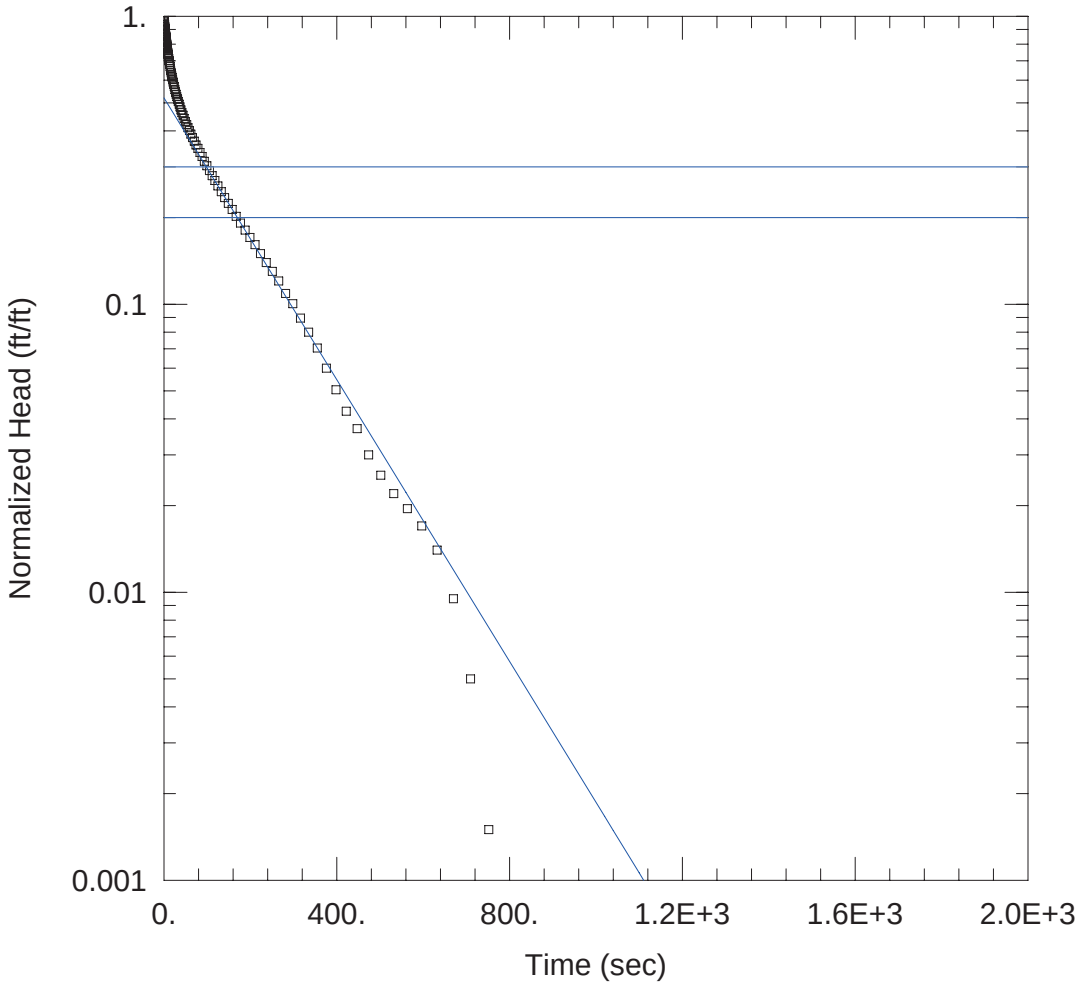
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-17)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004624 cm/sec
y0 = 1.062 ft



WELL TEST ANALYSIS

Data Set: MW-17b.aqt
Date: 10/20/07 Time: 20:32:13

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-17
Test Date: 18 September 2007

AQUIFER DATA

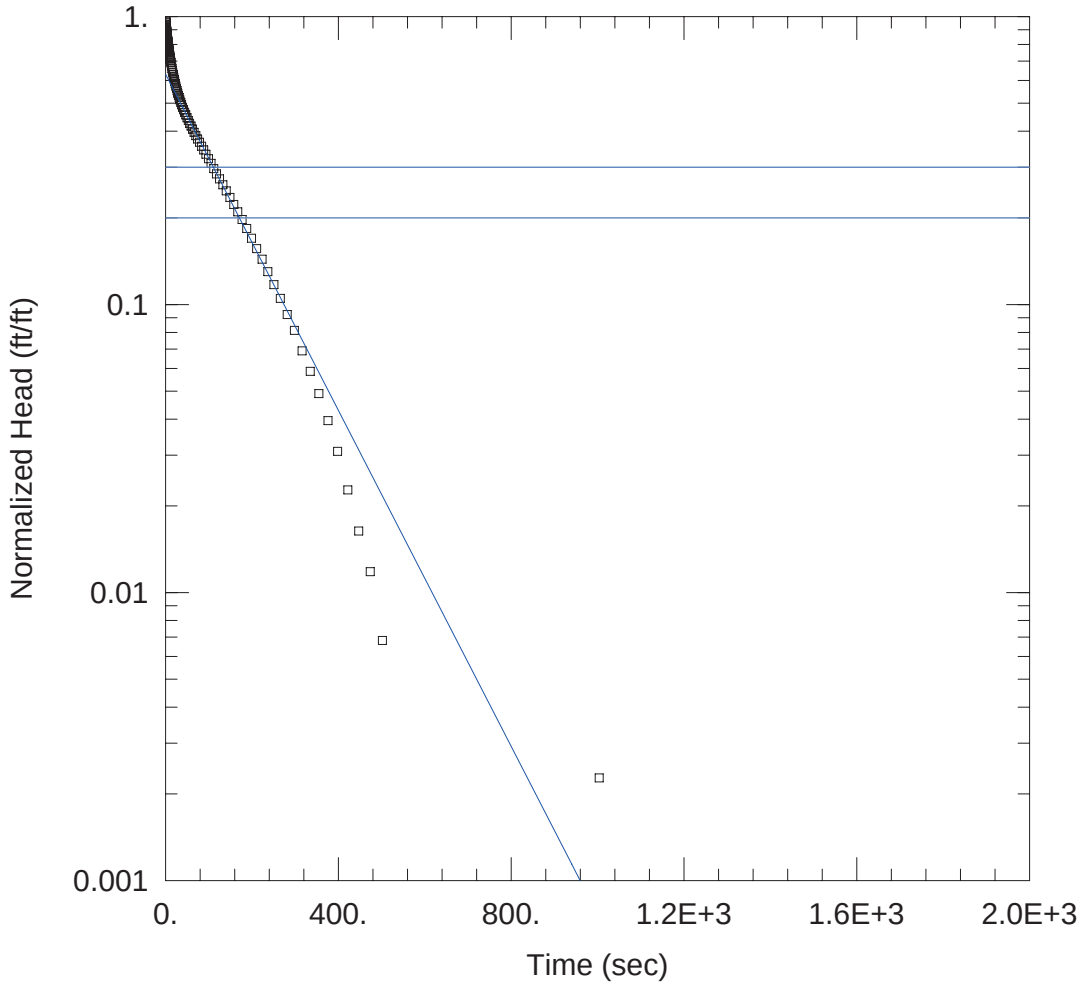
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-17)

Initial Displacement: 2. ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004931 cm/sec
y0 = 1.041 ft



WELL TEST ANALYSIS

Data Set: MW-17c.aqt
Date: 10/20/07 Time: 20:34:34

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-17
Test Date: 18 September 2007

AQUIFER DATA

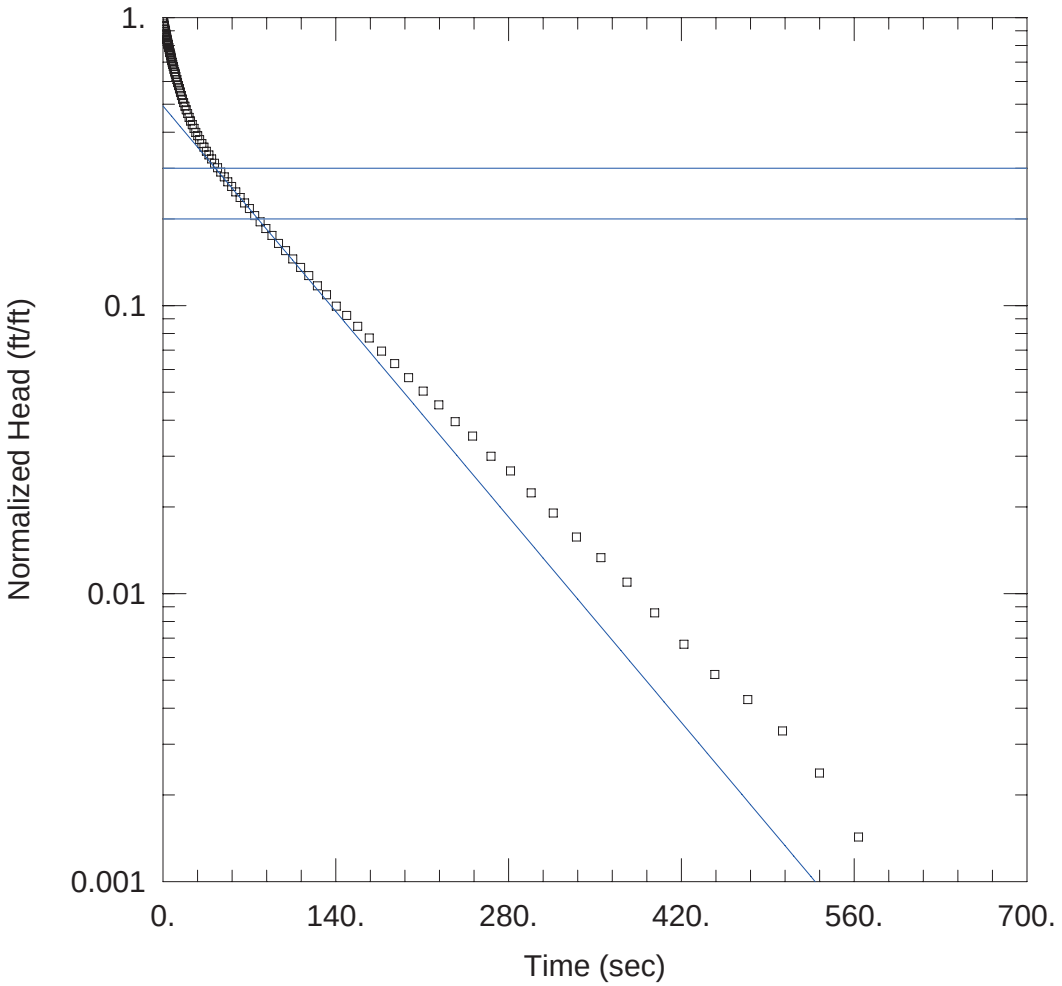
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-17)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0005881 cm/sec
y0 = 1.386 ft



WELL TEST ANALYSIS

Data Set: MW-18a.aqt
Date: 10/20/07 Time: 21:12:07

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-18
Test Date: 18 September 2007

AQUIFER DATA

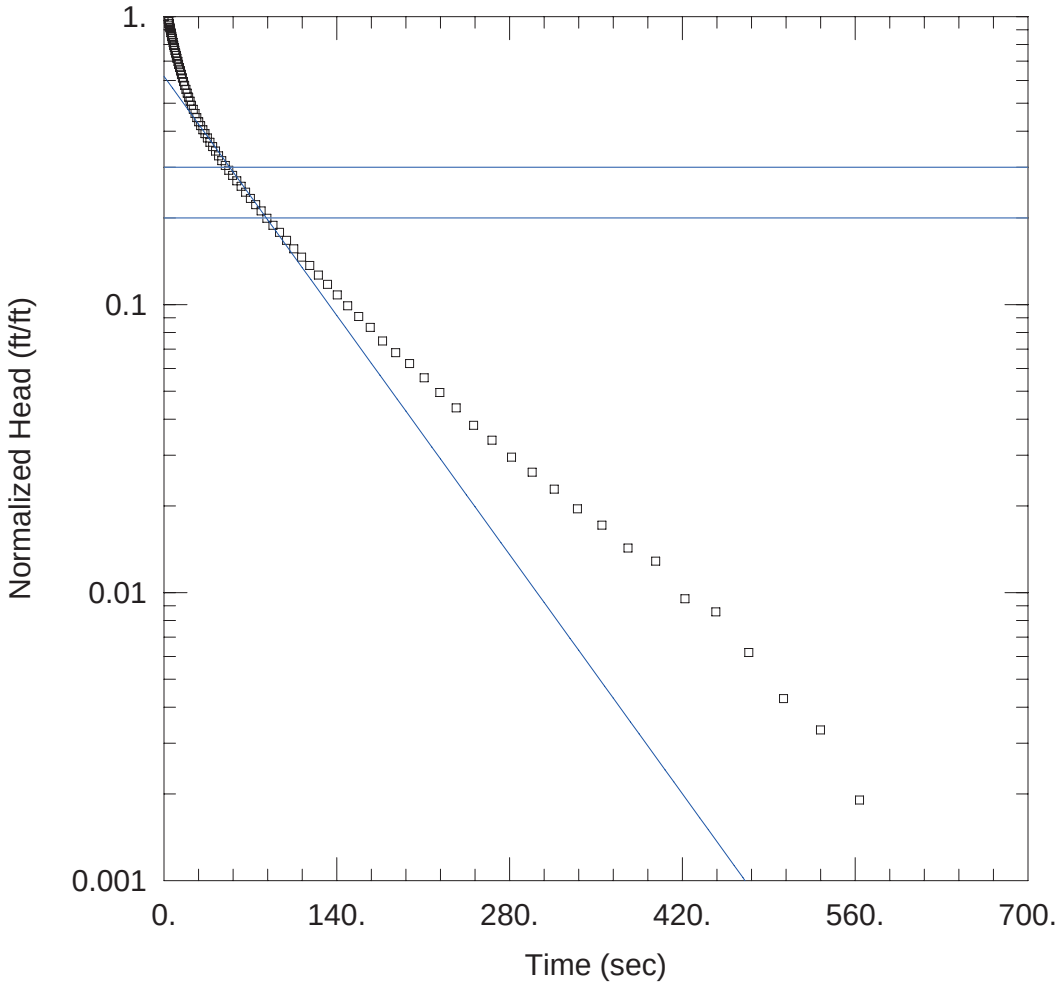
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 14. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001177 cm/sec
y0 = 1.035 ft



WELL TEST ANALYSIS

Data Set: MW-18b.aqt
Date: 10/20/07 Time: 21:13:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-18
Test Date: 18 September 2007

AQUIFER DATA

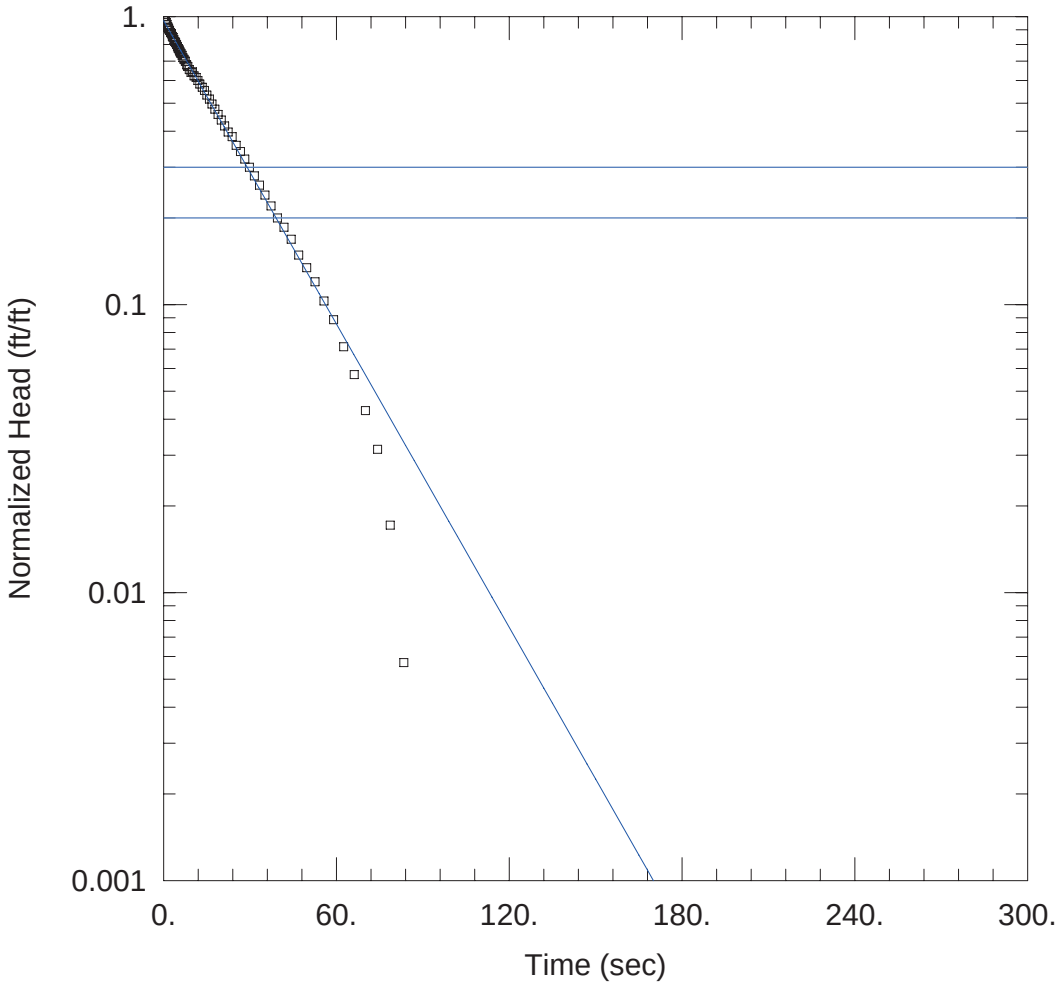
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 14 ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00137 cm/sec
y0 = 1.303 ft



WELL TEST ANALYSIS

Data Set: MW-19a.aqt
Date: 10/20/07 Time: 21:16:51

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-19
Test Date: 18 September 2007

AQUIFER DATA

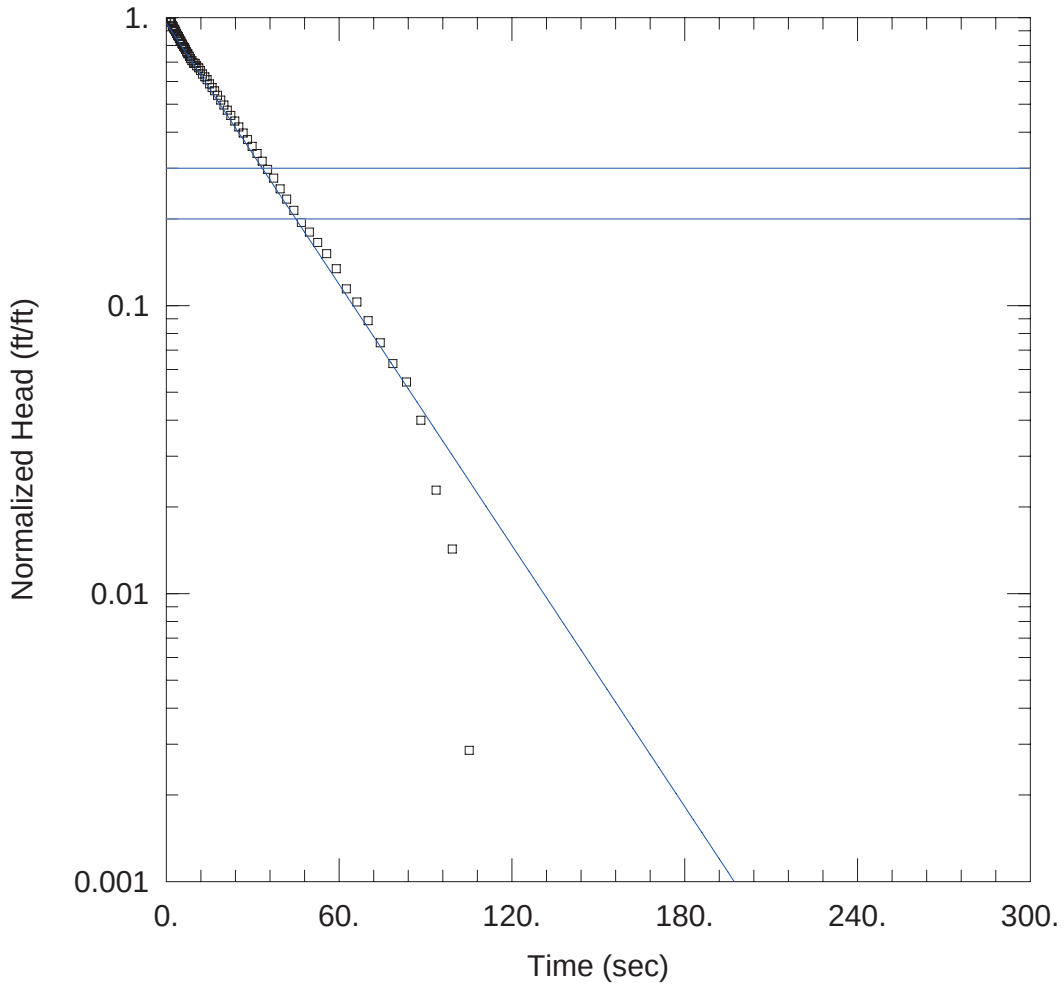
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-19)

Initial Displacement: 0.35 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.003145 cm/sec
y0 = 0.3389 ft



WELL TEST ANALYSIS

Data Set: MW-19b.aqt
Date: 10/20/07 Time: 21:17:54

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-19
Test Date: 18 September 2007

AQUIFER DATA

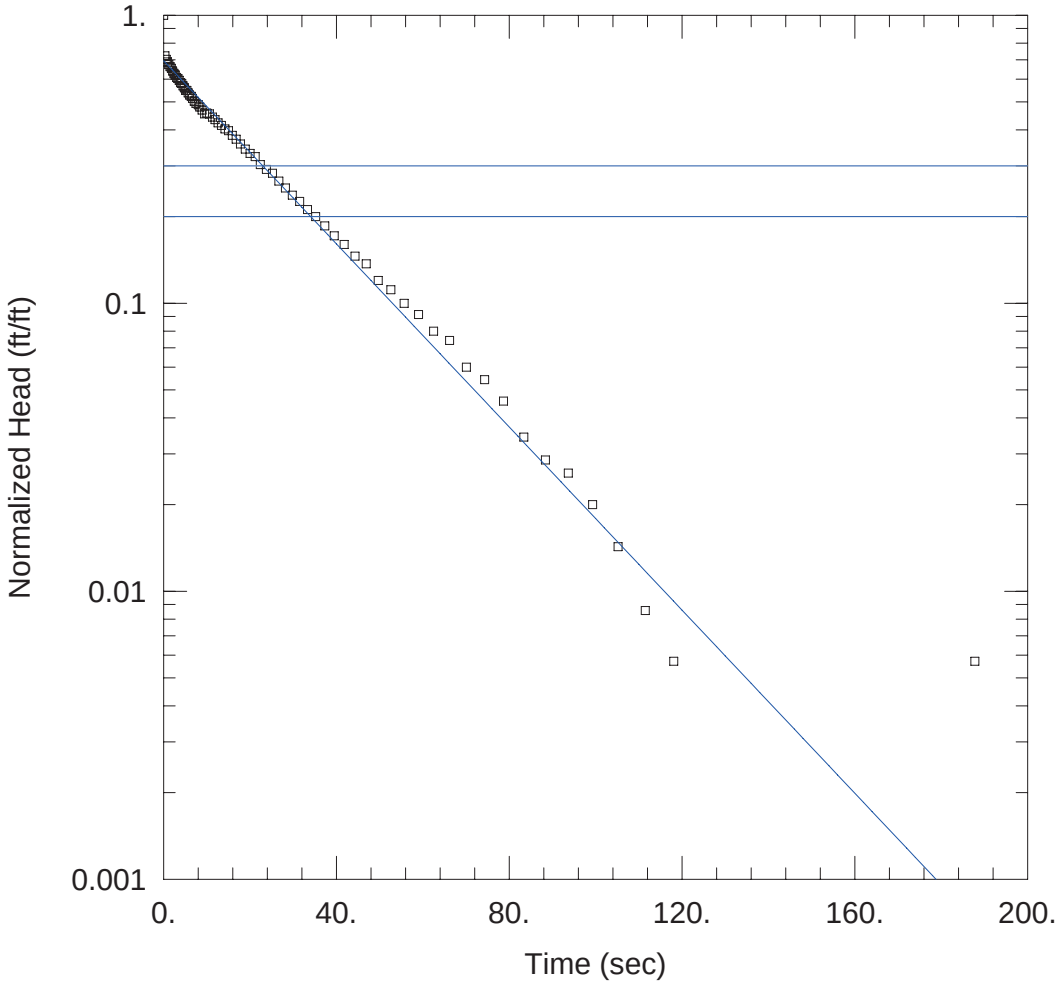
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-19)

Initial Displacement: 0.35 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002706 cm/sec
y0 = 0.3345 ft



WELL TEST ANALYSIS

Data Set: MW-19c.aqt
Date: 10/20/07 Time: 21:19:00

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-19
Test Date: 18 September 2007

AQUIFER DATA

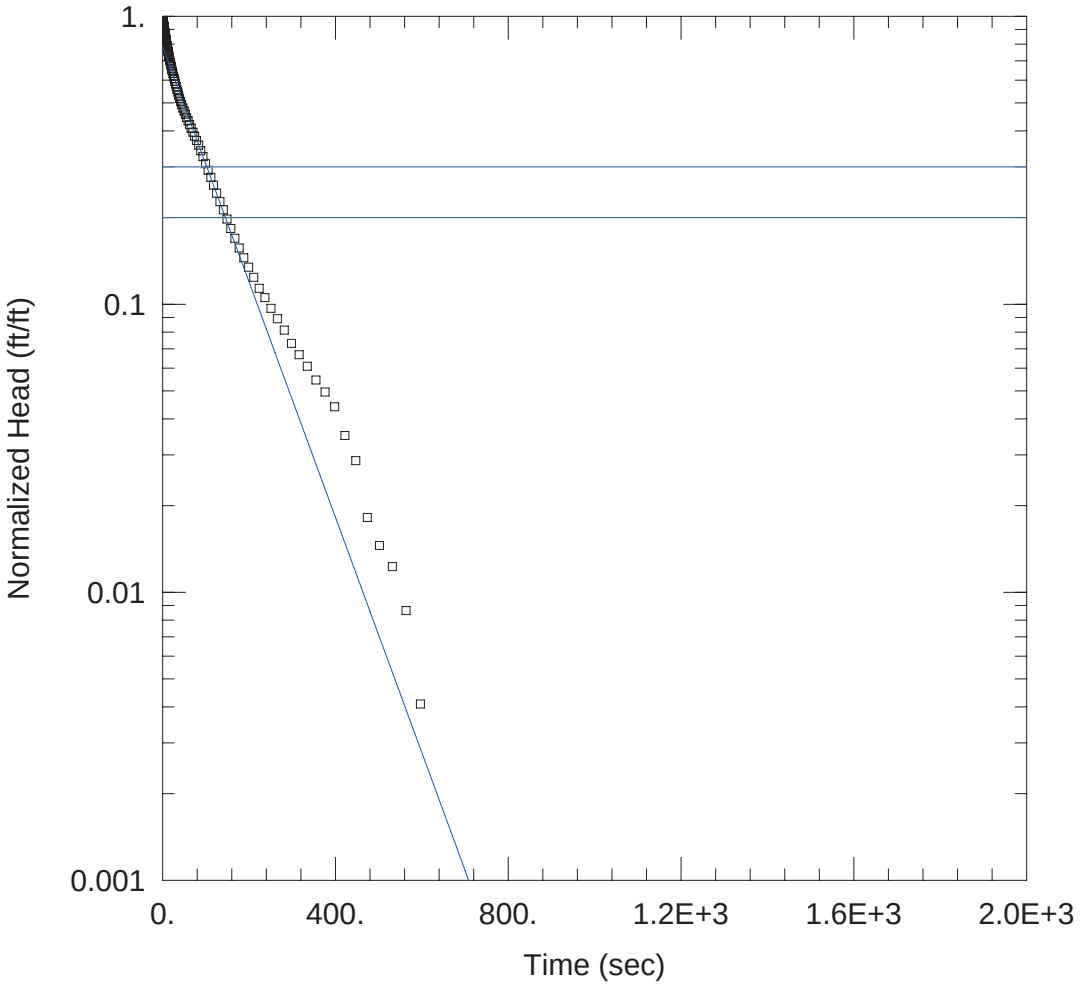
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-19)

Initial Displacement: 0.35 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002847 cm/sec
y0 = 0.2432 ft



WELL TEST ANALYSIS

Data Set: MW-20a.aqt
Date: 10/20/07 Time: 21:22:50

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-20
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

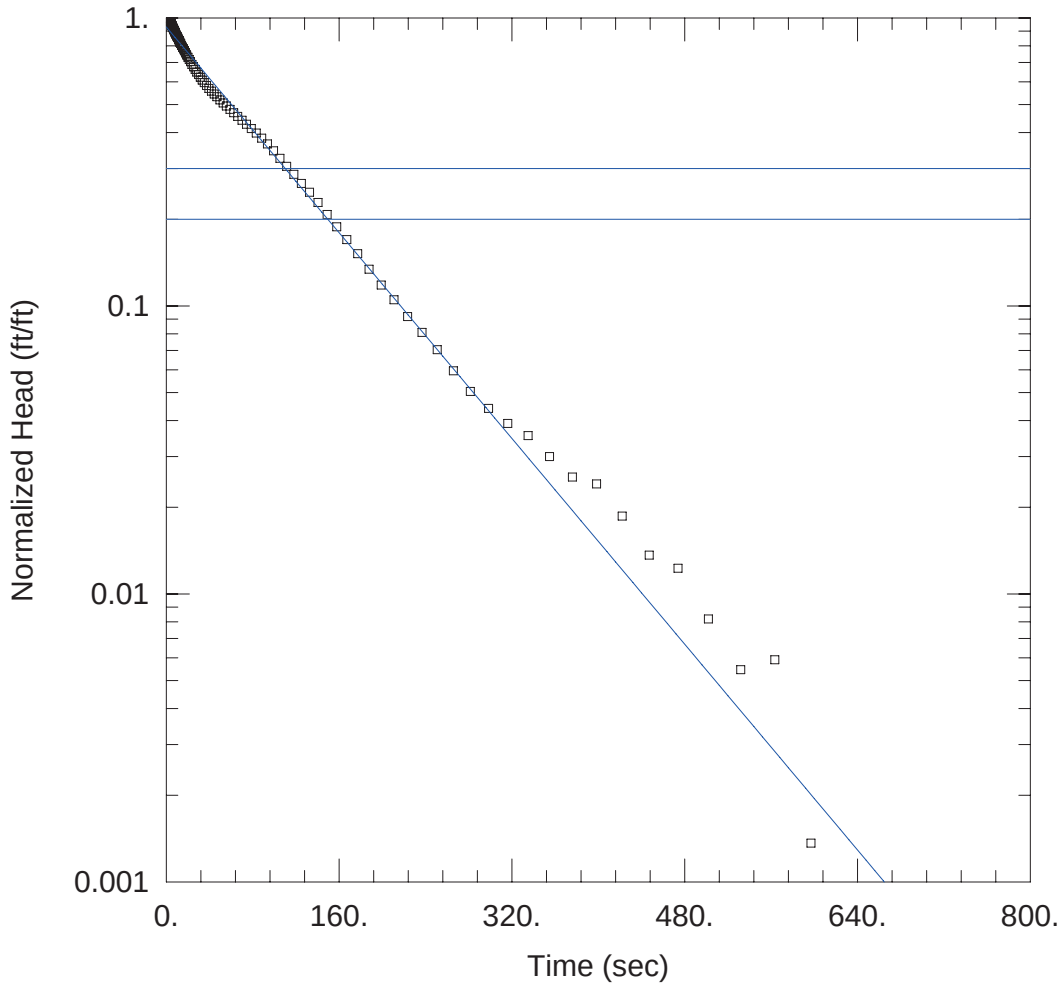
WELL DATA (MW-20)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0007318 cm/sec y0 = 1.726 ft



WELL TEST ANALYSIS

Data Set: MW-20b.aqt
Date: 10/20/07 Time: 21:24:04

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-20
Test Date: 18 September 2007

AQUIFER DATA

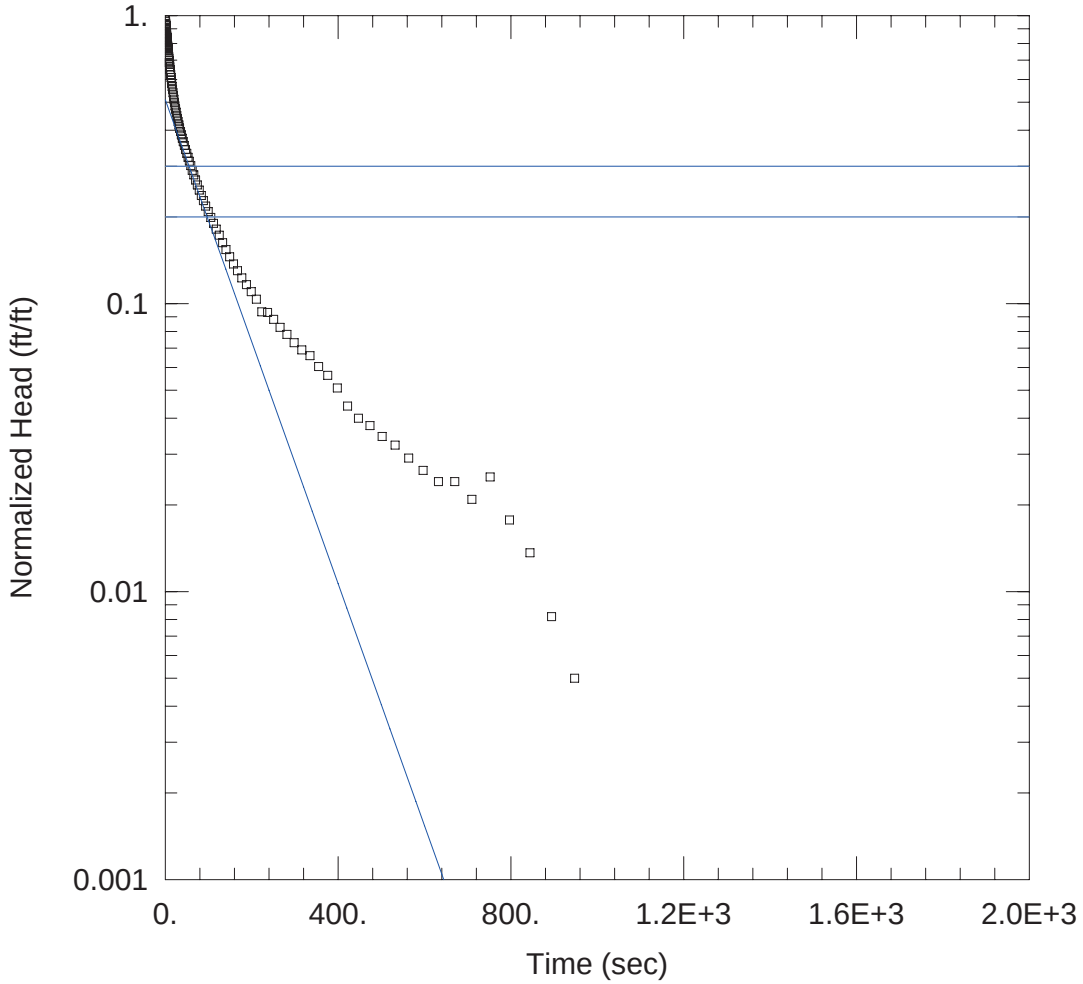
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-20)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0007997 cm/sec
y0 = 2.046 ft



WELL TEST ANALYSIS

Data Set: MW-21a.aqt
Date: 10/20/07 Time: 21:33:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-21
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

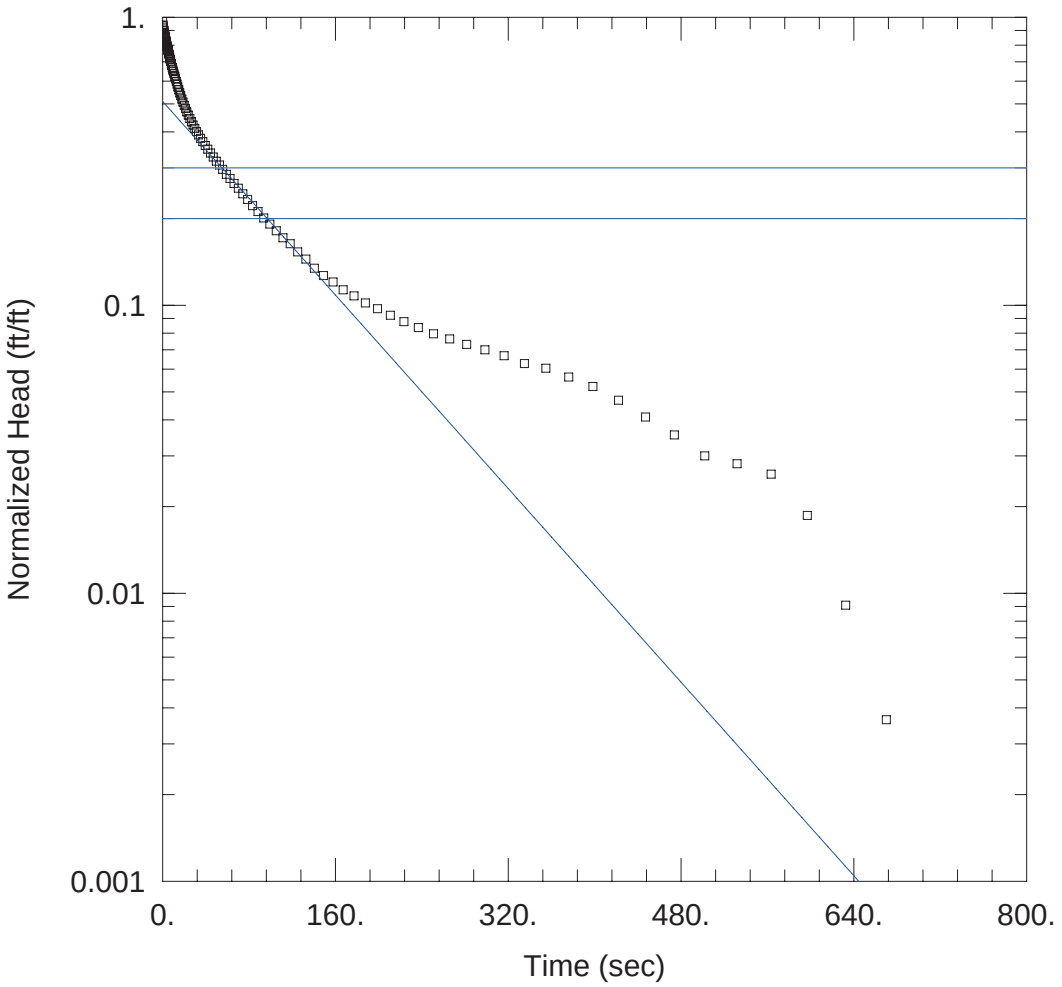
WELL DATA (MW-21)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0007524 cm/sec y0 = 1.122 ft



WELL TEST ANALYSIS

Data Set: MW-21b.aqt
Date: 10/20/07 Time: 21:35:21

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-21
Test Date: 18 September 2007

AQUIFER DATA

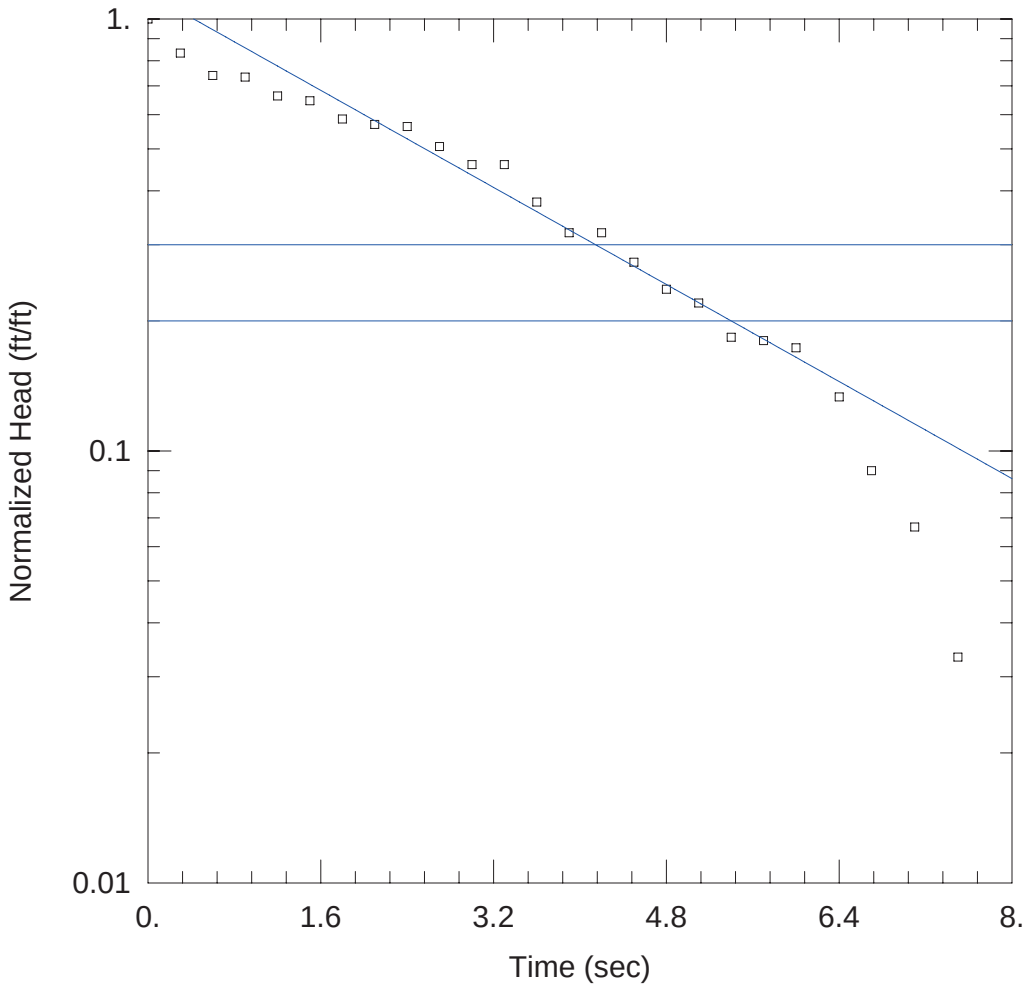
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-21)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0007524 cm/sec
y0 = 1.122 ft



WELL TEST ANALYSIS

Data Set: MW-22a.aqt
Date: 10/20/07 Time: 21:38:14

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-22
Test Date: 18 September 2007

AQUIFER DATA

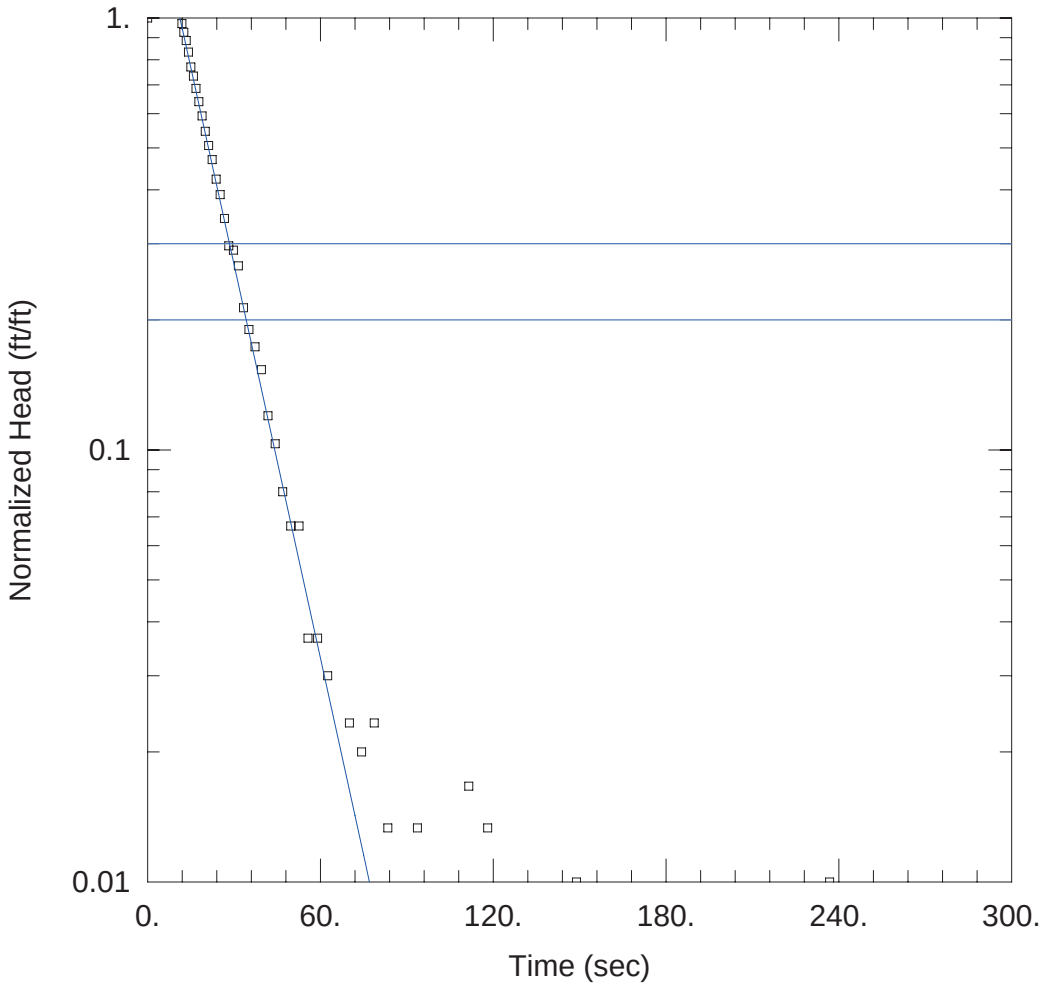
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-22)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.02831 cm/sec
y0 = 0.3439 ft



WELL TEST ANALYSIS

Data Set: MW-22b.aqt
Date: 10/20/07 Time: 21:39:49

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-22
Test Date: 18 September 2007

AQUIFER DATA

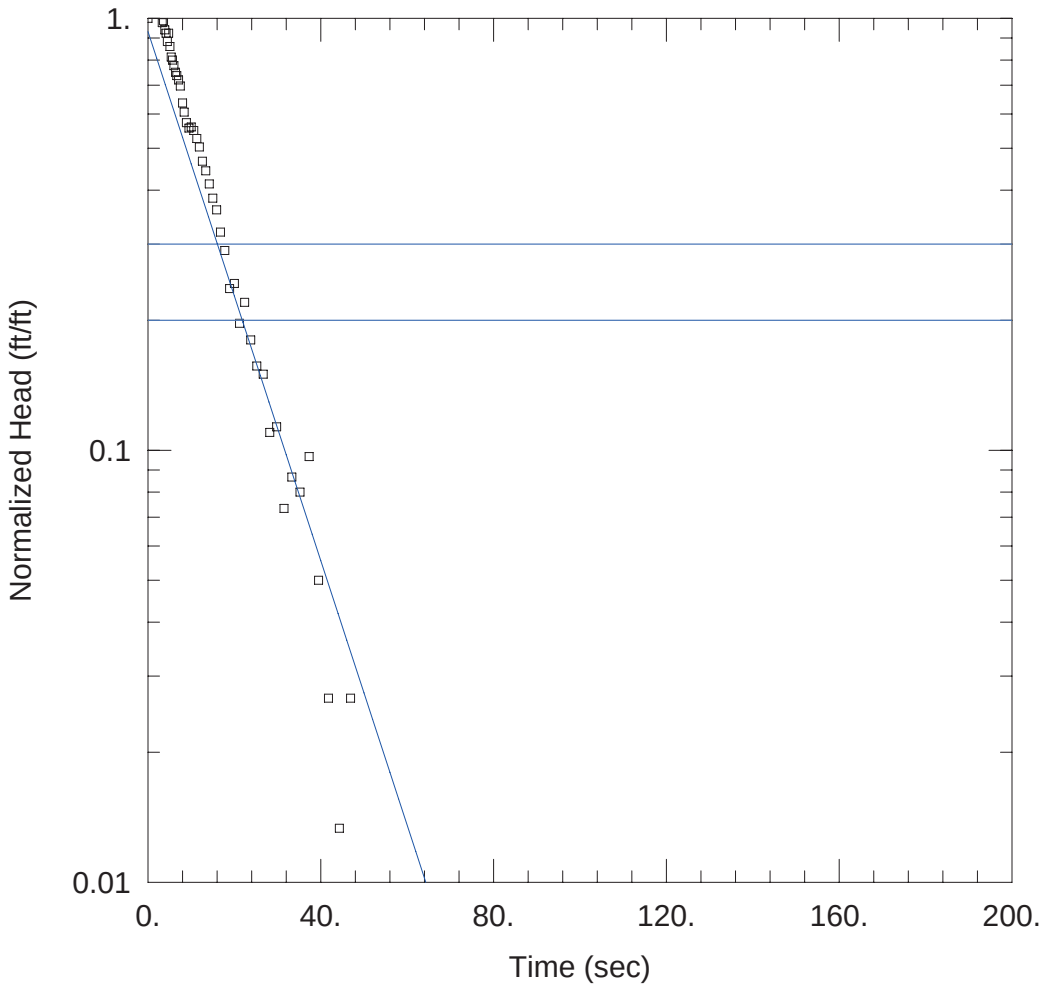
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-22)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.006124 cm/sec
y0 = 0.6569 ft



WELL TEST ANALYSIS

Data Set: MW-22c.aqt
Date: 10/20/07 Time: 21:41:17

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-22
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

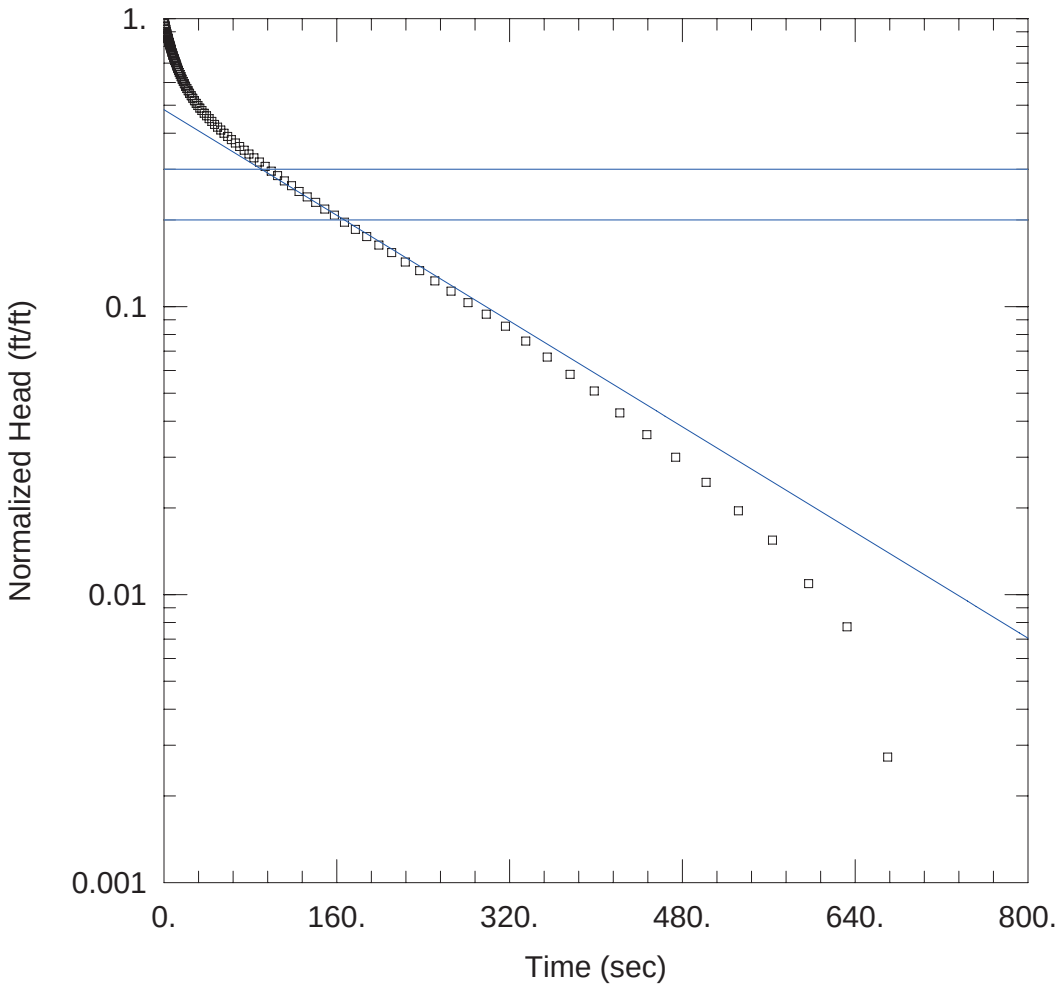
WELL DATA (MW-22)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.006173 cm/sec y0 = 0.2794 ft



WELL TEST ANALYSIS

Data Set: MW-23a.aqt
Date: 10/20/07 Time: 17:28:47

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-23
Test Date: 18 September 2007

AQUIFER DATA

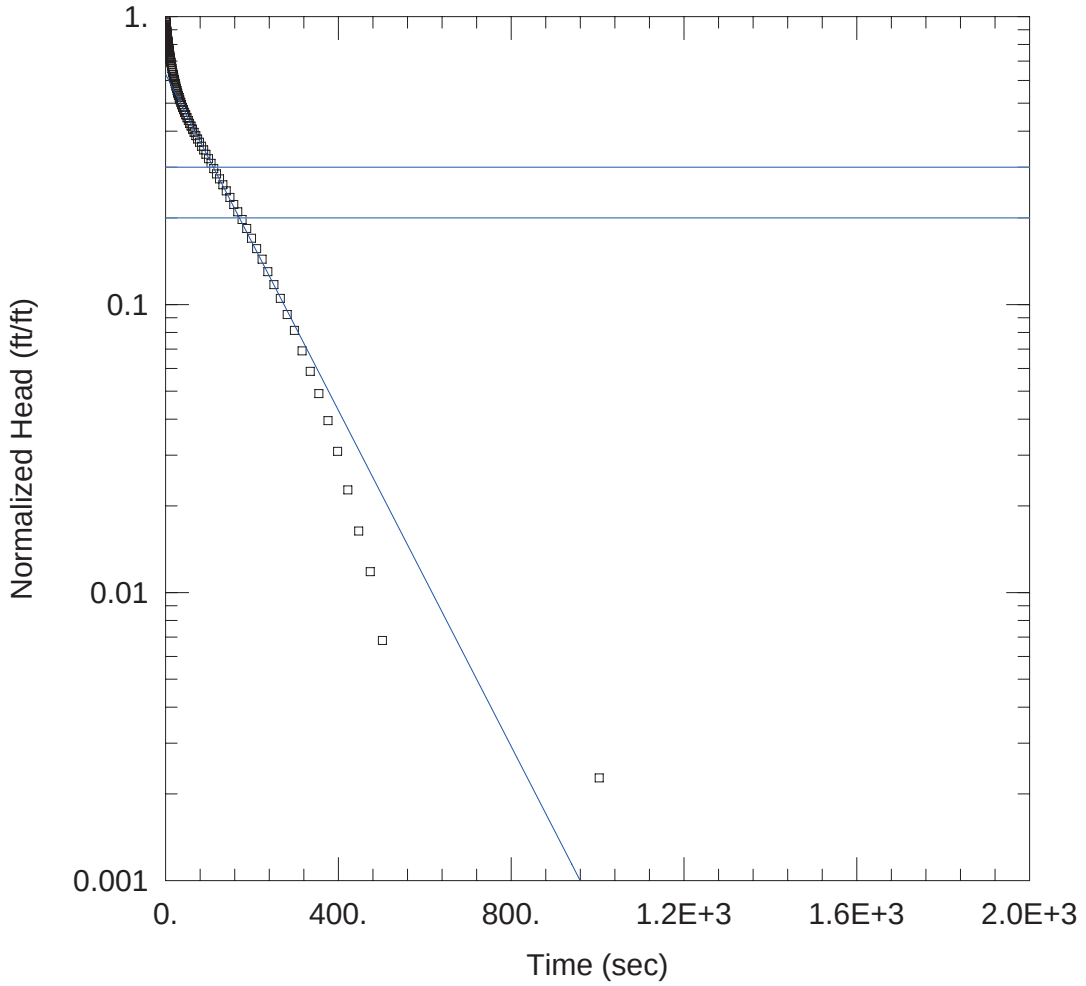
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-23)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 7. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004564 cm/sec
y0 = 1.062 ft



WELL TEST ANALYSIS

Data Set: MW-23b.aqt
Date: 10/20/07 Time: 17:34:34

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-23
Test Date: 18 September 2007

AQUIFER DATA

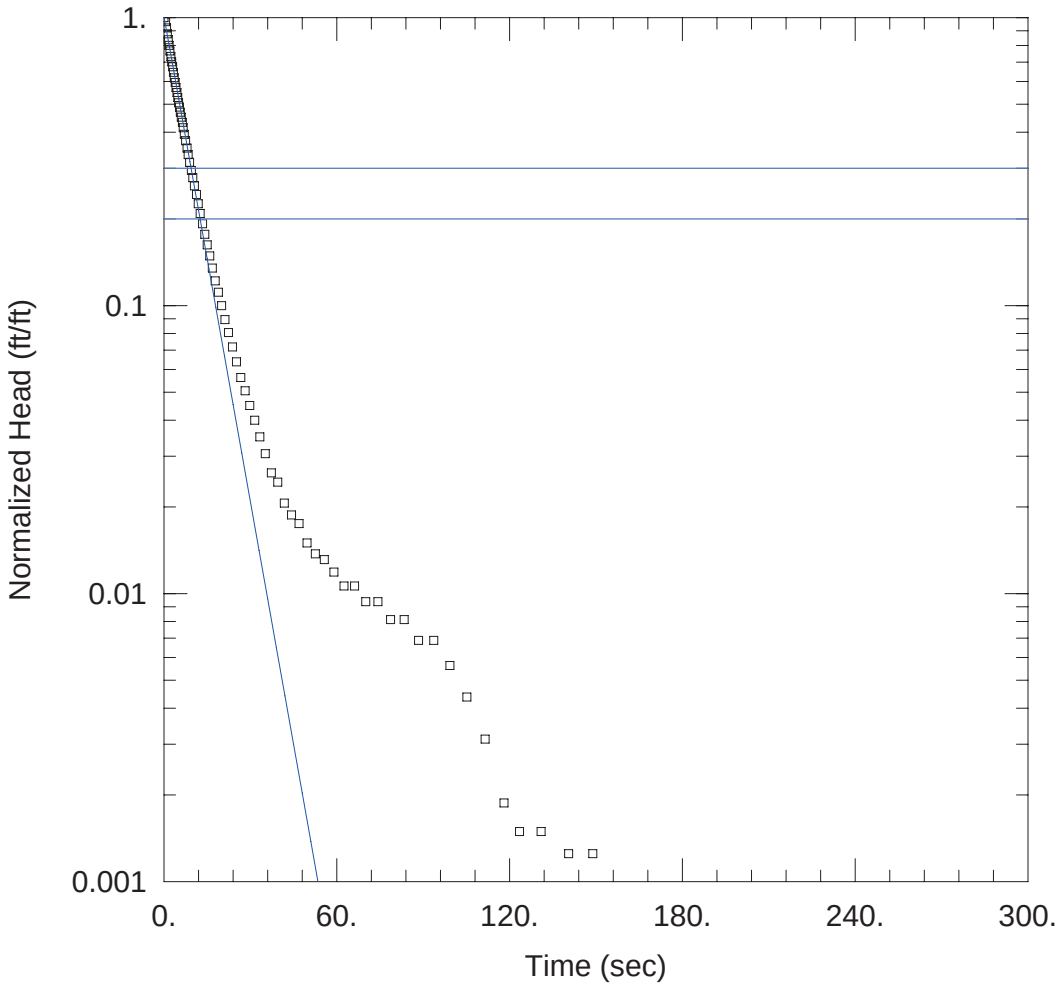
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-23)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0005281 cm/sec
y0 = 1.386 ft



WELL TEST ANALYSIS

Data Set: MW-24a.aqt
Date: 10/20/07 Time: 17:16:28

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-24
Test Date: 18 September 2007

AQUIFER DATA

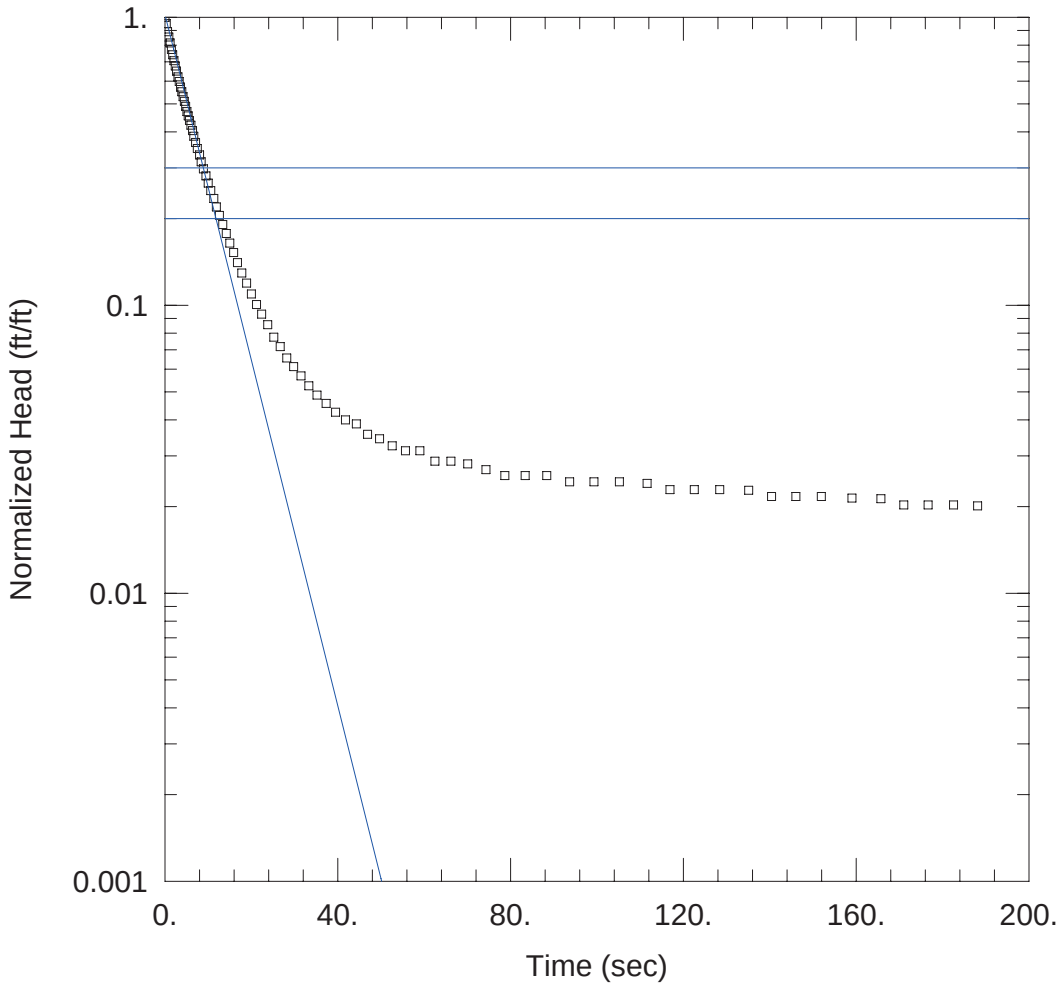
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-24)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00488 cm/sec
y0 = 1.621 ft



WELL TEST ANALYSIS

Data Set: MW-24b.aqt
Date: 10/20/07 Time: 17:17:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-24
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

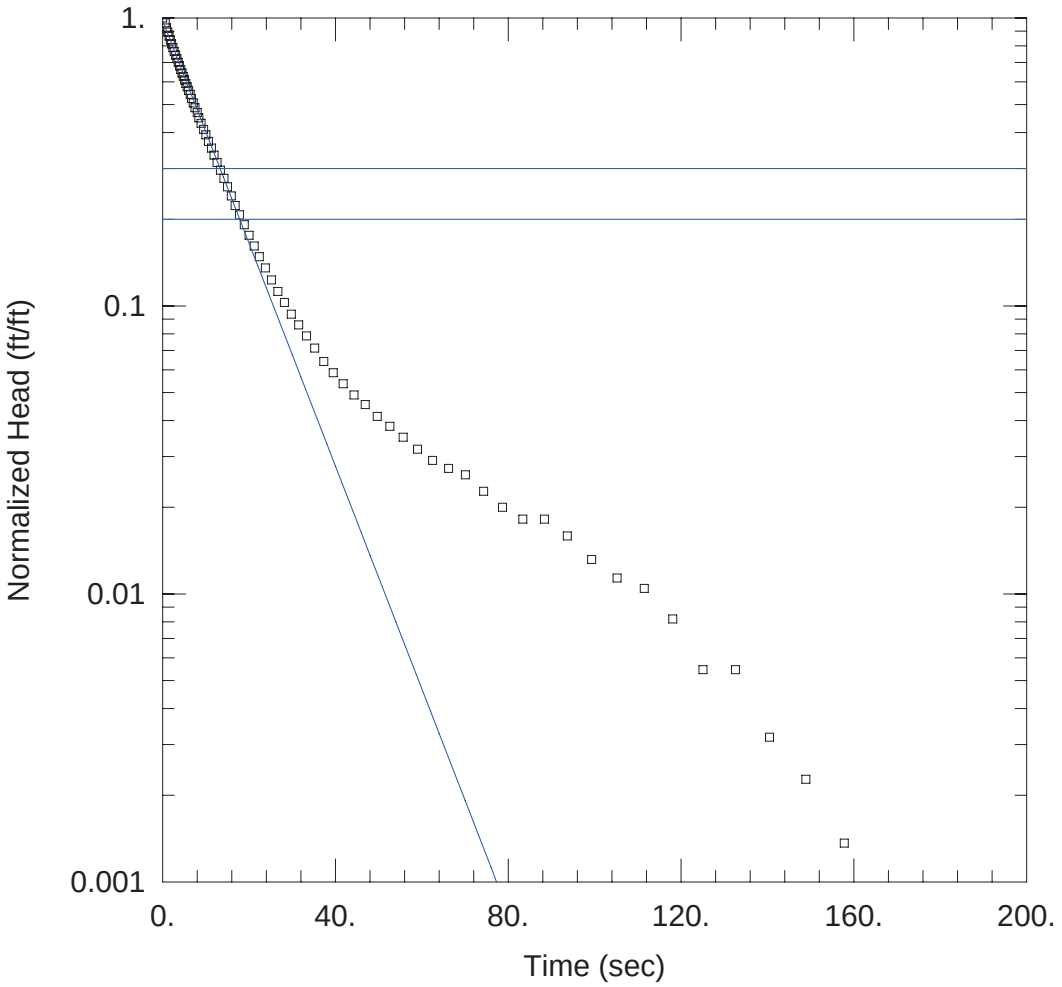
WELL DATA (MW-24)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.00461 cm/sec y0 = 1.635 ft



WELL TEST ANALYSIS

Data Set: MW-600Da.aqt
Date: 10/20/07 Time: 21:44:52

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-600D
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

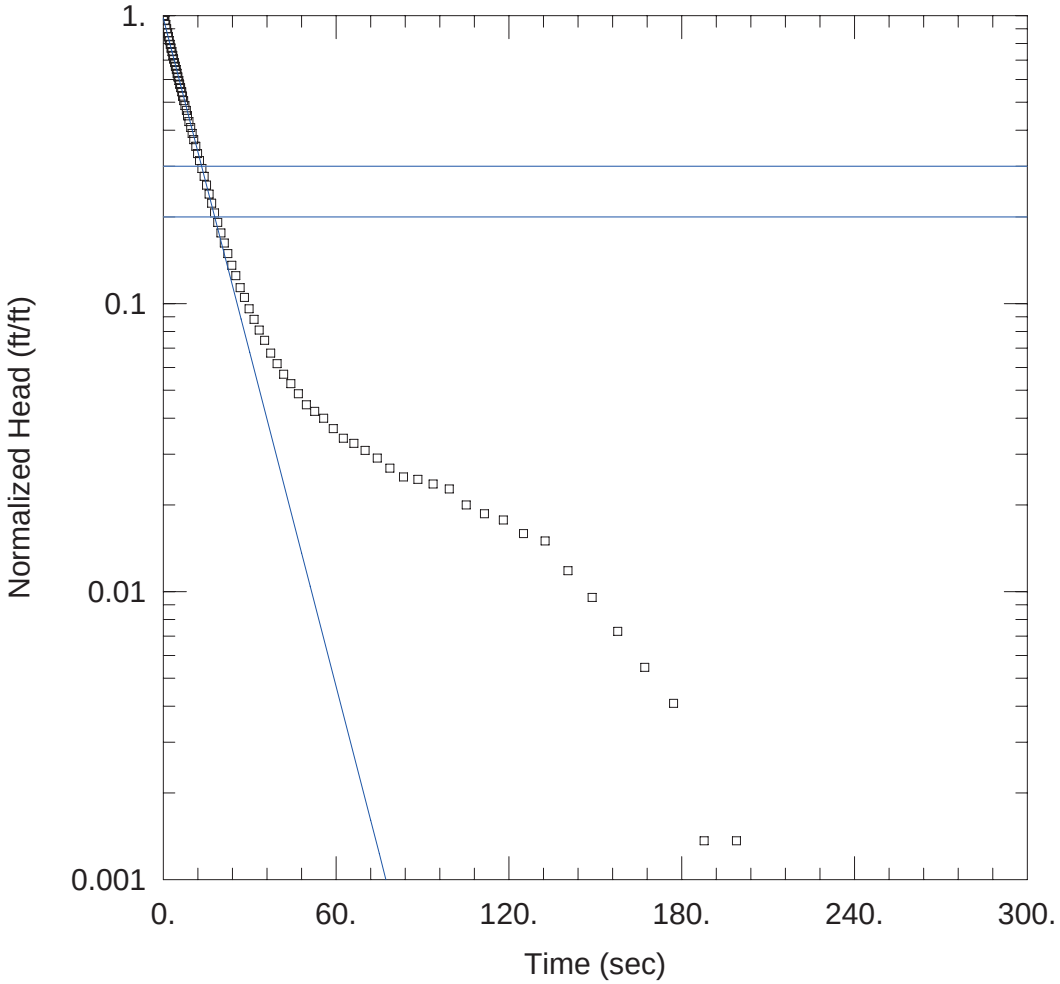
WELL DATA (MW-600D)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 23. ft
Casing Radius: 0.16 ft
Static Water Column Height: 10. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01284 cm/sec y0 = 2.155 ft



WELL TEST ANALYSIS

Data Set: MW-600Db.aqt
Date: 10/20/07 Time: 21:45:44

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-600D
Test Date: 18 September 2007

AQUIFER DATA

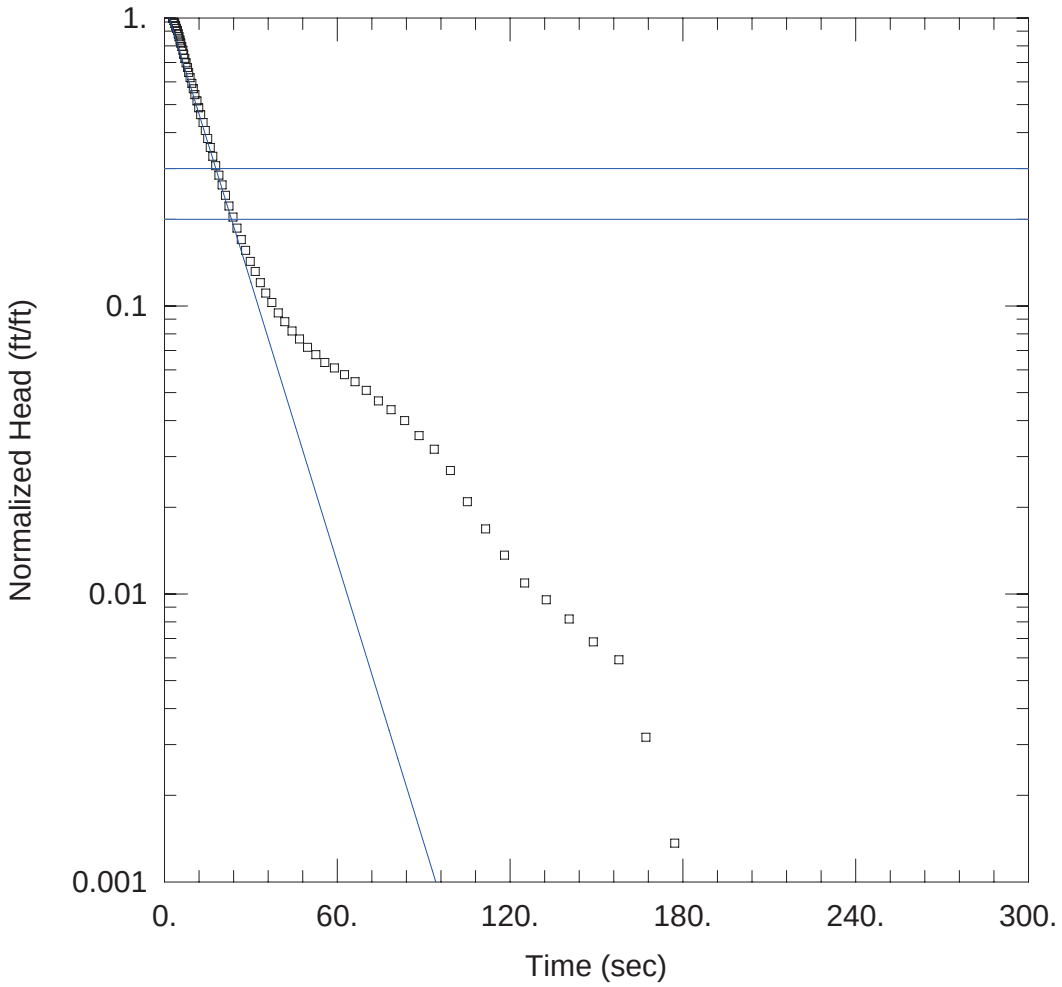
Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-600D)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 23. ft
Casing Radius: 0.16 ft
Static Water Column Height: 10. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01284 cm/sec
y0 = 2.155 ft



WELL TEST ANALYSIS

Data Set: MW-600Dc.aqt
Date: 10/20/07 Time: 21:46:56

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-600D
Test Date: 18 September 2007

AQUIFER DATA

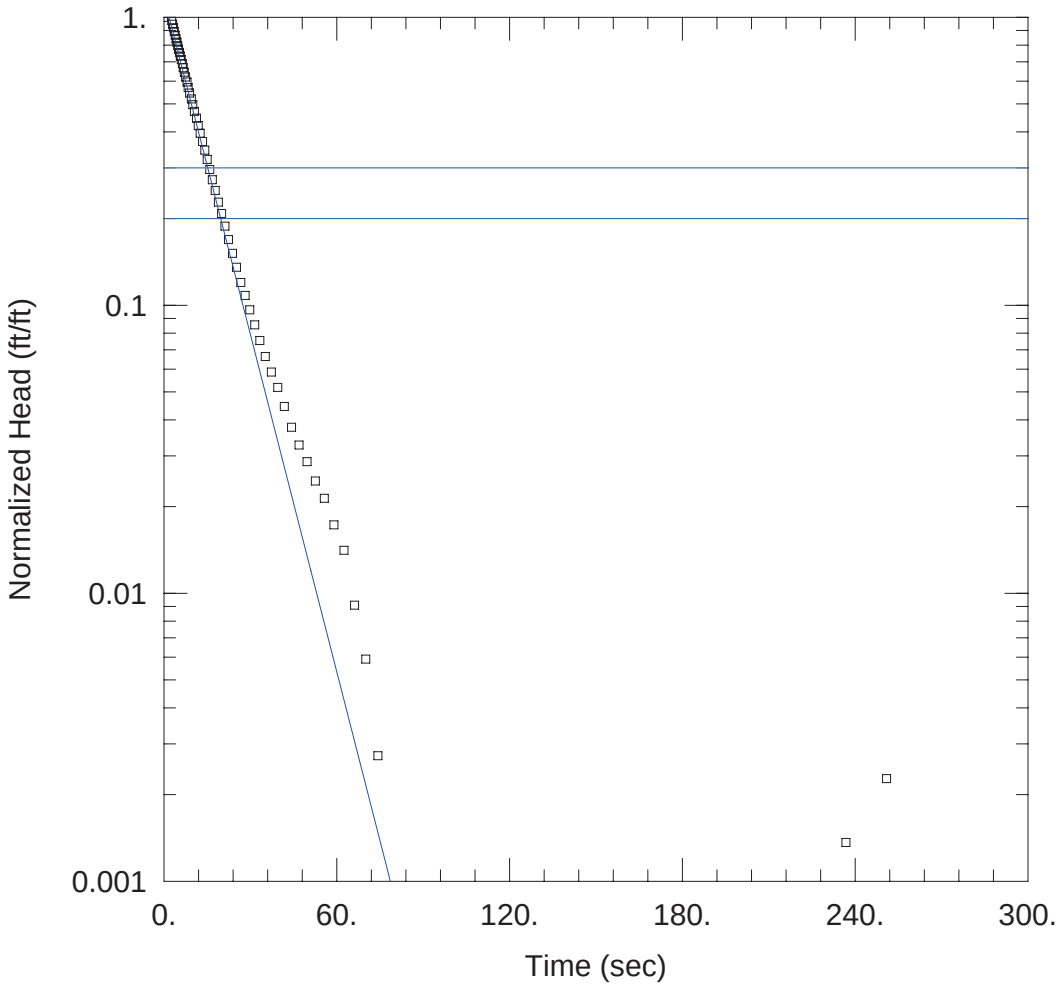
Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-600D)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 23. ft
Casing Radius: 0.16 ft
Static Water Column Height: 10. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01076 cm/sec
y0 = 2.496 ft



WELL TEST ANALYSIS

Data Set: MW-600Dd.aqt
Date: 10/20/07 Time: 21:48:36

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-600D
Test Date: 18 September 2007

AQUIFER DATA

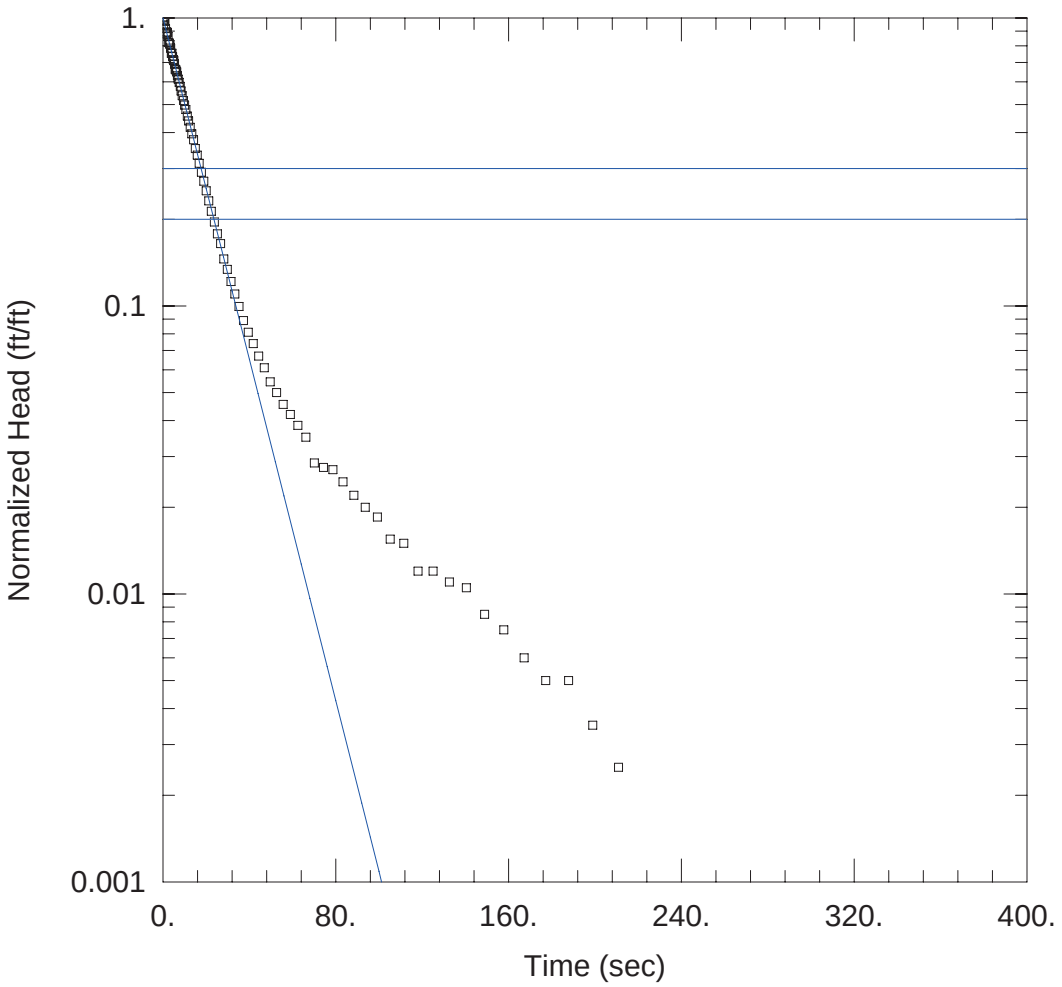
Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-600D)

Initial Displacement: 2.2 ft
Total Well Penetration Depth: 23. ft
Casing Radius: 0.16 ft
Static Water Column Height: 10. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01296 cm/sec
y0 = 2.585 ft



WELL TEST ANALYSIS

Data Set: MW-601Da.aqt
Date: 10/20/07 Time: 21:53:44

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-601D
Test Date: 18 September 2007

AQUIFER DATA

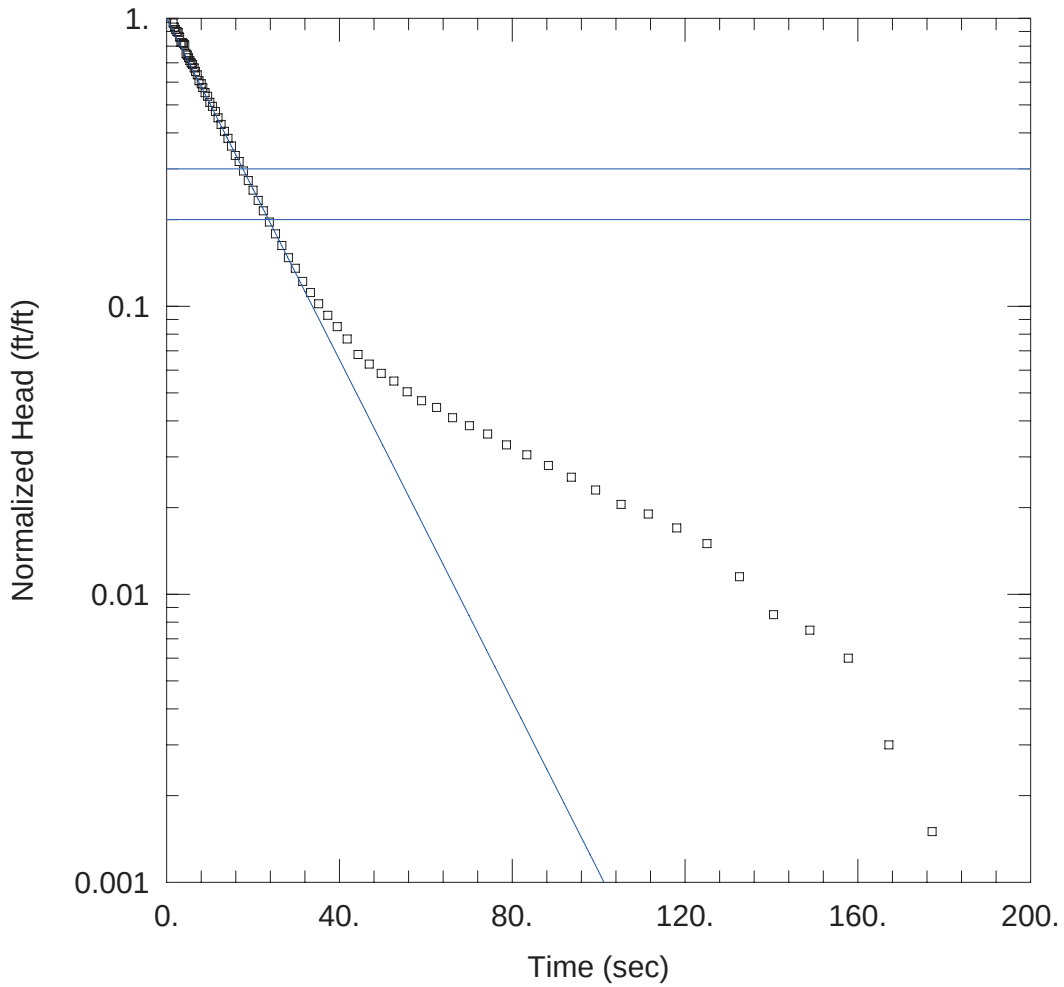
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW601D)

Initial Displacement: 2. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.009607 cm/sec
y0 = 1.998 ft



WELL TEST ANALYSIS

Data Set: MW-601Db.aqt
Date: 10/20/07 Time: 21:55:16

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-601D
Test Date: 18 September 2007

AQUIFER DATA

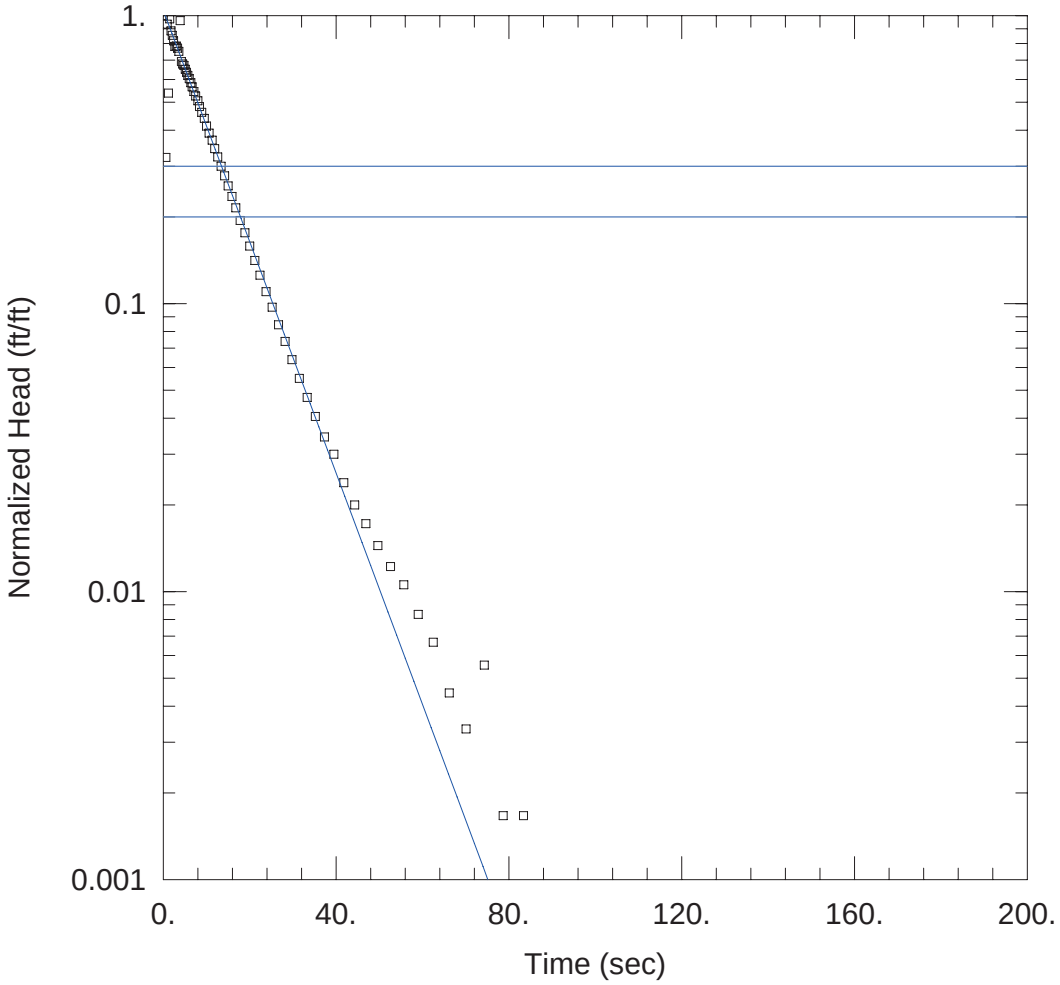
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW601D)

Initial Displacement: 2. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.009607 cm/sec
y0 = 1.998 ft



WELL TEST ANALYSIS

Data Set: MW-602Da.aqt
Date: 10/20/07 Time: 21:58:44

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-602D
Test Date: 18 September 2007

AQUIFER DATA

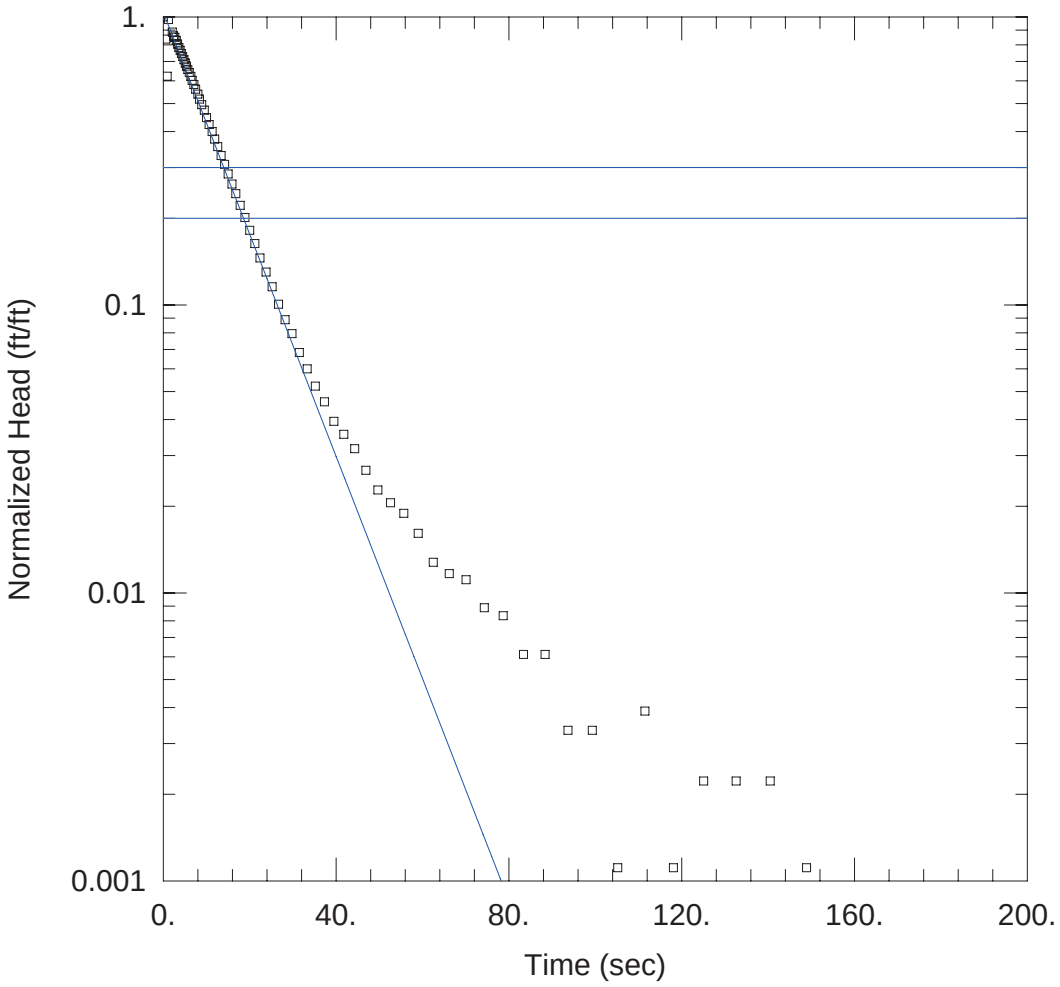
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-602D)

Initial Displacement: 1.8 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01302 cm/sec
y0 = 1.877 ft



WELL TEST ANALYSIS

Data Set: MW-602Db.aqt
Date: 10/20/07 Time: 22:00:10

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-602D
Test Date: 18 September 2007

AQUIFER DATA

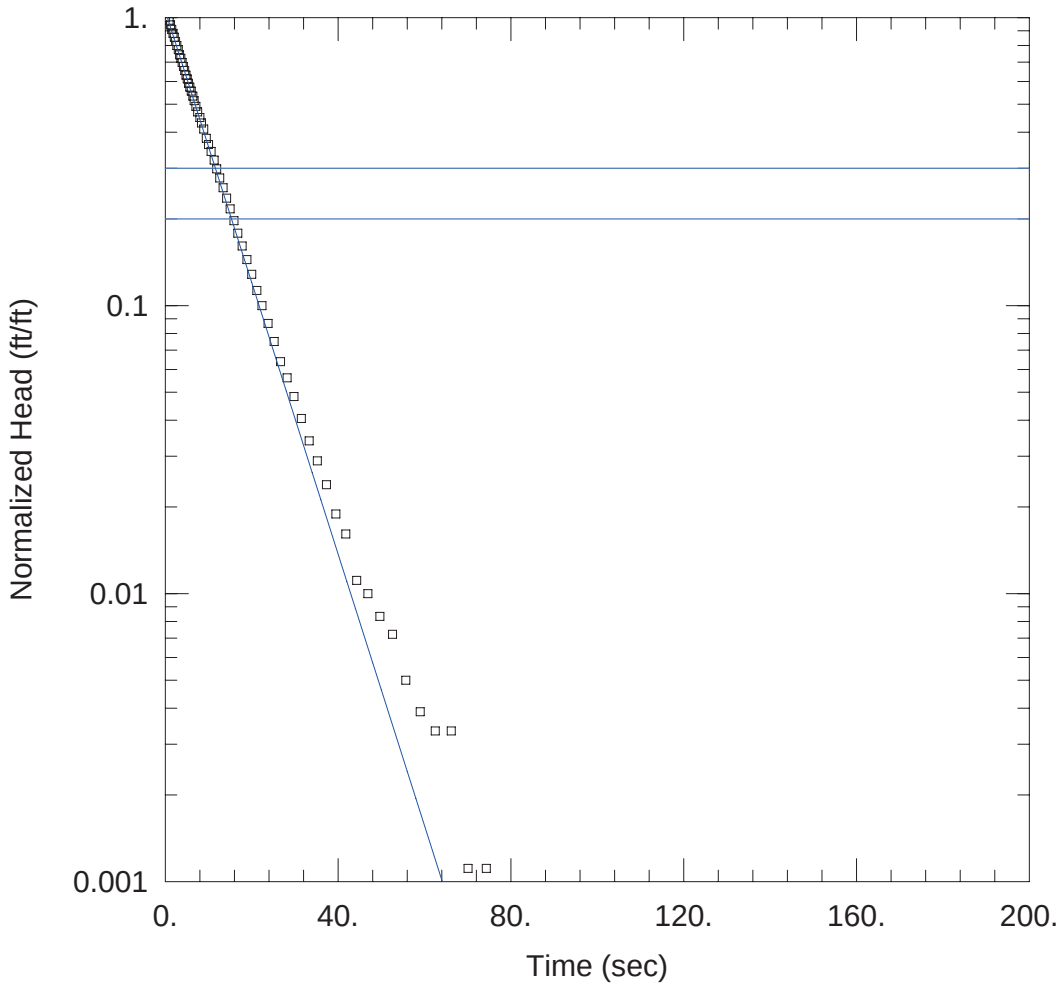
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-602D)

Initial Displacement: 1.8 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01251 cm/sec
y0 = 1.872 ft



WELL TEST ANALYSIS

Data Set: MW-602Dc.aqt
Date: 10/20/07 Time: 22:01:27

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-602D
Test Date: 18 September 2007

AQUIFER DATA

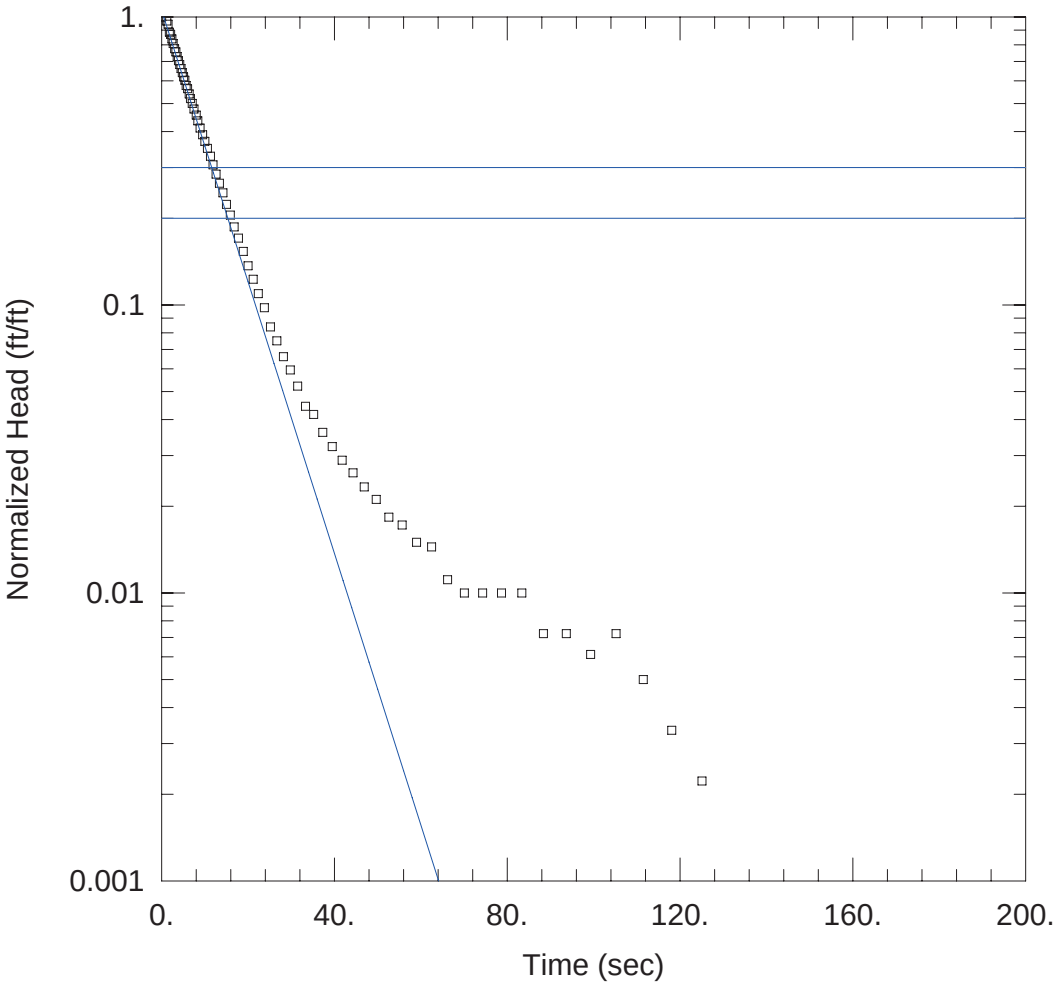
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-602D)

Initial Displacement: 1.8 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01529 cm/sec
y0 = 1.898 ft



WELL TEST ANALYSIS

Data Set: MW-602Dd.aqt
Date: 10/20/07 Time: 22:02:17

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-602D
Test Date: 18 September 2007

AQUIFER DATA

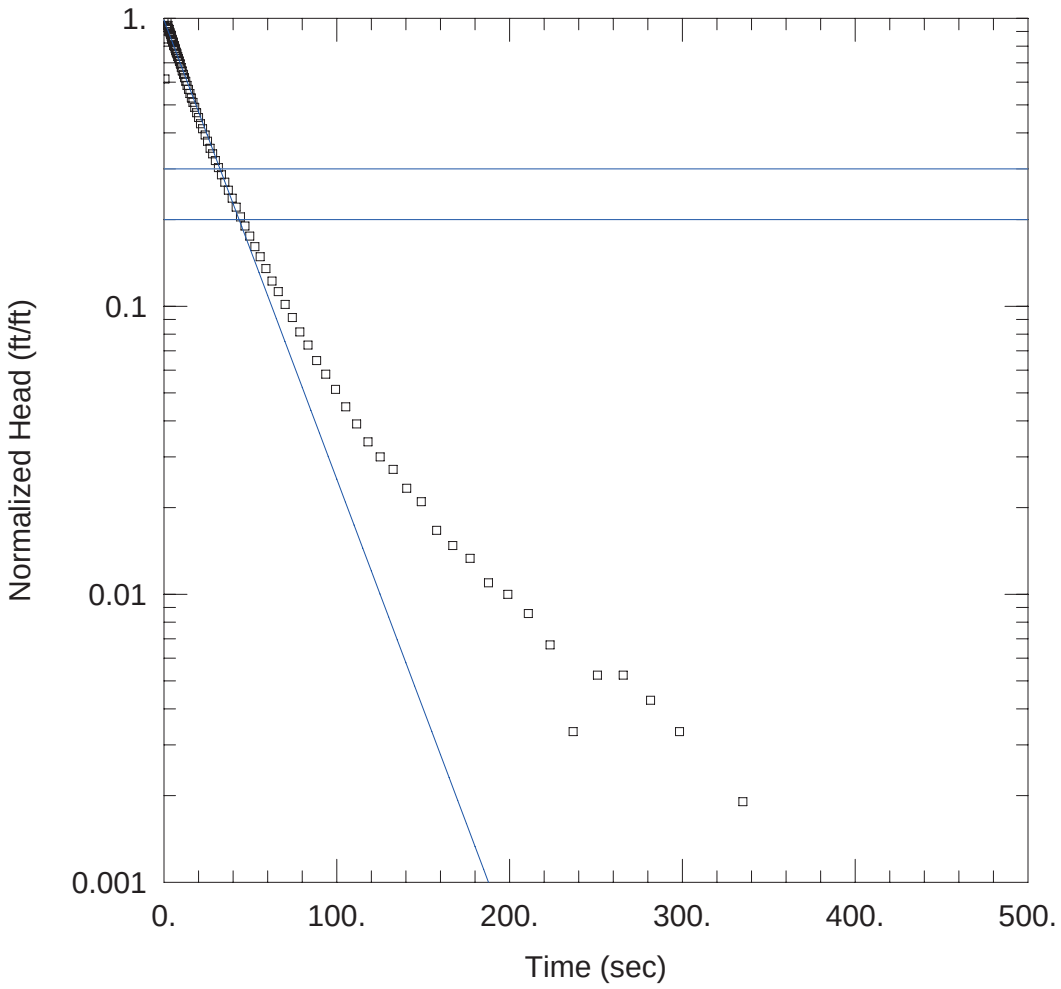
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-602D)

Initial Displacement: 1.8 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01529 cm/sec
y0 = 1.898 ft



WELL TEST ANALYSIS

Data Set: MW-603Da.aqt
Date: 10/20/07 Time: 22:04:59

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-603D
Test Date: 18 September 2007

AQUIFER DATA

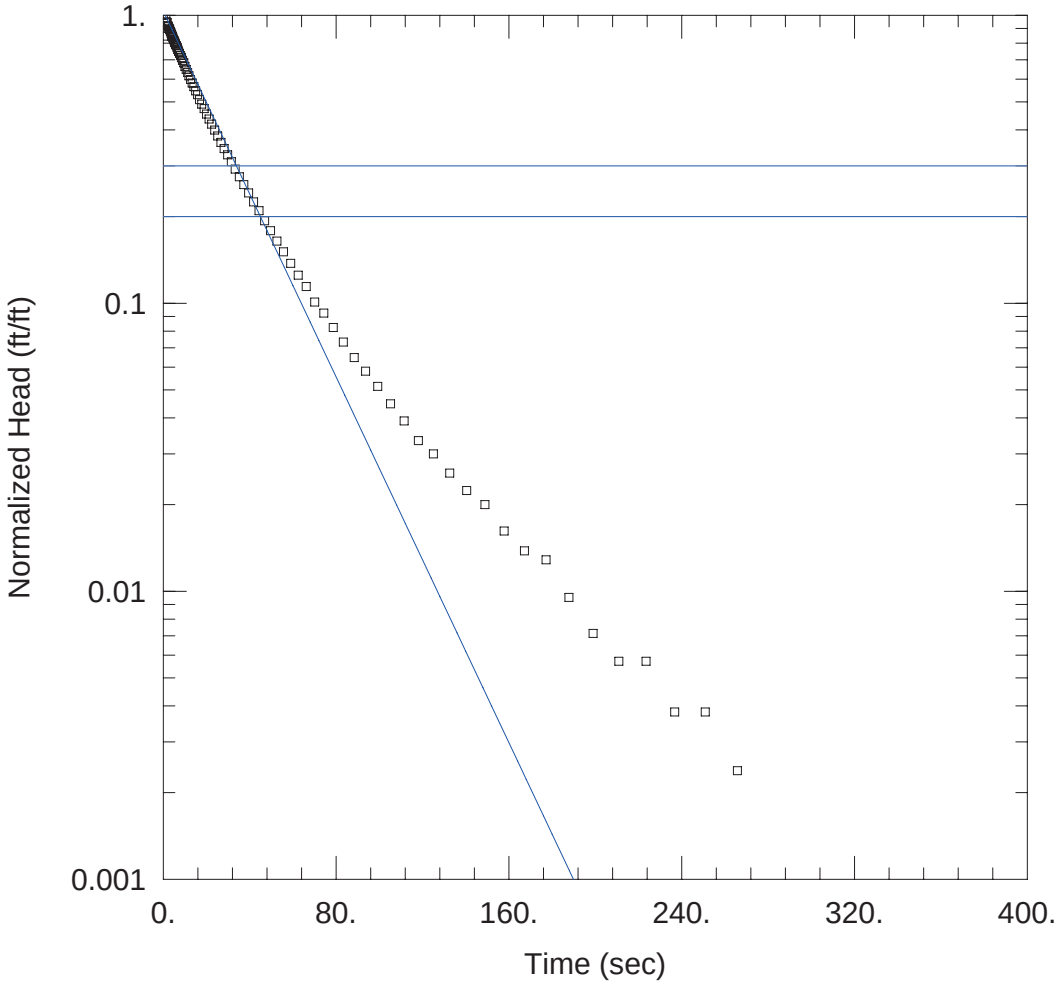
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-603D)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.005169 cm/sec
y0 = 2.07 ft



WELL TEST ANALYSIS

Data Set: MW-603Db.aqt
Date: 10/20/07 Time: 22:06:03

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-603D
Test Date: 18 September 2007

AQUIFER DATA

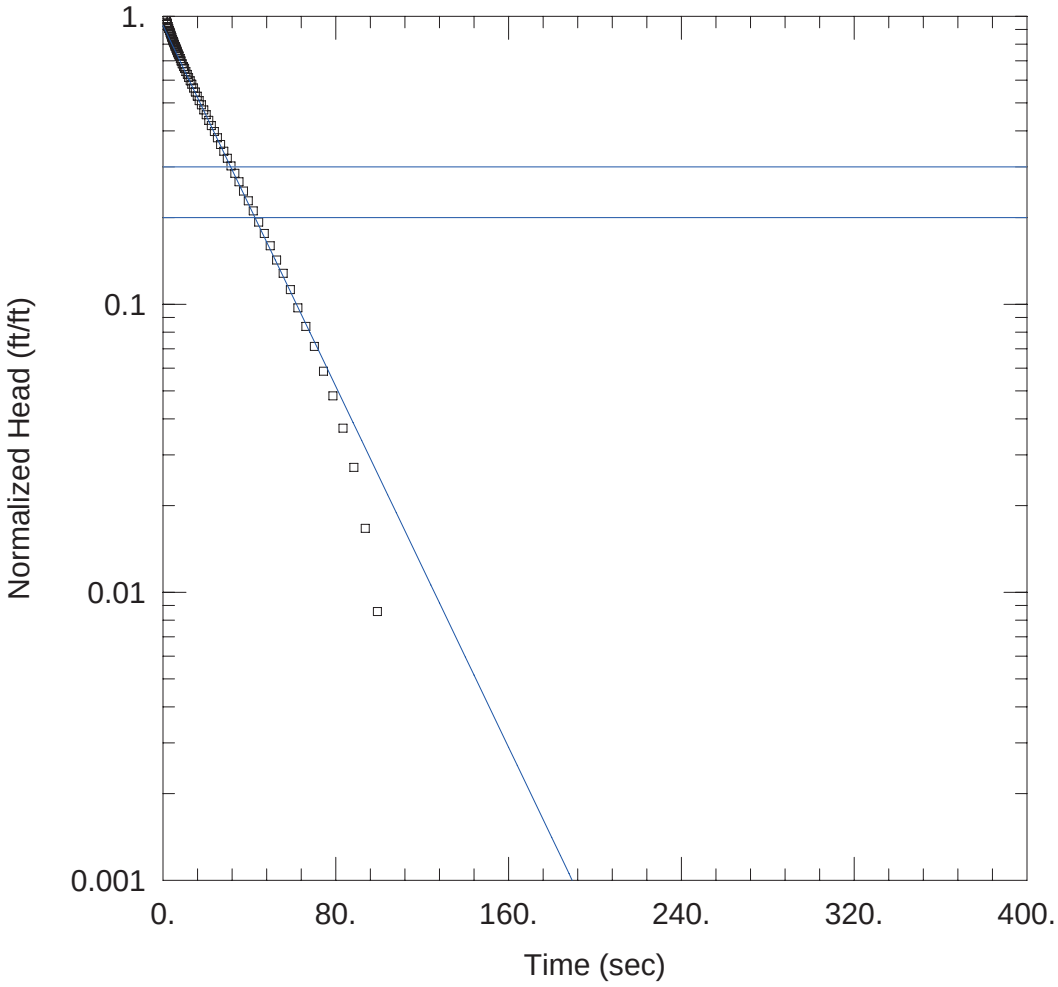
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-603D)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.005148 cm/sec
y0 = 2.169 ft



WELL TEST ANALYSIS

Data Set: MW-603Dc.aqt
Date: 10/20/07 Time: 22:06:49

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-603D
Test Date: 18 September 2007

AQUIFER DATA

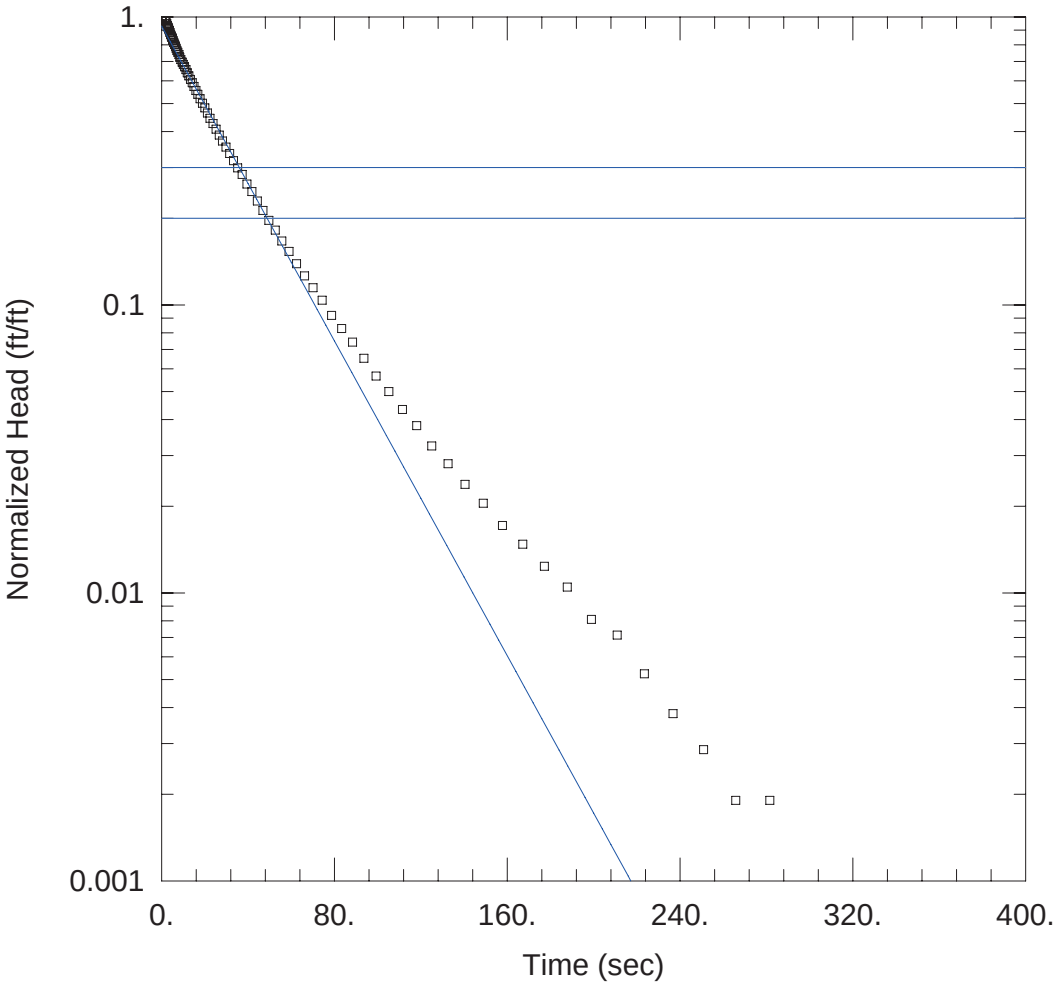
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-603D)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.005079 cm/sec
y0 = 1.951 ft



WELL TEST ANALYSIS

Data Set: MW-603Dd.aqt
Date: 10/20/07 Time: 22:07:40

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-603D
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 9. ft Anisotropy Ratio (Kz/Kr): 1.

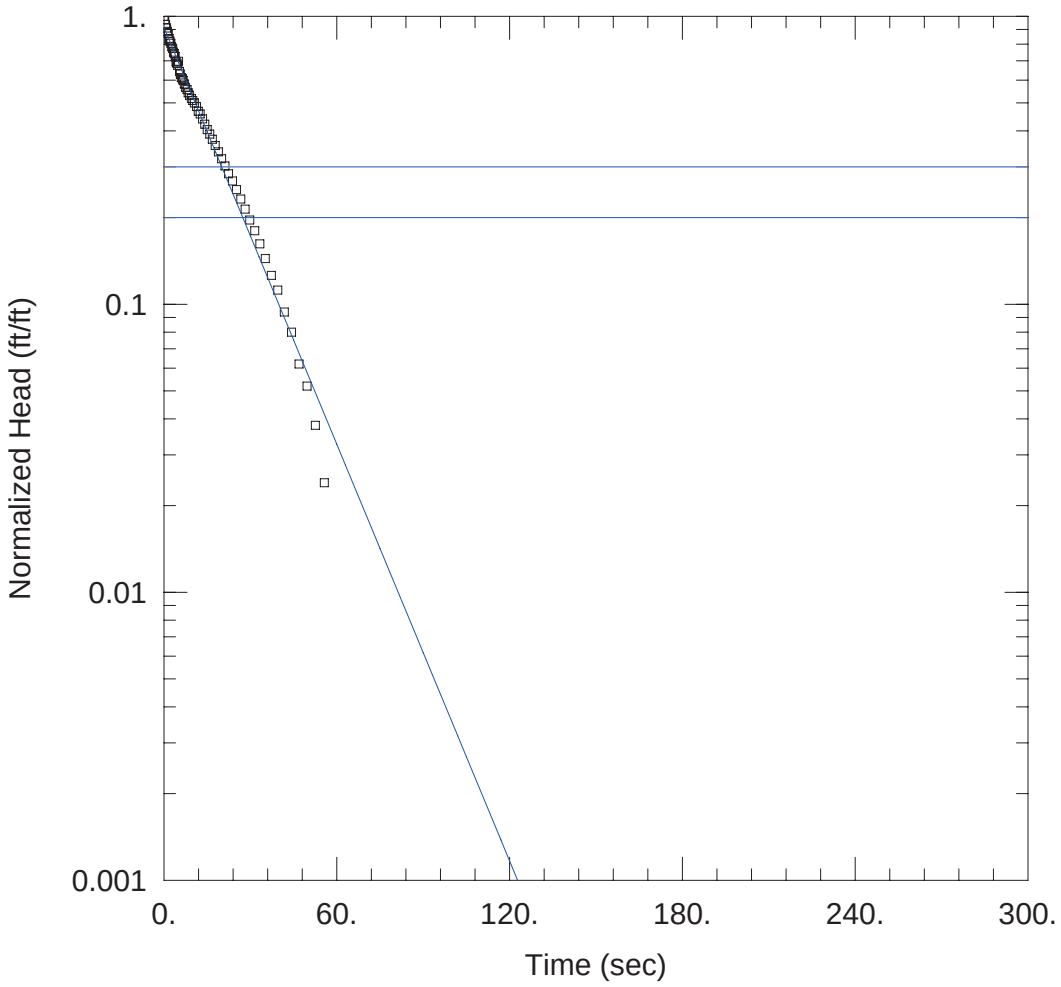
WELL DATA (MW-603D)

Initial Displacement: 2.1 ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.00443 cm/sec y0 = 1.951 ft



WELL TEST ANALYSIS

Data Set: MW-604Da.aqt
Date: 10/20/07 Time: 22:10:57

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-604D
Test Date: 18 September 2007

AQUIFER DATA

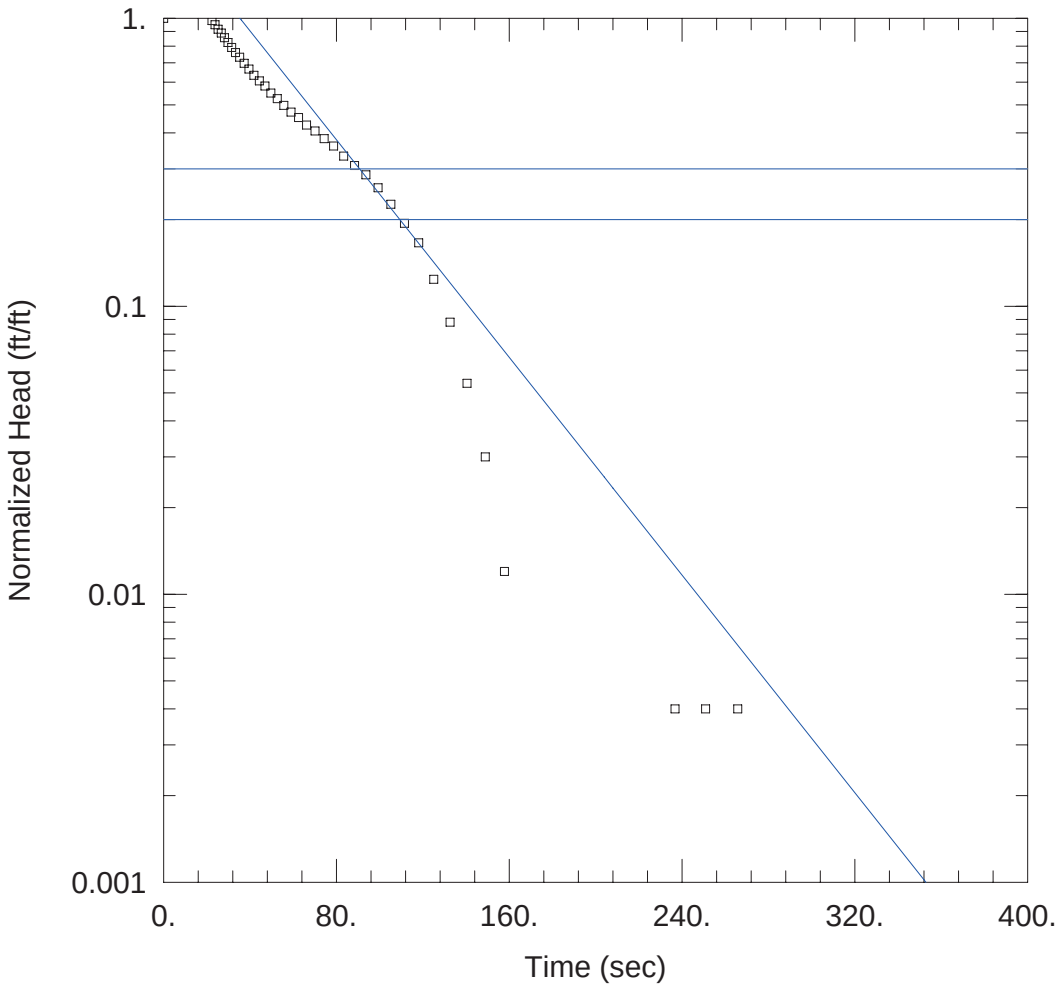
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-604D)

Initial Displacement: 0.5 ft
Total Well Penetration Depth: 19. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.007819 cm/sec
y0 = 0.4567 ft



WELL TEST ANALYSIS

Data Set: MW-604Db.aqt
Date: 10/20/07 Time: 22:12:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-604D
Test Date: 18 September 2007

AQUIFER DATA

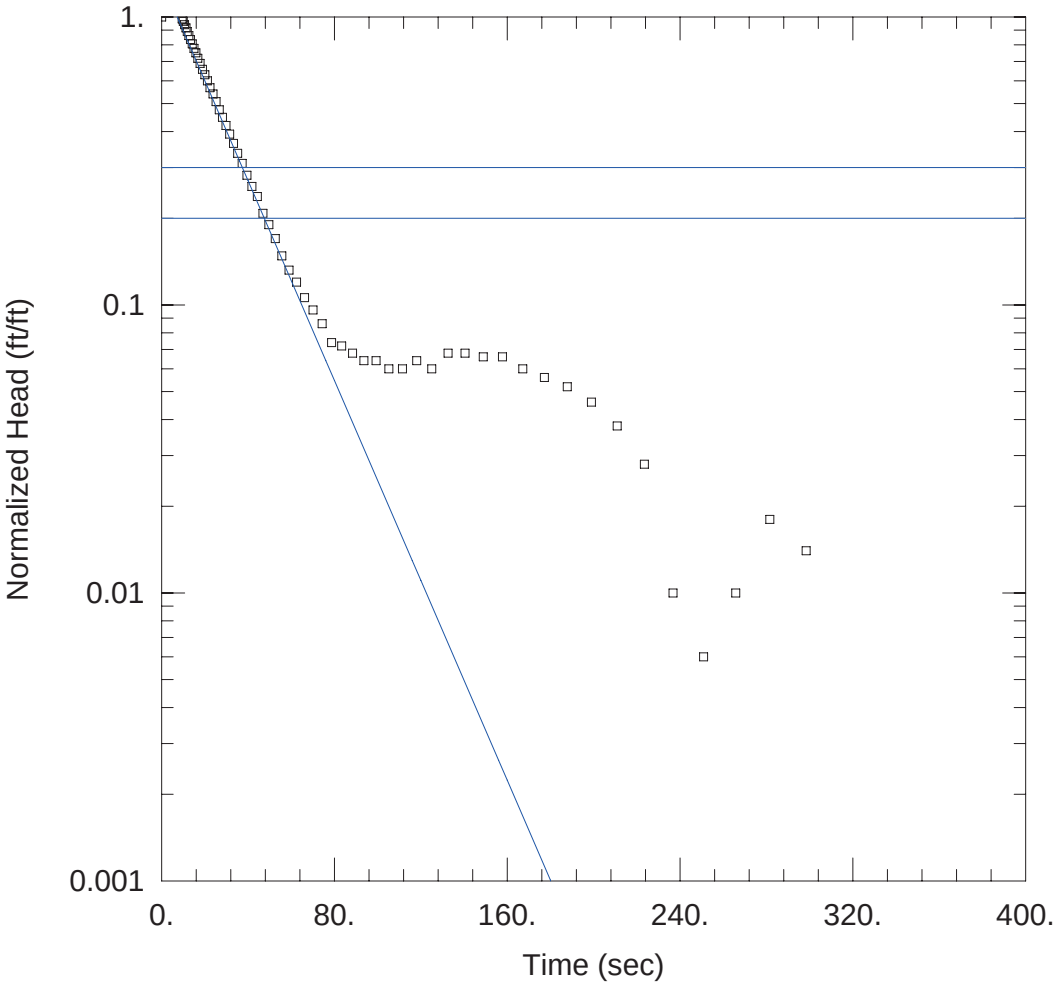
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-604D)

Initial Displacement: 0.5 ft
Total Well Penetration Depth: 19. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.003063 cm/sec
y0 = 1.078 ft



WELL TEST ANALYSIS

Data Set: MW-604Dc.aqt
Date: 10/20/07 Time: 22:13:28

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-604D
Test Date: 18 September 2007

AQUIFER DATA

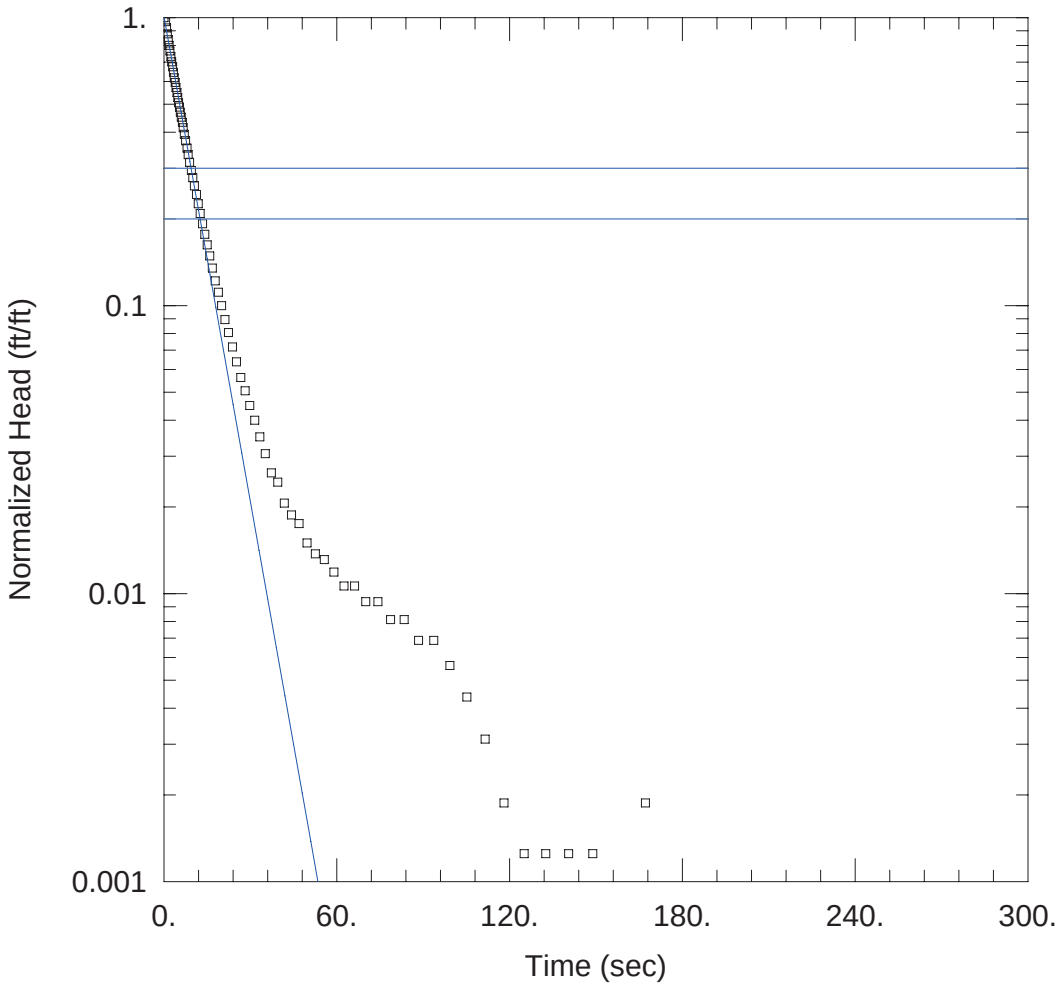
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-604D)

Initial Displacement: 0.5 ft
Total Well Penetration Depth: 19. ft
Casing Radius: 0.16 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.005625 cm/sec
y0 = 0.6668 ft



WELL TEST ANALYSIS

Data Set: MW-605Da.aqt
Date: 10/20/07 Time: 22:16:28

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-605D
Test Date: 18 September 2007

AQUIFER DATA

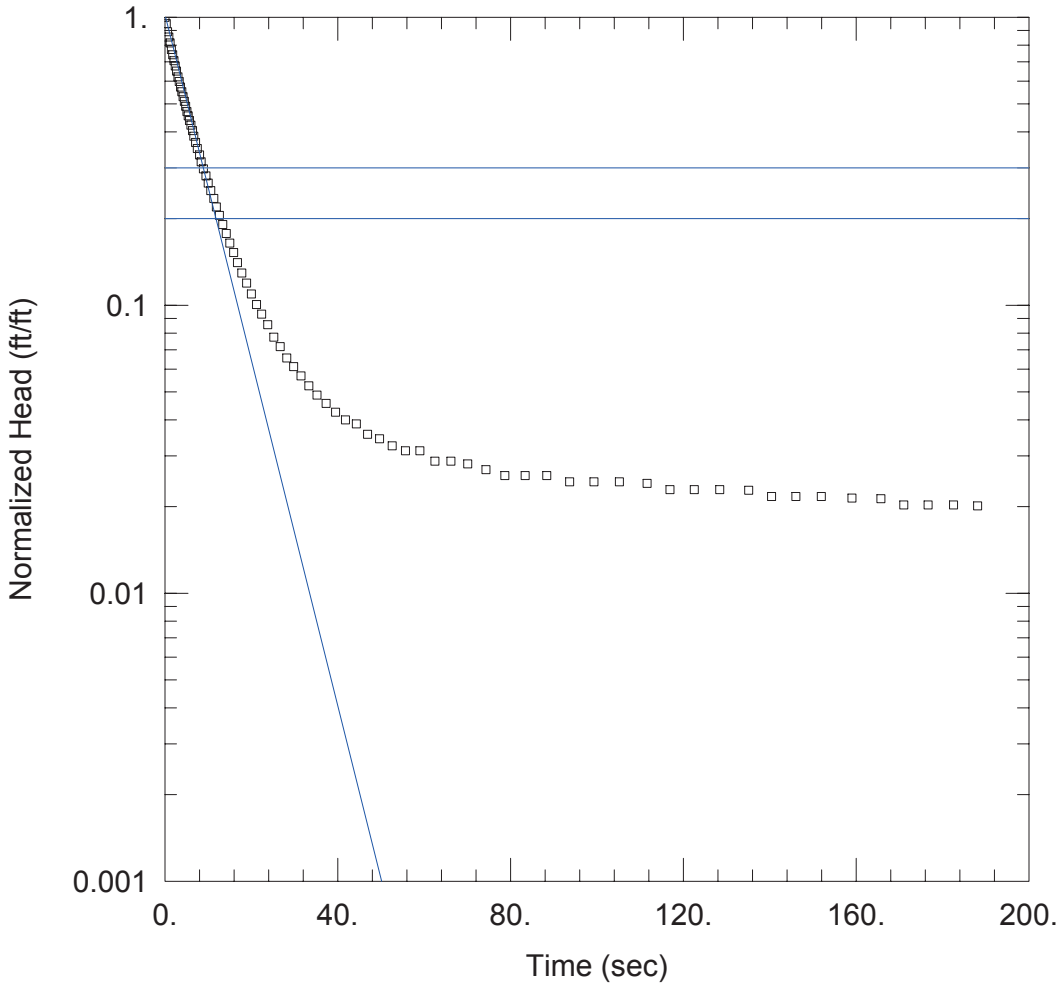
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-605D)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01088 cm/sec
y0 = 1.621 ft



WELL TEST ANALYSIS

Data Set: MW-24b.aqt
Date: 10/20/07 Time: 17:17:30

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-24
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

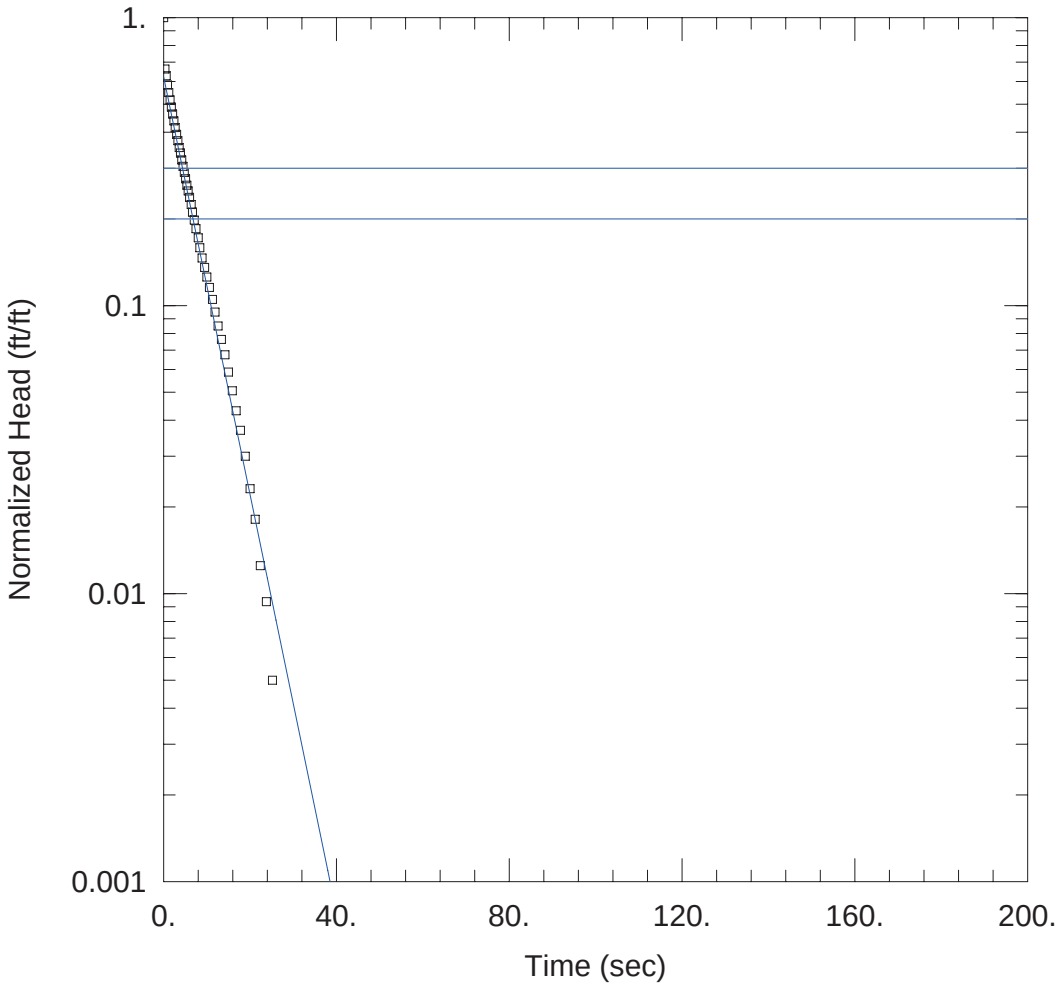
WELL DATA (MW-24)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.00461 cm/sec y0 = 1.635 ft



WELL TEST ANALYSIS

Data Set: MW-605Dc.aqt
Date: 10/20/07 Time: 22:18:17

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-605D
Test Date: 18 September 2007

AQUIFER DATA

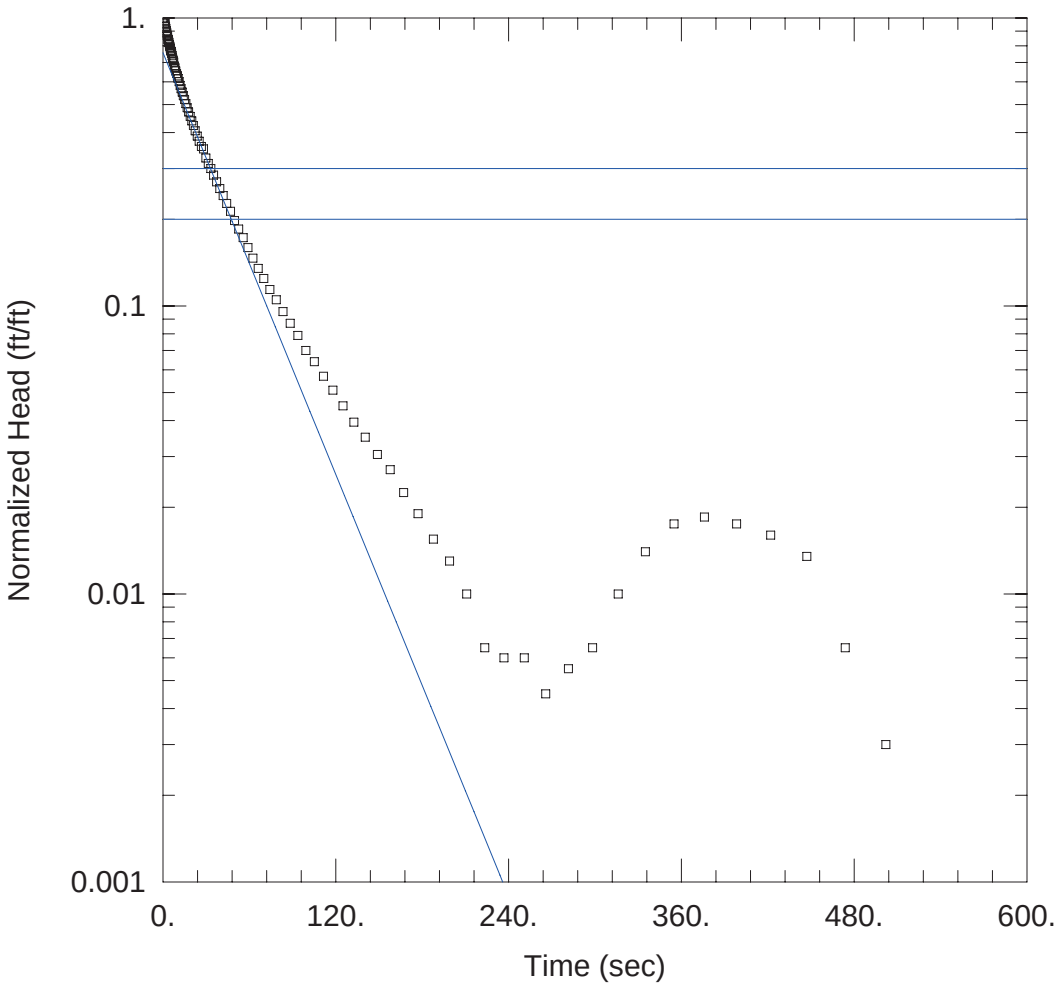
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-605D)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01403 cm/sec
y0 = 0.9949 ft



WELL TEST ANALYSIS

Data Set: MW-607Da.aqt
Date: 10/20/07 Time: 22:21:04

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-607D
Test Date: 18 September 2007

AQUIFER DATA

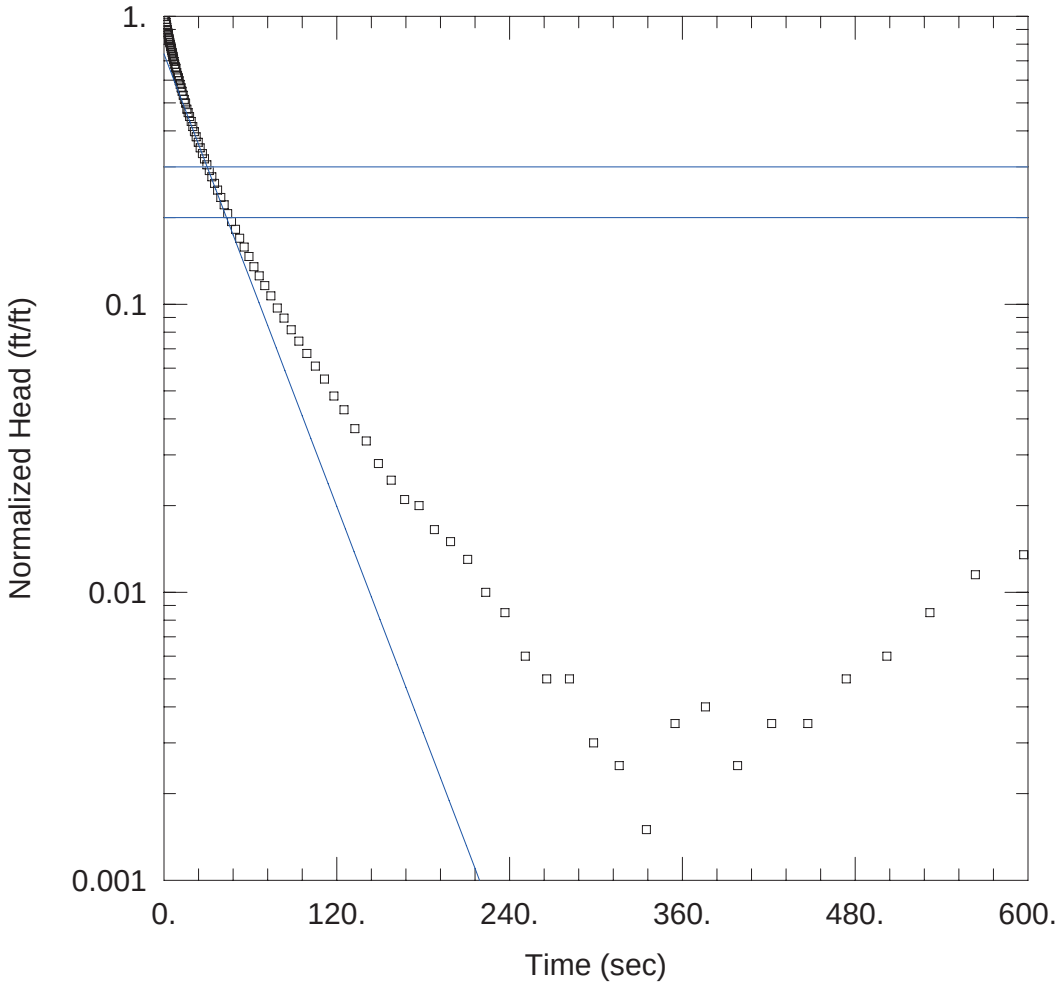
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 2. ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00246 cm/sec
y0 = 1.514 ft



WELL TEST ANALYSIS

Data Set: MW-607Db.aqt
Date: 10/20/07 Time: 22:21:47

PROJECT INFORMATION

Company: Earth Tech
Client: GUTERL
Project: 100657
Location: New York
Test Well: MW-607D
Test Date: 18 September 2007

AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 2. ft
Total Well Penetration Depth: 18. ft
Casing Radius: 0.16 ft
Static Water Column Height: 8. ft
Screen Length: 10. ft
Well Radius: 0.16 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002639 cm/sec y0 = 1.479 ft

APPENDIX N

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/2/2007	Casing Diameter	2 inches
Field Personnel	Tamara Raby & Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	599.92 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.44 1/100 ft
Well ID #	MW-1	Land Surface Elevation	598.18 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	9.7 to 14.7 1/100 ft
Weather Conditions	sunny, light breeze		
Air Temperature	90-95 ° F		
Total Depth (TWD) Below Top of Casing =	16.74 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.20 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	9.54 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.56 gal		
3 Casing Volumes =	4.67 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Dup
250ml Poly	TSS	2	none	Dup

FIELD ANALYSES

Flow Rate (ml/min)	150	175	175	200	200	200		
Time (Military)	14:15	14:20	14:25	14:30	14:35	14:40		
Depth to Groundwater Below Top of Casing (ft)	7.50	7.55	7.57	7.57	7.58	7.59		
Drawdown (ft)	-0.30	-0.35	-0.37	-0.37	-0.38	-0.39		
pH (S.U.)	7.05	7.04	7.06	7.06	7.07	7.08		
Sp. Cond. (mS/cm)	1.876	1.885	1.906	1.902	1.902	1.903		
Turbidity (NTUs)	7.00	2.03	1.45	1.30	1.34	1.20		
Dissolved Oxygen (mg/L)	0.61	0.44	0.32	0.31	0.26	0.23		
Water Temperature (°C)	17.14	16.89	16.38	15.56	16.42	16.32		
ORP (mV)	28.5	13.2	4.4	-3.7	-3.5	-6.0		

Physical appearance at start — Color: clear with iron bacteria; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 14:10. Set tubing intake at center of screen. Start sampling at 14:45. Sample ID: A02MW1-U/F. Duplicate sample ID: A02MW51-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/7 2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	598.78 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	599.17 1/100 ft
Well ID #	MW-2	Land Surface Elevation	596.96 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	9.2 to 14.2 1/100 ft
Weather Conditions	cloudy, humid		
Air Temperature	75-80 ° F		
Total Depth (TWD) Below Top of Casing =	16.00 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	8.68 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	7.32 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.19 gal		
3 Casing Volumes =	3.58 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	175	100	100	150	175		
Time (Military)	8:50	8:55	9:00	9:05	9:10	9:15		
Depth to Groundwater Below Top of Casing (ft)	8.70	8.71	8.70	8.71	8.73	8.73		
Drawdown (ft)	-0.02	-0.03	-0.02	-0.03	-0.05	-0.05		
pH (S.U.)	8.17	8.86	8.90	8.93	8.92	8.95		
Sp. Cond. (mS/cm)	0.562	0.561	0.559	0.554	0.554	0.552		
Turbidity (NTUs)	0.65	1.50	1.00	1.09	0.14	0.24		
Dissolved Oxygen (mg/L)	0.68	0.40	0.59	0.34	0.30	0.29		
Water Temperature (°C)	15.50	15.65	15.87	15.96	15.85	15.56		
ORP (mV)	-197.0	-184.8	-184.6	-187.0	-187.7	-19.9		

Physical appearance at start — Color: clear; Odor: yes (faint sulfer)

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (sulfer)

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 8:45. Set tubing intake at center of screen. Start sampling at 9:20. Sample ID: A02MW2-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/7 2007
Field Personnel: Emily Laity
Site Name: **Guterl Steel FUSRAP Site, Lockport, New York**
Earth Tech Job #: **100657**
Well ID #: MW-3
Upgradient ____ Downgradient ____
Weather Conditions: cloudy, raining (at times downpour at others steady rain)
Air Temperature: 75-80 ° F
Total Depth (TWD) Below Top of Casing = 16.04 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 6.30 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 9.74 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.59 gal
3 Casing Volumes = 4.76 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.03 1/100 ft
Outer Casing Elevation: 599.49 1/100 ft
Land Surface Elevation: 597.27 1/100 ft
Screened Interval (below land surface): 9.1 to 14.1 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	250	275	275	250-275		
Time (Military)	14:10	14:15	14:20	14:25	14:30	14:35		
Depth to Groundwater Below Top of Casing (ft)	6.34	6.34	6.34	6.34	6.34	6.34		
Drawdown (ft)	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04		
pH (S.U.)	7.93	7.98	8.00	8.06	8.10	8.14		
Sp. Cond. (mS/cm)	0.729	0.730	0.732	0.731	0.731	0.731		
Turbidity (NTUs)	clear	clear	clear	clear	clear	clear		
Dissolved Oxygen (mg/L)	0.21	0.18	0.17	0.16	0.18	0.17		
Water Temperature (°C)	14.10	14.13	14.11	14.03	14.01	13.95		
ORP (mV)	21.2	19.1	18.9	19.0	17.1	16.2		

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 13:50. Set tubing intake at center of screen. Start sampling at 14:45. Sample ID: A02MW3-U/F. Unable to collect turbidity readings due to equipment malfunction cause by humid conditions.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/8/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-4
Upgradient ____ Downgradient ____
Weather Conditions: sunny, breezy
Air Temperature: 80-85 ° F
Total Depth (TWD) Below Top of Casing = 16.41 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 5.78 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.63 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.73 gal
3 Casing Volumes = 5.20 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.52 1/100 ft
Outer Casing Elevation: 599.95 1/100 ft
Land Surface Elevation: 597.70 1/100 ft
Screened Interval (below land surface): 9 to 14 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200	200	225	225	
Time (Military)	14:50	14:55	15:00	15:05	15:10	15:15	15:20	
Depth to Groundwater Below Top of Casing (ft)	6.30	6.08	6.10	6.10	6.11	6.15	6.15	
Drawdown (ft)	-0.52	-0.30	-0.32	-0.32	-0.33	-0.37	-0.37	
pH (S.U.)	7.26	7.25	7.75	7.68	7.69	7.56	7.56	
Sp. Cond. (mS/cm)	0.584	0.698	0.593	0.587	0.585	0.577	0.577	
Turbidity (NTUs)	1.85	1.70	1.09	1.00	0.91	0.71	0.58	
Dissolved Oxygen (mg/L)	0.90	0.32	0.25	0.22	0.22	0.19	0.18	
Water Temperature (°C)	18.19	17.30	16.97	16.90	16.70	16.70	16.71	
ORP (mV)	-29.3	-52.2	17.9	38.2	47.2	48.8	49.6	

Physical appearance at start — Color: Clear; Odor: yes (sulfur); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 14:45. Set tubing intake at center of screen. Start sampling at 15:25. Sample ID: A02MW4-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/9/2007		
Field Personnel	Emily Laity		
Site Name	Guterl Steel FUSRAP Site, Lockport, New York		
Earth Tech Job #	100657		
Well ID #	MW-5		
	Upgradient	Downgradient	
Weather Conditions	cloudy/partly sunny		
Air Temperature	75	° F	
Total Depth (TWD) Below Top of Casing =	17.45	1/100 ft	
Depth to Groundwater (DGW) Below Top of Casing =	5.73	1/100 ft	
Length of Water Column (LWC) = TWD - DGW =	11.72	1/100 ft	
1 Casing Volume (OCV) = LWC x	0.163 =	1.91	gal
3 Casing Volumes =	5.73	gal	
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A	liter	

Casing Diameter	2	inches	
Casing Material	PVC		
Inner Casing Elevation	598.52	1/100 ft	
Outer Casing Elevation	598.92	1/100 ft	
Land Surface Elevation	596.68	1/100 ft	
Screened Interval (below land surface)	10 to 15	1/100 ft	

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	300	250	200	190	190	490	200	200
Time (Military)	9:05	9:10	9:15	9:20	9:25	9:30	9:35	9:40
Depth to Groundwater Below Top of Casing (ft)	5.78	5.78	5.78	5.79	5.80	5.80	5.80	5.80
Drawdown (ft)	-0.05	-0.05	-0.05	-0.06	-0.07	-0.07	-0.07	-0.07
pH (S.U.)	8.65	8.71	8.06	7.86	7.72	7.65	7.50	7.61
Sp. Cond. (mS/cm)	0.765	0.764	0.764	0.766	0.764	0.761	0.758	0.756
Turbidity (NTUs)	1.10	0.33	0.37	0.34	0.35	0.29	0.34	0.4
Dissolved Oxygen (mg/L)	0.61	0.30	0.28	0.26	0.21	0.26	0.25	0.25
Water Temperature (°C)	12.75	12.73	12.89	12.86	12.81	12.84	12.78	12.79
ORP (mV)	-40.2	-27.4	-39.9	-46.1	-49.0	-50.9	-53.0	-50.1

Physical appearance at start	Color	clear w/ dark particles	
	Odor	no	
Sheen/Free Product	no sheen/no product		
Physical appearance at sampling	Color	clear w/ dark particles	
	Odor	no	
Sheen/Free Product	no sheen/no product		

COMMENTS/OBSERVATIONS

Start pump at 9:00. Small amount of iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 10:00. Sample ID: A02MW5-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/9/2007
Field Personnel: Emily Laity
Site Name: **Guterl Steel FUSRAP Site, Lockport, New York**
Earth Tech Job #: **100657**
Well ID #: MW-5
____ Upgradient ____ Downgradient
Weather Conditions: cloudy/partly sunny
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 17.45 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 5.73 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.72 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.91 gal
3 Casing Volumes = 5.73 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 598.52 1/100 ft
Outer Casing Elevation: 598.92 1/100 ft
Land Surface Elevation: 596.68 1/100 ft
Screened Interval (below land surface): 10 to 15 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	190	190	200					
Time (Military)	9:45	9:50	9:55					
Depth to Groundwater Below Top of Casing (ft)	5.80	5.80	5.80					
Drawdown (ft)	-0.07	-0.07	-0.07					
pH (S.U.)	7.34	7.34	7.32					
Sp. Cond. (mS/cm)	0.750	0.748	0.745					
Turbidity (NTUs)	0.30	0.46	0.33					
Dissolved Oxygen (mg/L)	0.21	0.20	0.17					
Water Temperature (°C)	12.86	12.80	12.84					
ORP (mV)	-55.9	-55.8	-57.7					

Physical appearance at start — Color: clear w/ dark particles; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear w/ dark particles; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 9:00. Small amount of iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 10:00. Sample ID: A02MW5-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/2/2007
Field Personnel: Tamara Raby & Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-06
____ Upgradient ____ Downgradient
Weather Conditions: sunny, light breeze
Air Temperature: 90 ° F
Total Depth (TWD) Below Top of Casing = 19.01 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 7.75 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.26 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.84 gal
3 Casing Volumes = 5.51 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 600.68 1/100 ft
Outer Casing Elevation: 601.07 1/100 ft
Land Surface Elevation: 597.59 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	200	195	205	225	225		
Time (Military)	11:15	11:20	11:25	11:30	11:35	11:40		
Depth to Groundwater Below Top of Casing (ft)	7.89	7.94	7.93	7.94	7.96	7.96		
Drawdown (ft)	-0.14	-0.19	-0.18	-0.19	-0.21	-0.21		
pH (S.U.)	7.05	7.07	7.08	7.07	7.07	7.08		
Sp. Cond. (mS/cm)	0.924	0.924	0.923	0.926	0.922	0.921		
Turbidity (NTUs)	2.04	1.12	2.40	1.30	1.07	1.40		
Dissolved Oxygen (mg/L)	1.85	0.38	0.28	0.24	0.24	0.23		
Water Temperature (°C)	16.28	15.19	15.39	15.18	15.26	15.3		
ORP (mV)	49.4	37.5	31.9	25.1	22.8	19.8		

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 11:10. Set tubing intake at center of screen. Start sampling at 11:45. Sample ID: A02MW06-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/20/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-08
Upgradient ____ Downgradient ____
Weather Conditions: cloudy
Air Temperature: 65-70 ° F
Total Depth (TWD) Below Top of Casing = 19.90 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.45 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.45 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.70 gal
3 Casing Volumes = 5.11 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 601.37 1/100 ft
Outer Casing Elevation: 601.71 1/100 ft
Land Surface Elevation: 598.31 1/100 ft
Screened Interval (below land surface): 7 to 17 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	6	HNO3	MS/MSD
250ml Poly	TSS	3	none	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	175	20	125	125	100	125	110	100
Time (Military)	9:05	9:10	9:15	9:20	9:25	9:30	9:35	9:40
Depth to Groundwater Below Top of Casing (ft)	9.81	9.83	9.84	9.86	9.82	9.84	9.84	9.83
Drawdown (ft)	-0.36	-0.38	-0.39	-0.41	-0.37	-0.39	-0.39	-0.38
pH (S.U.)	7.06	7.02	7.01	7.06	7.09	7.09	7.11	7.1
Sp. Cond. (mS/cm)	1.525	1.517	1.512	1.506	1.494	1.481	1.472	1.468
Turbidity (NTUs)	1.64	1.65	1.52	1.55	1.30	1.21	1.08	1.06
Dissolved Oxygen (mg/L)	0.58	0.45	0.39	0.32	0.35	0.26	0.02	0.26
Water Temperature (°C)	14.32	14.24	14.20	14.21	14.26	14.24	14.28	14.29
ORP (mV)	-66.0	-68.3	-69.6	-70.6	-65.1	-70.9	-73.5	-70.6

Physical appearance at start — Color: clear; Odor: yes (possibly sulfur)
Physical appearance at sampling — Color: clear; Odor: yes (faint sulfur)
Sheen/Free Product: no sheen/no product
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 9:00. Set tubing intake at center of screen. Start sampling at 9:45. Sample ID: A02MW08-U/F. MS/MSD taken at this well.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/7 2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-09
Upgradient / Downgradient
Weather Conditions: cloudy, humid
Air Temperature: 75-80 ° F
Total Depth (TWD) Below Top of Casing = 19.14 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.78 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.36 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.69 gal
3 Casing Volumes = 5.07 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.70 1/100 ft
Outer Casing Elevation: 600.01 1/100 ft
Land Surface Elevation: 596.49 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	175	180	200	200	225		
Time (Military)	10:40	10:45	10:50	10:55	11:00	11:05		
Depth to Groundwater Below Top of Casing (ft)	8.80	8.80	8.81	8.82	8.82	8.82		
Drawdown (ft)	-0.02	-0.02	-0.03	-0.04	-0.04	-0.04		
pH (S.U.)	7.19	7.21	7.93	8.17	8.32	8.42		
Sp. Cond. (mS/cm)	1.045	1.011	0.768	0.668	0.614	0.595		
Turbidity (NTUs)	9.20	8.07	4.00	2.60	1.30	1.30		
Dissolved Oxygen (mg/L)	0.55	0.44	0.28	0.24	0.21	0.20		
Water Temperature (°C)	16.97	15.84	16.16	15.87	15.77	15.71		
ORP (mV)	-159.8	-161.4	-150.9	-147.8	-138.9	-143.1		

Physical appearance at start — Color: clear with black floating particles — Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear with black floating particles — Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 14:15. Set tubing intake at center of screen. Start sampling at 14:55. Sample ID: A0MW09-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/20/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-11
Upgradient / Downgradient
Weather Conditions: cloudy, light rain
Air Temperature: 70 ° F
Total Depth (TWD) Below Top of Casing = 20.99 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.63 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.36 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.85 gal
3 Casing Volumes = 5.56 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.79 1/100 ft
Outer Casing Elevation: 600.22 1/100 ft
Land Surface Elevation: 596.77 1/100 ft
Screened Interval (below land surface): 8 to 18 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	180	150	150	150	200	180	170
Time (Military)	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00
Depth to Groundwater Below Top of Casing (ft)	10.02	10.10	10.03	10.03	10.03	10.10	10.05	10.08
Drawdown (ft)	-0.39	-0.47	-0.40	-0.40	-0.40	-0.47	-0.42	-0.45
pH (S.U.)	7.29	7.26	7.28	7.29	7.31	7.33	7.36	7.38
Sp. Cond. (mS/cm)	1.245	1.243	1.231	1.214	1.190	1.165	1.139	1.121
Turbidity (NTUs)	0.68	1.20	2.50	2.45	2.00	1.80	1.50	1.37
Dissolved Oxygen (mg/L)	0.55	0.39	0.36	0.33	0.31	0.33	0.31	0.29
Water Temperature (°C)	15.49	15.60	15.99	16.03	16.03	16.02	16.07	16.04
ORP (mV)	-41.4	-43.8	-39.6	-50.1	-51.9	-76.0	-93.2	-94.7

Physical appearance at start — Color: clear; Odor: yes (unidentified); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (unidentified); Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 36.0; PID Air: 3.3. Start pump at 13.20. Set tubing intake at center of screen. Start sampling at 14:10. Sample ID: A02MW11-U/F. Field Blank: A02MWFB003-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/20/2007
Field Personnel: Emily Laity
Site Name: **Guterl Steel FUSRAP Site, Lockport, New York**
Earth Tech Job #: **100657**
Well ID #: MW-11
____ Upgradient ____ Downgradient
Weather Conditions: cloudy, light rain
Air Temperature: 70 ° F
Total Depth (TWD) Below Top of Casing = 20.99 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.63 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.36 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.85 gal
3 Casing Volumes = 5.56 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.79 1/100 ft
Outer Casing Elevation: 600.22 1/100 ft
Land Surface Elevation: 596.77 1/100 ft
Screened Interval (below land surface): 8 to 18 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	190							
Time (Military)	14:05							
Depth to Groundwater Below Top of Casing (ft)	10.08							
Drawdown (ft)	-0.45							
pH (S.U.)	7.39							
Sp. Cond. (mS/cm)	1.115							
Turbidity (NTUs)	1.26							
Dissolved Oxygen (mg/L)	0.29							
Water Temperature (°C)	16.04							
ORP (mV)	-94.9							

Physical appearance at start — Color: clear; Odor: yes (unidentified); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (unidentified); Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 36.0; PID Air: 3.3. Start pump at 13.20. Set tubing intake at center of screen. Start sampling at 14:10. Sample ID: A02MW11-U/F. Field Blank: A02MWFB003-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/6/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-13D
Upgradient / Downgradient
Weather Conditions: Cloudy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 19.40 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.68 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.72 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.75 gal
3 Casing Volumes = 5.24 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 603.47 1/100 ft
Outer Casing Elevation: 603.69 1/100 ft
Land Surface Elevation: 600.15 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	6	HNO3	MS/MSD
250ml Poly	TSS	3	none	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	200	225	250	180	200	190	200	
Time (Military)	10:10	10:15	10:20	10:25	10:30	10:35	10:40	
Depth to Groundwater Below Top of Casing (ft)	8.90	8.94	8.98	8.98	8.94	8.96	8.98	
Drawdown (ft)	-0.22	-0.26	-0.30	-0.30	-0.26	-0.28	-0.30	
pH (S.U.)	7.42	7.41	7.41	7.41	7.42	7.42	7.43	
Sp. Cond. (mS/cm)	1.341	1.335	1.335	1.335	1.333	1.333	1.332	
Turbidity (NTUs)	0.70	0.70	0.70	0.80	0.68	1.00	0.50	
Dissolved Oxygen (mg/L)	0.67	0.34	0.27	0.27	0.26	0.22	0.23	
Water Temperature (°C)	17.00	16.48	16.61	16.57	17.01	17.02	16.89	
ORP (mV)	-19.4	-26.2	-27.2	-31.6	-31.8	-34.0	-34.9	

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/noproduct

COMMENTS/OBSERVATIONS

Start pump at 10:05. Set tubing intake at center of screen. Start sampling at 10:45. Sample ID: A03MW13D-U/F +MS/MSD. USACE split taken.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/1/2007
Field Personnel: Tamara Raby & Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-14
Upgradient / Downgradient
Weather Conditions: sunny, light breeze
Air Temperature: 70-75 ° F
Total Depth (TWD) Below Top of Casing = 19.61 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.28 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.33 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.85 gal
3 Casing Volumes = 5.54 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 602.36 1/100 ft
Outer Casing Elevation: 602.59 1/100 ft
Land Surface Elevation: 598.90 1/100 ft
Screened Interval (below land surface): 6 to 15.95 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	175	175	175	175	175	175	
Time (Military)	8:25	8:30	8:35	8:40	8:45	8:50	8:55	
Depth to Groundwater Below Top of Casing (ft)	8.41	8.41	8.42	8.42	8.43	8.43	8.44	
Drawdown (ft)	-0.13	-0.13	-0.14	-0.14	-0.15	-0.15	-0.16	
pH (S.U.)	7.44	7.4	7.38	7.4	7.38	7.38	7.39	
Sp. Cond. (mS/cm)	1.158	1.168	1.185	1.188	1.189	1.189	1.188	
Turbidity (NTUs)	239	116	22	8.2	6	4.2	2	
Dissolved Oxygen (mg/L)	0.73	0.41	0.39	0.40	0.38	0.28	0.29	
Water Temperature (°C)	16.34	16.66	16.68	16.66	16.74	16.86	16.95	
ORP (mV)	-53.2	-62.0	-61.2	-65.3	-64.3	-68.7	70.3.	

Physical appearance at start — Color: light grey; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 8:20. Set tubing intake at center of screen. Start sampling at 9:00. Sample ID: A03MW14-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/14/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-15
Upgradient ____ Downgradient ____
Weather Conditions: partly cloudy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 23.50 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 12.50 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.00 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.79 gal
3 Casing Volumes = 5.38 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 608.09 1/100 ft
Outer Casing Elevation: 608.29 1/100 ft
Land Surface Elevation: 604.42 1/100 ft
Screened Interval (below land surface): 10 to 20 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	200	200	175	200	175	175	200
Time (Military)	9:20	9:25	9:30	9:35	9:40	9:45	9:50	9:55
Depth to Groundwater Below Top of Casing (ft)	12.72	12.72	12.72	12.73	12.73	12.73	12.73	12.74
Drawdown (ft)	-0.22	-0.22	-0.22	-0.23	-0.23	-0.23	-0.23	-0.24
pH (S.U.)	11.12	11.25	11.28	11.20	11.12	11.08	11.05	11.01
Sp. Cond. (mS/cm)	0.704	0.703	0.704	0.705	0.705	0.706	0.706	0.707
Turbidity (NTUs)	9.63	12.33	10.72	8.09	5.52	5.54	5.24	5.02
Dissolved Oxygen (mg/L)	0.78	1.53	1.68	1.40	1.34	1.32	1.39	1.26
Water Temperature (°C)	15.16	15.46	15.57	15.53	15.74	15.75	15.95	15.69
ORP (mV)	-125.4	-130.7	-143.9	-145.8	-150.7	-153.5	-153.2	-152.2

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.4; PID AIR: 0.04. Start pump at 9:15. Set tubing intake at center of screen. Start sampling at 10:00. Sample ID: A03MW15-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/1/2007
Field Personnel: Tamara Raby & Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-16
___ Upgradient ___ Downgradient
Weather Conditions: sunny
Air Temperature: 80 ° F
Total Depth (TWD) Below Top of Casing = 20.10 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.46 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.64 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.73 gal
3 Casing Volumes = 5.20 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 604.37 1/100 ft
Outer Casing Elevation: 604.79 1/100 ft
Land Surface Elevation: 601.41 1/100 ft
Screened Interval (below land surface): 7 to 17 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	150	180	180	180	180	180	180	
Time (Military)	10:15	10:20	10:25	10:30	10:35	10:40	10:45	
Depth to Groundwater Below Top of Casing (ft)	9.47	9.47	9.47	9.47	9.47	9.47	9.47	
Drawdown (ft)	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
pH (S.U.)	7.38	7.36	7..35	7.34	7.33	7.33	7.33	
Sp. Cond. (mS/cm)	1.307	1.301	1.300	1.301	1.300	1.298	1.300	
Turbidity (NTUs)	1.90	1.03	0.75	0.80	1.07	0.85	0.85	
Dissolved Oxygen (mg/L)	0.75	0.46	0.37	0.33	0.29	0.26	0.23	
Water Temperature (°C)	17.52	17.11	16.95	16.93	16.88	16.92	16.72	
ORP (mV)	-93.8	-92.3	-90.6	-91.9	-90.3	-88.6	-88.0	

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 10:10. Set tubing intake at center of screen. Start sampling at 10:50. Sample ID: A03MW16-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 7/31/2007
Field Personnel: Tamara Raby & Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-17
Upgradient / Downgradient
Weather Conditions: sunny, light breeze
Air Temperature: 85 ° F
Total Depth (TWD) Below Top of Casing = 20.08 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.60 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.48 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.71 gal
3 Casing Volumes = 5.12 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 606.97 1/100 ft
Outer Casing Elevation: 607.15 1/100 ft
Land Surface Elevation: 603.79 1/100 ft
Screened Interval (below land surface): 7 to 16.76 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	100	75	75	100	100	95	80	
Time (Military)	14:20	14:25	14:30	14:35	14:40	14:45	14:50	
Depth to Groundwater Below Top of Casing (ft)	10.00	10.03	10.02	10.08	10.11	10.08	10.02	
Drawdown (ft)	-0.40	-0.43	-0.42	-0.48	-0.51	-0.48	-0.42	
pH (S.U.)	7.54	7.34	7.36	7.3	7.3	7.33	7.31	
Sp. Cond. (mS/cm)	2.203	2.177	2.177	2.202	2.191	2.164	2.163	
Turbidity (NTUs)	7.25	8.00	4.50	7.50	6.70	5.00	5.00	
Dissolved Oxygen (mg/L)	1.13	0.69	0.60	0.60	0.49	0.44	0.45	
Water Temperature (°C)	18.52	19.13	19.38	17.68	17.54	18.49	19.43	
ORP (mV)	-42.4	-41.1	-36.8	-31.7	-29.3	-35.6	-35.7	

Physical appearance at start — Color: clear w/ iron bacteria; Odor: no
Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 14:15. Set tubing intake at center of screen. Start sampling at 14:55. Sample ID: A03MW17-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/15/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-18
Upgradient / Downgradient
Weather Conditions: cloudy, breezy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 17.73 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.39 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 9.34 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.52 gal
3 Casing Volumes = 4.57 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 602.36 1/100 ft
Outer Casing Elevation: 602.62 1/100 ft
Land Surface Elevation: 599.48 1/100 ft
Screened Interval (below land surface): 5 to 14 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	175	200	190	200	200	200	200
Time (Military)	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05
Depth to Groundwater Below Top of Casing (ft)	8.68	8.67	8.72	8.70	8.72	8.72	8.73	8.72
Drawdown (ft)	-0.29	-0.28	-0.33	-0.31	-0.33	-0.33	-0.34	-0.33
pH (S.U.)	7.76	7.38	7.54	7.48	7.33	7.46	7.45	7.44
Sp. Cond. (mS/cm)	1.295	1.292	1.311	1.320	1.324	1.324	1.324	1.324
Turbidity (NTUs)	2.27	0.91	0.57	0.35	0.43	0.35	0.33	0.35
Dissolved Oxygen (mg/L)	0.91	0.48	0.30	0.24	0.23	0.20	0.20	0.18
Water Temperature (°C)	17.13	16.91	16.77	17.76	16.66	16.66	16.61	16.59
ORP (mV)	-10.4	18.0	42.0	25.2	16.2	52.2	53.7	51.3

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.02; PID AIR: 0.01. Start pump at 8:25. Set tubing intake at center of screen. Start sampling at 9:10. Sample ID: A04BMW18-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/6/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-19
Upgradient ____ Downgradient ____
Weather Conditions: sunny
Air Temperature: 80 ° F
Total Depth (TWD) Below Top of Casing = 23.26 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.58 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.68 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.23 gal
3 Casing Volumes = 6.69 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 601.36 1/100 ft
Outer Casing Elevation: 601.84 1/100 ft
Land Surface Elevation: 598.29 1/100 ft
Screened Interval (below land surface): 10 to 20.02 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	150	175	200	200	200	200	200	
Time (Military)	14:15	14:20	14:25	14:30	14:35	14:40	14:45	
Depth to Groundwater Below Top of Casing (ft)	9.75	9.75	9.80	9.80	9.80	9.80	9.80	
Drawdown (ft)	-0.17	-0.17	-0.22	-0.22	-0.22	-0.22	-0.22	
pH (S.U.)	7.45	7.23	7.14	7.18	7.18	7.19	7.20	
Sp. Cond. (mS/cm)	0.931	0.933	0.929	0.927	0.928	0.930	0.932	
Turbidity (NTUs)	1.35	0.89	0.71	0.80	0.50	0.92	0.28	
Dissolved Oxygen (mg/L)	2.46	1.52	1.48	1.73	1.80	1.79	1.83	
Water Temperature (°C)	18.19	18.03	17.71	17.74	17.66	17.67	17.58	
ORP (mV)	48.6	-11.5	-29.7	-37.6	-42.5	-48.6	-50.7	

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 14:10. Set tubing intake at center of screen. Start sampling at 14:55. Sample ID: A04BMW19-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/1/2007
Field Personnel: Tamara Raby & Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-20
Upgradient / Downgradient
Weather Conditions: sunny
Air Temperature: 85-90 ° F
Total Depth (TWD) Below Top of Casing = 20.20 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.55 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.65 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.74 gal
3 Casing Volumes = 5.21 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 603.62 1/100 ft
Outer Casing Elevation: 603.78 1/100 ft
Land Surface Elevation: 600.50 1/100 ft
Screened Interval (below land surface): 7 to 17 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	150	150	100	100	100	125	125	
Time (Military)	13:25	13:30	13:35	13:40	13:45	13:50	13:55	
Depth to Groundwater Below Top of Casing (ft)	10.05	10.21	10.10	10.13	10.20	10.24	10.28	
Drawdown (ft)	-0.50	-0.66	-0.55	-0.58	-0.65	-0.69	-0.73	
pH (S.U.)	7.15	7.15	7.15	7.15	7.15	7.17	7.16	
Sp. Cond. (mS/cm)	1.001	0.980	0.954	0.929	0.907	0.927	0.941	
Turbidity (NTUs)	3.52	1.50	1.34	2.12	1.53	1.20	1.34	
Dissolved Oxygen (mg/L)	1.51	0.65	0.58	0.61	0.75	1.00	0.98	
Water Temperature (°C)	18.60	18.47	19.13	18.51	18.56	18.82	18.63	
ORP (mV)	-10.2	-19.0	-21.8	-22.3	-22.1	-23.7	-25.7	

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 13:20. Set tubing intake at center of screen. Start sampling at 14:00. Sample ID: A04AMW020-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/14/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-21
Upgradient / Downgradient
Weather Conditions: sunny
Air Temperature: 75-80 ° F
Total Depth (TWD) Below Top of Casing = 21.00 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 13.57 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 7.43 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.21 gal
3 Casing Volumes = 3.63 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 608.46 1/100 ft
Outer Casing Elevation: 608.67 1/100 ft
Land Surface Elevation: 605.41 1/100 ft
Screened Interval (below land surface): 11 to 21 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	DUP
250ml Poly	TSS	2	none	DUP

FIELD ANALYSES

Flow Rate (ml/min)	200	200	150	150	150	151	152	153
Time (Military)	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25
Depth to Groundwater Below Top of Casing (ft)	14.07	14.21	14.12	14.12	14.15	14.15	14.17	14.17
Drawdown (ft)	-0.50	-0.64	-0.55	-0.55	-0.58	-0.58	-0.60	-0.60
pH (S.U.)	7.22	7.28	7.27	7.40	7.41	7.36	7.36	7.41
Sp. Cond. (mS/cm)	1.723	1.793	1.811	1.879	1.881	1.867	1.850	1.849
Turbidity (NTUs)	0.60	0.35	0.45	0.35	0.28	0.35	0.34	0.3
Dissolved Oxygen (mg/L)	0.47	0.37	0.32	0.33	0.30	0.26	0.23	0.21
Water Temperature (°C)	15.25	15.24	15.64	15.81	15.66	15.73	15.52	15.63
ORP (mV)	33.2	57.7	44.7	59.0	59.4	58.5	57.8	57.8

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID WELL: 0.08; PID AIR: 0.08. Start pump at 11:45. Settubing intake at center of screen. Start sampling at 12:30. Sample ID: A04AMW21-U/F. Duplicate sample ID: A04AMW71-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/8/2007		
Field Personnel	Emily Laity		
Site Name	Guterl Steel FUSRA PSite, Lockport, New York		
Earth Tech Job #	100657		
Well ID #	MW-22		
	Upgradient	Downgradient	
Weather Conditions	sunny, humid, windy		
Air Temperature	75-80	° F	
Total Depth (TWD) Below Top of Casing =	20.19	1/100 ft	
Depth to Groundwater (DGW) Below Top of Casing =	7.55	1/100 ft	
Length of Water Column (LWC) = TWD - DGW =	12.64	1/100 ft	
1 Casing Volume (OCV) = LWC x 0.163 =	2.06	gal	
3 Casing Volumes =	6.18	gal	
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A	liter	

Casing Diameter	2	inches
Casing Material	PVC	
Inner Casing Elevation	601.35	1/100 ft
Outer Casing Elevation	601.73	1/100 ft
Land Surface Elevation	598.09	1/100 ft
Screened Interval (below land surface)	7 to 17(1)	1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	175	190	200	200	
Time (Military)	8:55	9:00	9:05	9:10	9:15	9:20	9:25	
Depth to Groundwater Below Top of Casing (ft)	7.72	7.74	7.76	7.72	7.75	7.75	7.76	
Drawdown (ft)	-0.17	-0.19	-0.21	-0.17	-0.20	-0.20	-0.21	
pH (S.U.)	7.17	7.61	7.69	7.63	7.59	7.31	7.27	
Sp. Cond. (mS/cm)	0.606	0.604	0.604	0.604	0.606	0.606	0.608	
Turbidity (NTUs)	3.82	0.24	0.60	0.65	0.62	0.45	0.44	
Dissolved Oxygen (mg/L)	0.59	0.41	0.25	0.20	0.22	0.20	0.20	
Water Temperature (°C)	18.03	17.84	17.53	17.76	17.65	17.60	17.50	
ORP (mV)	0.6	27.3	35.2	44.7	44.9	20.2	16.1	

Physical appearance at start	Color	clear w/ iron bacteria particles	
	Odor	no	
Sheen/Free Product		no sheen/no product	
Physical appearance at sampling	Color	clear	
	Odor	no	
Sheen/Free Product		no sheen/no product	

COMMENTS/OBSERVATIONS

Start pump at 8:50. Set tubing intake at center of screen. Start sampling at 9:30. Sample ID: A04AMW22-U/F. (1) Start of screened interval is estimated.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/10/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-23
Upgradient ____ Downgradient ____
Weather Conditions: partly sunny, breezy
Air Temperature: 75-80 ° F
Total Depth (TWD) Below Top of Casing = 19.60 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 6.52 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.08 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.13 gal
3 Casing Volumes = 6.40 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 600.50 1/100 ft
Outer Casing Elevation: 600.95 1/100 ft
Land Surface Elevation: 597.58 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	2	none	

FIELD ANALYSES

Flow Rate (ml/min)	125	225	225	200	200	200	200	200
Time (Military)	9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10
Depth to Groundwater Below Top of Casing (ft)	6.58	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Drawdown (ft)	-0.06	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
pH (S.U.)	7.09	7.09	7.11	7.13	7.14	7.14	7.14	7.14
Sp. Cond. (mS/cm)	0.546	0.553	0.572	0.593	0.603	0.613	0.616	0.619
Turbidity (NTUs)	6.70	4.18	2.35	2.98	1.50	1.02	0.90	0.92
Dissolved Oxygen (mg/L)	0.66	0.52	0.49	0.35	0.36	0.32	0.30	0.3
Water Temperature (°C)	16.35	16.48	16.64	16.73	16.74	16.76	16.73	16.72
ORP (mV)	35.5	36.1	28.4	2.0	-4.6	-11.9	-13.3	-15.5

Physical appearance at start — Color: clear w/ small particles; Odor: no
Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 9:30. Set tubing intake at center of screen. Start sampling at 10:15. Sample ID: A04AMW23-U/F. USACE split taken.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/8/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	**100657**	Outer Casing Elevation	597.27 1/100 ft
Well ID #	MW-24	Land Surface Elevation	597.27 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	6.43 to 16.43(1) 1/100 ft
Weather Conditions	sunny, windy		
Air Temperature	80 ° F		
Total Depth (TWD) Below Top of Casing =	16.67 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	3.85 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.82 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.09 gal		
3 Casing Volumes =	6.27 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	PeristalticPump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	150	180	125	125	150	125	150	150
Time (Military)	11:15	11:20	11:25	11:30	11:35	11:40	12:05	12:10
Depth to Groundwater Below Top of Casing (ft)	3.86	3.88	3.88	3.89	3.89	3.89	3.89	3.89
Drawdown (ft)	-0.01	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04
pH (S.U.)	7.29	8.15	7.26	7.27	8.03	8.28	7.24	7.27
Sp. Cond. (mS/cm)	0.491	0.487	0.485	0.486	0.488	0.487	0.487	0.486
Turbidity (NTUs)	0.68	0.71	0.82	0.71	0.74	0.68	1.06	0.75
Dissolved Oxygen (mg/L)	1.78	0.69	0.59	0.50	0.46	0.43	0.36	0.31
Water Temperature (°C)	20.68	20.28	20.64	20.80	20.74	20.67	20.68	20.47
ORP (mV)	-123.6	-90.9	-119.5	-123.1	-	-89.6	-134.5	-139.6

Physical appearance at start — Color: clear with black floating particles — Odor: yes (possible sulfur)

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear — Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Well under slight pressure when opened. Start pump at 11:10. A little rust colored iron bacteria at start of pumping. Restart pump at 11:45 (time gap) because battery died. Set tubing intake at center of screen. Start sampling at 12:20. Sample ID: A04DMW24-U/F. (1) Start of screened interval is estimated.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/8/2007		
Field Personnel	Emily Laity		
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**		
Earth Tech Job #	**100657**		
Well ID #	MW-24		
	Upgradient / Downgradient		
Weather Conditions	sunny, windy		
Air Temperature	80	° F	
Total Depth (TWD) Below Top of Casing =	16.67	1/100 ft	
Depth to Groundwater (DGW) Below Top of Casing =	3.85	1/100 ft	
Length of Water Column (LWC) = TWD - DGW =	12.82	1/100 ft	
1 Casing Volume (OCV) = LWC x 0.163 =	2.09	gal	
3 Casing Volumes =	6.27	gal	
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A	liter	

Casing Diameter	2	inches
Casing Material	PVC	
Inner Casing Elevation	N/A	1/100 ft
Outer Casing Elevation	597.27	1/100 ft
Land Surface Elevation	597.27	1/100 ft
Screened Interval (below land surface)	6.43 to 16.43[1]	1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175							
Time (Military)	12:15							
Depth to Groundwater Below Top of Casing (ft)	3.89							
Drawdown (ft)	-0.04							
pH (S.U.)	7.31							
Sp. Cond. (mS/cm)	0.486							
Turbidity (NTUs)	0.68							
Dissolved Oxygen (mg/L)	0.37							
Water Temperature (°C)	20.27							
ORP (mV)	-143.7							

Physical appearance at start — Color: clear with black floating particles; Odor: yes (possible sulfur); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Well under slight pressure when opened. Start pump at 11:10. A little rust colored iron bacteria at start of pumping. Restart pump at 11:45 (time gap) because battery died. Set tubing intake at center of screen. Start sampling at 12:20. Sample ID: A04DMW24-U/F. (1) Start of screened interval is estimated.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/9/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	596.93 1/100 ft
Well ID #	MW-26	Land Surface Elevation	596.93 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	7 to 17(1) 1/100 ft
Weather Conditions	cloudy, sprinkles		
Air Temperature	75 ° F		
Total Depth (TWD) Below Top of Casing =	16.90 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	3.07 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	13.83 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.25 gal		
3 Casing Volumes =	6.76 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	200	200	200	190	190	190	190
Time (Military)	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35
Depth to Groundwater Below Top of Casing (ft)	3.18	3.19	3.19	3.19	3.20	3.20	3.20	3.2
Drawdown (ft)	-0.11	-0.12	-0.12	-0.12	-0.13	-0.13	-0.13	-0.13
pH (S.U.)	7.06	7.42	7.45	7.47	7.45	7.41	7.38	7.37
Sp. Cond. (mS/cm)	4.512	4.452	4.237	4.065	3.908	3.864	3.772	3.686
Turbidity (NTUs)	2.40	4.41	4.63	3.22	4.01	3.57	2.21	1.8
Dissolved Oxygen (mg/L)	0.54	0.27	0.22	0.21	0.21	0.24	0.24	0.26
Water Temperature (°C)	17.91	17.49	17.22	17.27	17.40	17.34	17.29	17.27
ORP (mV)	-8.0	29.6	44.3	58.7	61.5	62.7	59.7	57.5

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/noproduct

COMMENTS/OBSERVATIONS: Start pump at 12:55. Small amount of iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 13:50. Sample ID: A04BMW26-U/F. USACE split taken. (1) Start of screened interval is estimated.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/9/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	**100657**	Outer Casing Elevation	596.93 1/100 ft
Well ID #	MW-26	Land Surface Elevation	596.93 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	7 to 17(1) 1/100 ft
Weather Conditions	cloudy, sprinkles		
Air Temperature	75 ° F		
Total Depth (TWD) Below Top of Casing =	16.90 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	3.07 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	13.83 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.25 gal		
3 Casing Volumes =	6.76 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	190	190						
Time (Military)	13:40	13:45						
Depth to Groundwater Below Top of Casing (ft)	3.20	3.20						
Drawdown (ft)	-0.13	-0.13						
pH (S.U.)	7.35	7.33						
Sp. Cond. (mS/cm)	3.636	3.545						
Turbidity (NTUs)	1.50	1.25						
Dissolved Oxygen (mg/L)	0.27	0.29						
Water Temperature (°C)	17.23	17.32						
ORP (mV)	57.0	53.9						

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 12:55. Small amount of iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 13:50. Sample ID: A04BMW26-U/F. USACE split taken. (1) Start of screened interval is estimated.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/17/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	613.29 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	613.50 1/100 ft
Well ID #	MW-600D	Land Surface Elevation	610.54 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	13 to 23 1/100 ft
Weather Conditions	sunny		
Air Temperature	75-80 ° F		
Total Depth (TWD) Below Top of Casing =	24.79 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	12.68 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.11 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.97 gal		
3 Casing Volumes =	5.92 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	125	200	190	200	190	190	
Time (Military)	14:30	14:35	14:40	14:45	14:50	14:55	15:00	
Depth to Groundwater Below Top of Casing (ft)	12.75	12.75	12.78	12.78	12.79	12.79	12.80	
Drawdown (ft)	-0.07	-0.07	-0.10	-0.10	-0.11	-0.11	-0.12	
pH (S.U.)	6.81	6.75	6.75	6.79	6.89	7.03	6.99	
Sp. Cond. (mS/cm)	12.71	12.85	12.82	12.83	12.85	12.75	12.76	
Turbidity (NTUs)	10.03	8.95	4.85	2.20	2.00	1.92	1.10	
Dissolved Oxygen (mg/L)	0.55	0.37	0.31	0.27	0.22	0.22	0.19	
Water Temperature (°C)	15.64	15.43	15.05	14.66	14.60	14.60	14.52	
ORP (mV)	29.2	33.5	36.0	43.8	68.8	114.0	116.0	

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 1.7; PID Air: 0.3. Start pump at 14:25. Set tubing intake at center of screen. Start sampling at 15:05. Sample ID: A05BMW600D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/15/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-601D
Upgradient / Downgradient
Weather Conditions: cloudy, breezy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 22.58 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 10.95 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.63 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.90 gal
3 Casing Volumes = 5.69 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 604.85 1/100 ft
Outer Casing Elevation: 605.22 1/100 ft
Land Surface Elevation: 602.42 1/100 ft
Screened Interval (below land surface): 9.5 to 19.5 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	190	175	190	190	195	195	180	200
Time (Military)	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15
Depth to Groundwater Below Top of Casing (ft)	11.00	11.02	11.03	11.04	11.04	11.05	11.05	11.06
Drawdown (ft)	-0.05	-0.07	-0.08	-0.09	-0.09	-0.10	-0.10	-0.11
pH (S.U.)	8.50	8.46	8.09	8.47	8.69	8.57	8.56	8.62
Sp. Cond. (mS/cm)	1.719	1.688	1.649	1.468	1.389	1.468	1.443	1.307
Turbidity (NTUs)	9.36	5.08	2.36	1.10	1.00	2.54	2.02	1.84
Dissolved Oxygen (mg/L)	0.62	0.46	0.34	0.29	0.27	0.22	0.22	0.22
Water Temperature (°C)	17.35	17.41	17.45	17.59	17.37	17.35	17.76	17.53
ORP (mV)	-60.6	-61.9	-65.1	-59.7	-45.9	-44.9	-49.6	-35.2

Physical appearance at start — Color: clear; Odor: yes (potential sulfur); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID WELL: 2.4; PID AIR: 1.0. Start pump at 10:35. Set tubing intake at center of screen. Start sampling at 11:40. Sample ID: A04AMW601D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/15/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-601D
Upgradient / Downgradient
Weather Conditions: cloudy, breezy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 22.58 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 10.95 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.63 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.90 gal
3 Casing Volumes = 5.69 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 604.85 1/100 ft
Outer Casing Elevation: 605.22 1/100 ft
Land Surface Elevation: 602.42 1/100 ft
Screened Interval (below land surface): 9.5 to 19.5 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	795	175	175				
Time (Military)	11:20	11:25	11:30	11:35				
Depth to Groundwater Below Top of Casing (ft)	11.06	11.06	11.05	11.05				
Drawdown (ft)	-0.11	-0.11	-0.10	-0.10				
pH (S.U.)	8.54	7.91	7.92	8.38				
Sp. Cond. (mS/cm)	1.273	1.259	1.244	1.240				
Turbidity (NTUs)	1.05	1.08	1.06	1.05				
Dissolved Oxygen (mg/L)	0.20	0.22	0.22	0.23				
Water Temperature (°C)	17.48	17.64	17.73	17.43				
ORP (mV)	-30.1	-78.0	-79.6	-29.3				

Physical appearance at start — Color: clear; Odor: yes (potential sulfur)
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID WELL: 2.4; PID AIR: 1.0. Start pump at 10:35. Set tubing intake at center of screen. Start sampling at 11:40. Sample ID: A04AMW601D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	605.005 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	604.295 1/100 ft
Well ID #	MW-602D	Land Surface Elevation	601.135 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	10 to 20 1/100 ft
Weather Conditions	sunny, slight breeze		
Air Temperature	80-85 ° F		
Total Depth (TWD) Below Top of Casing =	22.10 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	10.16 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.94 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.95 gal		
3 Casing Volumes =	5.84 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIEL D ANALYSES

Flow Rate (ml/min)	175	175	190	225	200	200	200	200
Time (Military)	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45
Depth to Groundwater Below Top of Casing (ft)	10.20	10.21	10.22	10.23	10.23	10.23	10.23	10.23
Drawdown (ft)	-0.04	-0.05	-0.06	-0.07	-0.07	-0.07	-0.07	-0.07
pH (S.U.)	7.39	8.02	7.95	7.89	7.66	7.57	7.86	7.64
Sp. Cond. (mS/cm)	2.146	2.130	2.111	2.079	2.052	1.988	1.969	1.949
Turbidity (NTUs)	1.31	1.74	1.54	1.57	1.58	1.21	1.02	0.70
Dissolved Oxygen (mg/L)	0.63	0.38	0.27	0.22	0.20	0.17	0.16	0.20
Water Temperature (°C)	17.42	16.77	16.74	16.72	16.51	16.54	16.72	16.94
ORP (mV)	-55.0	16.9	16.9	19.4	-8.6	-18.7	21.7	-7

Physical appearance at start — Color: clear; Odor: yes (faint sulfer)

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (faint sulfer)

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 2.7; PID AIR: 0.9. Start pump at 14:05. Set tubing intake at center of screen. Start sampling at 15:00. Sample ID: A04AMW602D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**	Inner Casing Elevation	605.005 1/100 ft
Earth Tech Job #	**100657**	Outer Casing Elevation	604.295 1/100 ft
Well ID #	MW-602D	Land Surface Elevation	601.135 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	10 to 20 1/100 ft
Weather Conditions	sunny, slight breeze		
Air Temperature	80-85 ° F		
Total Depth (TWD) Below Top of Casing =	22.10 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	10.16 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.94 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.95 gal		
3 Casing Volumes =	5.84 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	175	175						
Time (Military)	14:50	14:55						
Depth to Groundwater Below Top of Casing (ft)	10.22	10.22						
Drawdown (ft)	-0.06	-0.06						
pH (S.U.)	7.54	7.56						
Sp. Cond. (mS/cm)	1.926	1.923						
Turbidity (NTUs)	0.85	0.67						
Dissolved Oxygen (mg/L)	0.17	0.17						
Water Temperature (°C)	16.82	16.73						
ORP (mV)	-13.7	-14.3						

Physical appearance at start — Color: clear; Odor: yes (faint sulfer); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (faint sulfer); Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 2.7; PID AIR: 0.9. Start pump at 14:05. Set tubing intake at center of screen. Start sampling at 15:00. Sample ID: A04AMW602D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/17/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRA Site, Lockport, New York	Inner Casing Elevation	600.43 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.62 1/100 ft
Well ID #	MW-603D	Land Surface Elevation	597.69 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	9.5 to 19.5 1/100 ft
Weather Conditions	sunny		
Air Temperature	80 ° F		
Total Depth (TWD) Below Top of Casing =	22.65 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.46 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	15.19 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.48 gal		
3 Casing Volumes =	7.43 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	150	200	160	175	125	125	175
Time (Military)	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50
Depth to Groundwater Below Top of Casing (ft)	7.71	7.64	6.69	6.64	6.65	6.62	6.62	6.66
Drawdown (ft)	-0.25	-0.18	0.77	0.82	0.81	0.84	0.84	0.80
pH (S.U.)	7.69	7.73	7.72	7.72	7.43	7.67	7.66	7.66
Sp. Cond. (mS/cm)	1.374	1.371	1.366	1.367	1.359	1.350	1.348	0.341
Turbidity (NTUs)	1.85	2.02	3.08	1.64	1.42	1.42	1.03	0.94
Dissolved Oxygen (mg/L)	0.30	0.23	0.20	0.18	0.17	0.17	0.16	0.17
Water Temperature (°C)	15.84	16.12	15.76	15.93	15.73	15.91	16.20	15.83
ORP (mV)	26.6	37.0	36.6	39.2	1.6	35.0	40.9	41.4

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.02; PID Air: 0.02. Start pump at 10:10. Set tubing intake at center of screen. Start sampling at 10:55. Sample ID: A04AMW603D-U/F. USACE split taken.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	595.98 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	596.25 1/100 ft
Well ID #	MW-604D	Land Surface Elevation	596.25 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	8.2 to 18.2 1/100 ft
Weather Conditions	sunny		
Air Temperature	75 ° F		
Total Depth (TWD) Below Top of Casing =	18.08 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	5.81 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.27 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.00 gal		
3 Casing Volumes =	6.00 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	325	225	200	200	200	200	200	
Time (Military)	10:40	10:45	10:50	10:55	11:00	11:05	11:10	
Depth to Groundwater Below Top of Casing (ft)	6.02	6.00	6.01	6.01	6.01	6.01	6.01	
Drawdown (ft)	-0.21	-0.19	-0.20	-0.20	-0.20	-0.20	-0.20	
pH (S.U.)	7.30	7.42	7.45	7.35	7.36	7.36	7.36	
Sp. Cond. (mS/cm)	1.309	1.307	1.329	1.322	1.312	1.308	1.303	
Turbidity (NTUs)	0.77	1.45	1.10	0.90	0.60	0.55	0.45	
Dissolved Oxygen (mg/L)	0.38	0.37	0.28	0.25	0.22	0.22	0.18	
Water Temperature (°C)	16.96	16.90	16.95	17.01	17.15	17.13	17.10	
ORP (mV)	49.6	54.6	59.6	44.8	36.6	32.7	30.3	

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 10:35. Set tubing intake at center of screen. Start sampling at 11:15. Sample ID: A04DMW604D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	8/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	598.11 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	598.24 1/100 ft
Well ID #	MW-605D	Land Surface Elevation	598.50 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	8 to 18 1/100 ft
Weather Conditions	partly cloudy		
Air Temperature	75 ° F		
Total Depth (TWD) Below Top of Casing =	18.50 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	4.03 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	14.47 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.36 gal		
3 Casing Volumes =	7.08 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	225	225	175	175	175	200	200	200
Time (Military)	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20
Depth to Groundwater Below Top of Casing (ft)	4.11	4.12	4.09	4.09	4.09	4.09	4.09	4.09
Drawdown (ft)	-0.08	-0.09	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
pH (S.U.)	7.22	7.75	7.69	7.62	7.58	7.30	7.31	7.58
Sp. Cond. (mS/cm)	1.005	1.001	1.000	0.996	0.992	0.987	0.984	0.981
Turbidity (NTUs)	3.32	2.70	2.10	0.85	0.74	0.58	0.50	0.42
Dissolved Oxygen (mg/L)	0.57	0.43	0.35	0.45	0.40	0.36	0.36	0.34
Water Temperature (°C)	16.97	17.02	17.34	17.48	17.48	17.55	17.61	17.54
ORP (mV)	2.9	32.8	36.5	34.5	31.8	2.9	-1.2	24.3

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 8:40. Set tubing intake at center of screen. Start sampling at 9:40. Sample ID: A04BMW605D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/13/2007
Field Personnel: Emily Laity
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-605D
Upgradient ____ Downgradient ____
Weather Conditions: partly cloudy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 18.50 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 4.03 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 14.47 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.36 gal
3 Casing Volumes = 7.08 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 598.11 1/100 ft
Outer Casing Elevation: 598.24 1/100 ft
Land Surface Elevation: 598.50 1/100 ft
Screened Interval (below land surface): 8 to 18 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200					
Time (Military)	9:25	9:30	9:35					
Depth to Groundwater Below Top of Casing (ft)	4.09	4.10	4.10					
Drawdown (ft)	-0.06	-0.07	-0.07					
pH (S.U.)	7.40	7.32	7.31					
Sp. Cond. (mS/cm)	0.978	0.976	0.974					
Turbidity (NTUs)	0.38	0.35	0.43					
Dissolved Oxygen (mg/L)	0.31	0.30	0.27					
Water Temperature (°C)	17.58	17.58	17.61					
ORP (mV)	12.3	3.0	0.2					

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 8:40. Set tubing intake at center of screen. Start sampling at 9:40. Sample ID: A04BMW605D-U/F.

ROUND 1 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/15/2007
Field Personnel: Emily Laity
Site Name: Gut drSteel FUSRA PSite, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-607D
Upgradient ____ Downgradient ____
Weather Conditions: partly cloudy
Air Temperature: 80 ° F
Total Depth (TWD) Below Top of Casing = 19.78 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.49 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.29 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.84 gal
3 Casing Volumes = 5.52 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 600.38 1/100 ft
Outer Casing Elevation: 600.67 1/100 ft
Land Surface Elevation: 597.93 1/100 ft
Screened Interval (below land surface): 7.4 to 17.4 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	100	175	175	200	
Time (Military)	16:15	16:20	16:25	16:30	16:35	16:40	16:45	
Depth to Groundwater Below Top of Casing (ft)	8.59	8.63	8.66	8.63	8.66	8.66	8.66	
Drawdown (ft)	-0.10	-0.14	-0.17	-0.14	-0.17	-0.17	-0.17	
pH (S.U.)	7.38	7.97	9.06	9.02	9.12	9.13	8.95	
Sp. Cond. (mS/cm)	1.423	1.407	1.400	1.394	1.395	1.391	1.387	
Turbidity (NTUs)	1.10	1.08	0.92	1.14	0.76	0.46	0.42	
Dissolved Oxygen (mg/L)	0.60	0.37	0.28	0.27	0.21	0.18	0.17	
Water Temperature (°C)	15.42	15.10	15.20	15.56	15.62	15.64	15.66	
ORP (mV)	-115.8	-103.6	-69.8	-70.0	-83.2	-96.6	-97.5	

Physical appearance at start — Color: clear; Odor: yes (sulfur)
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (sulfur)
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 1.4; PID Air: 0.8. Start pump at 14:10. Set tubing intake at center of screen. Start sampling at 16:50. Sample ID: A03MW607D-U/F. Ran field/equipment blank after this well 8/16/2007 at 10:30. Field Blank: A03MWFB002-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	599.92 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.44 1/100 ft
Well ID #	MW-1	Land Surface Elevation	598.18 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	9.7 to 14.7 1/100 ft
Weather Conditions	cloudy		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	16.74 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	6.98 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	9.76 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.59 gal		
3 Casing Volumes =	4.77 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200	200	200	200	
Time (Military)	9:30	9:35	9:40	9:45	9:50	9:55	10:00	
Depth to Groundwater Below Top of Casing (ft)	7.30	7.34	7.35	7.35	7.36	7.35	7.36	
Drawdown (ft)	-0.32	-0.36	-0.37	-0.37	-0.38	-0.37	-0.38	
pH (S.U.)	6.90	6.92	6.92	6.93	6.92	6.92	6.93	
Sp. Cond. (mS/cm)	1.703	1.747	1.76	1.773	1.786	1.797	1.81	
Turbidity (NTUs)	26.40	31.40	31.40	3.56	2.02	1.20	1.18	
Dissolved Oxygen (mg/L)	0.88	0.61	0.68	0.74	0.42	0.42	0.41	
Water Temperature (°C)	13.38	13.43	13.45	13.49	13.54	13.53	13.53	
ORP (mV)	-22.3	-28.3	-26.4	-22.9	-22.6	-23.1	-23.4	

Physical appearance at start — Color: slightly orange; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear with orange floating particles; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 9:25. Orange iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 10:05. Sample ID: A02MW1-U/F. Filled 3 sample bottles for NYDEC.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	598.78 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	599.17 1/100 ft
Well ID #	MW-2	Land Surface Elevation	596.96 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	9.2 to 14.2 1/100 ft
Weather Conditions	cloudy		
Air Temperature	60 ° F		
Total Depth (TWD) Below Top of Casing =	16.00 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	8.65 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	7.35 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.20 gal		
3 Casing Volumes =	3.59 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	275	175	200	200	195	190	200	200
Time (Military)	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15
Depth to Groundwater Below Top of Casing (ft)	8.68	8.65	8.66	8.68	8.66	8.66	8.66	8.66
Drawdown (ft)	-0.03	0.00	-0.01	-0.03	-0.01	-0.01	-0.01	-0.01
pH (S.U.)	7.32	7.38	7.43	7.45	7.45	7.44	7.44	7.44
Sp. Cond. (mS/cm)	0.622	0.611	0.599	0.588	0.578	0.576	0.574	0.573
Turbidity (NTUs)	1.40	1.32	0.85	0.99	0.90	0.86	0.81	0.81
Dissolved Oxygen (mg/L)	0.84	0.50	0.64	0.81	0.78	0.56	0.48	0.43
Water Temperature (°C)	14.47	14.50	14.42	14.48	14.48	14.49	14.47	14.53
ORP (mV)	-164.2	-200.4	-195.4	-188.9	-190.2	-199.9	-204.8	-203.5

Physical appearance at start	Color: clear	Physical appearance at sampling	Color: clear
	Odor: no		Odor: no
Sheen/Free Product	no sheen/no product	Sheen/Free Product	no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 13:35. Set tubing intake at center of screen. Start sampling at 14:20. Sample ID: A02MW2-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/14/2007
Field Personnel: Emily Laity & Jeffrey Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-3
Upgradient / Downgradient
Weather Conditions: cloudy
Air Temperature: 50 ° F
Total Depth (TWD) Below Top of Casing = 16.04 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 5.85 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.19 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.66 gal
3 Casing Volumes = 4.98 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.03 1/100 ft
Outer Casing Elevation: 599.49 1/100 ft
Land Surface Elevation: 597.27 1/100 ft
Screened Interval (below land surface): 9.1 to 14.1 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	210	200	200	200	200	200
Time (Military)	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30
Depth to Groundwater Below Top of Casing (ft)	5.88	5.89	5.90	5.90	5.90	5.90	5.90	5.90
Drawdown (ft)	-0.03	-0.04	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
pH (S.U.)	6.95	6.89	6.87	6.87	6.87	6.88	6.87	6.86
Sp. Cond. (mS/cm)	0.734	0.739	0.742	0.745	0.746	0.747	0.748	0.747
Turbidity (NTUs)	24.30	17.03	12.19	10.06	9.96	7.00	6.91	6.9
Dissolved Oxygen (mg/L)	0.56	0.30	0.36	0.20	0.17	0.17	0.17	0.16
Water Temperature (°C)	13.56	13.56	13.56	13.55	13.55	13.55	13.54	13.55
ORP (mV)	-77.5	-84.9	-87.5	-88.6	-89.4	-90.4	-90.6	-91.2

Physical appearance at start — Color: pale yellow; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 16:50. Set tubing intake at center of screen. Start sampling at 17:35. Sample ID: A02MW3-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	599.52 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	599.95 1/100 ft
Well ID #	MW-4	Land Surface Elevation	597.70 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	9 to 14 1/100 ft
Weather Conditions	cool, partly sunny		
Air Temperature	40 ° F		
Total Depth (TWD) Below Top of Casing =	16.41 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	5.95 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.46 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.70 gal		
3 Casing Volumes =	5.11 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Dup
250ml Poly	TSS	2	none	Dup

FIELD ANALYSES

Flow Rate (ml/min)	250	190	200	200	200			
Time (Military)	11:15	11:20	11:25	11:30	11:35			
Depth to Groundwater Below Top of Casing (ft)	6.20	6.17	6.18	6.19	6.20			
Drawdown (ft)	-0.25	-0.22	-0.23	-0.24	-0.25			
pH (S.U.)	7.25	7.31	7.28	7.31	7.30			
Sp. Cond. (mS/cm)	0.660	0.658	0.659	0.657	0.652			
Turbidity (NTUs)	2.58	1.26	0.80	0.79	0.69			
Dissolved Oxygen (mg/L)	0.61	0.45	0.35	0.32	0.31			
Water Temperature (°C)	13.03	13.14	13.21	13.21	13.24			
ORP (mV)	43.8	31.6	27.2	22.1	19.3			

Physical appearance at start — Color: clear; Odor: yes (sulfur); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 1.9; PID Air: 0.0. Start pump at 11:10. Set tubing intake at center of screen. Start sampling at 11:40. Sample ID: A02MW4-U/F. Duplicate sample collected: A02MW54U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Gut drSteel FUSRA PSite, Lockport, New York	Inner Casing Elevation	598.52 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	598.92 1/100 ft
Well ID #	MW-5	Land Surface Elevation	596.68 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	10 to 15 1/100 ft
Weather Conditions	cloudy		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	17.45 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	5.74 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.71 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.91 gal		
3 Casing Volumes =	5.73 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	275	210	200	200	200	200	200	200
Time (Military)	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25
Depth to Groundwater Below Top of Casing (ft)	5.78	5.78	5.80	5.81	5.83	5.84	5.83	5.84
Drawdown (ft)	-0.04	-0.04	-0.06	-0.07	-0.09	-0.10	-0.09	-0.10
pH (S.U.)	7.02	6.97	6.97	6.97	6.96	6.96	6.96	6.95
Sp. Cond. (mS/cm)	0.717	0.710	0.708	0.704	0.700	0.699	0.699	0.700
Turbidity (NTUs)	7.06	7.00	6.24	4.20	4.18	2.50	2.43	2.31
Dissolved Oxygen (mg/L)	0.66	0.49	0.29	0.28	0.30	0.18	0.18	0.17
Water Temperature (°C)	12.59	12.57	12.50	12.48	12.47	12.47	12.47	12.47
ORP (mV)	-82.4	-97.4	-98.7	-99.8	-99.1	-96.7	-94.9	-94.4

Physical appearance at start — Color: pale yellow with floating particles; Odor: yes

Physical appearance at sampling — Color: clear; Odor: yes (faint)

Sheen/Free Product: no sheen/no product

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 15:45. Small amount of orange iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 16:30. Sample ID: A02MW5-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	600.68 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	601.07 1/100 ft
Well ID #	MW-06	Land Surface Elevation	597.59 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	6 to 16 1/100 ft
Weather Conditions	cloudy with sprinkles		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	19.01 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.40 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.61 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.89 gal		
3 Casing Volumes =	5.68 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	190	200	200	200	200		
Time (Military)	8:45	8:50	8:55	9:00	9:05	9:10		
Depth to Groundwater Below Top of Casing (ft)	7.52	7.53	7.54	7.54	7.54	7.54		
Drawdown (ft)	-0.12	-0.13	-0.14	-0.14	-0.14	-0.14		
pH (S.U.)	6.88	6.87	6.85	6.85	6.85	6.85		
Sp. Cond. (mS/cm)	1.048	1.051	1.05	1.046	1.044	1.042		
Turbidity (NTUs)	9.00	6.05	4.90	3.88	3.65	3.40		
Dissolved Oxygen (mg/L)	0.65	0.55	0.47	0.45	0.45	0.45		
Water Temperature (°C)	13.47	13.46	13.39	13.34	13.34	13.35		
ORP (mV)	18.9	-5.7	-19.3	-18.4	-20.1	-19.7		

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.0; PID Air: 0.0. Start pump at 8:40. Set tubing intake at center of screen. Start sampling at 9:20. Sample ID: A02MW6-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	601.37 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	601.71 1/100 ft
Well ID #	MW-08	Land Surface Elevation	598.31 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	7 to 17 1/100 ft
Weather Conditions	Sprinkles		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	19.90 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	9.04 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.86 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.77 gal		
3 Casing Volumes =	5.31 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	210	200	190	175	200	170	190	170
Time (Military)	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05
Depth to Groundwater Below Top of Casing (ft)	9.36	9.41	9.43	9.46	9.53	9.45	9.49	9.45
Drawdown (ft)	-0.32	-0.37	-0.39	-0.42	-0.49	-0.41	-0.45	-0.41
pH (S.U.)	6.91	6.89	6.89	6.89	6.89	6.89	6.89	6.89
Sp. Cond. (mS/cm)	1.550	1.559	1.565	1.559	1.557	1.558	1.556	1.556
Turbidity (NTUs)	3.80	2.55	2.46	1.92	1.74	1.41	1.17	1.15
Dissolved Oxygen (mg/L)	0.50	0.26	0.28	0.23	0.15	0.17	0.17	0.17
Water Temperature (°C)	13.76	13.72	13.66	13.70	13.73	13.67	13.72	13.7
ORP (mV)	-120.9	-134.1	-143.0	-146.6	-150.9	-153.9	-154.8	-157.2

Physical appearance at start — Color: clear; Odor: yes (possible slight chemical odor); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes (faint odor); Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 10:25. Set tubing intake at center of screen. Start sampling at 11:10. Sample ID: A02MW08-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/14/2007
Field Personnel: Emily Laity & Jeffrey Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-09
Upgradient / Downgradient
Weather Conditions: cloudy with sprinkles
Air Temperature: 50 ° F
Total Depth (TWD) Below Top of Casing = 19.14 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.77 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.37 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.69 gal
3 Casing Volumes = 5.07 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 599.70 1/100 ft
Outer Casing Elevation: 600.01 1/100 ft
Land Surface Elevation: 596.49 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200	200	200	200	200
Time (Military)	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00
Depth to Groundwater Below Top of Casing (ft)	8.80	8.78	8.78	8.78	8.78	8.78	8.78	8.78
Drawdown (ft)	-0.03	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
pH (S.U.)	7.17	7.11	7.07	7.07	7.07	7.07	7.06	7.06
Sp. Cond. (mS/cm)	0.890	0.850	0.744	0.723	0.716	0.705	0.696	0.69
Turbidity (NTUs)	36.20	36.00	15.76	10.90	8.32	6.20	4.66	4.60
Dissolved Oxygen (mg/L)	2.08	1.02	0.41	0.34	0.29	0.23	0.24	0.20
Water Temperature (°C)	13.10	13.05	13.12	13.12	13.14	13.08	13.07	13.07
ORP (mV)	-137.1	-139.1	-135.5	-144.0	-147.9	-152.6	-153.9	-157.6

Physical appearance at start — Color: cloudy with black particles; Odor: no
Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 12:20. Set tubing intake at center of screen. Start sampling at 13:05. Sample ID: A0MW09-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	599.79 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.22 1/100 ft
Well ID #	MW-11	Land Surface Elevation	596.77 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	8 to 18 1/100 ft
Weather Conditions	cloudy		
Air Temperature	60 ° F		
Total Depth (TWD) Below Top of Casing =	20.99 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	9.55 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.44 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.86 gal		
3 Casing Volumes =	5.59 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	210	210	210	200	200		
Time (Military)	14:35	14:40	14:45	14:50	14:55	15:00		
Depth to Groundwater Below Top of Casing (ft)	9.86	9.87	9.85	9.86	9.87	9.86		
Drawdown (ft)	-0.31	-0.32	-0.30	-0.31	-0.32	-0.31		
pH (S.U.)	6.99	7.08	7.07	6.95	6.89	6.89		
Sp. Cond. (mS/cm)	1.257	1.262	1.263	1.261	1.258	1.255		
Turbidity (NTUs)	6.10	3.36	3.26	2.04	1.60	1.51		
Dissolved Oxygen (mg/L)	0.78	0.37	0.26	0.18	0.16	0.17		
Water Temperature (°C)	14.71	14.66	14.65	14.66	14.68	14.64		
ORP (mV)	-55.4	-69.4	-69.1	-84.3	-93.2	-94.8		

Physical appearance at start — Color: clear; Odor: yes

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 14:30. Set tubing intake at center of screen. Start sampling at 15:05. Sample ID: A02MW11-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/16/2007
Field Personnel: Emily Laity & Jeffrey Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-13D
Upgradient / Downgradient
Weather Conditions: cloudy
Air Temperature: 35 ° F
Total Depth (TWD) Below Top of Casing = 19.40 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 9.15 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.25 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.67 gal
3 Casing Volumes = 5.01 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 603.47 1/100 ft
Outer Casing Elevation: 603.69 1/100 ft
Land Surface Elevation: 600.15 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	275	200	250	200	200			
Time (Military)	10:10	10:15	10:20	10:25	10:30			
Depth to Groundwater Below Top of Casing (ft)	9.40	9.37	9.40	9.40	9.40			
Drawdown (ft)	-0.25	-0.22	-0.25	-0.25	-0.25			
pH (S.U.)	7.32	7.30	7.29	7.26	7.28			
Sp. Cond. (mS/cm)	1.276	1.264	1.259	1.249	1.250			
Turbidity (NTUs)	3.63	2.47	1.44	1.40	1.33			
Dissolved Oxygen (mg/L)	0.57	0.48	0.41	0.37	0.39			
Water Temperature (°C)	12.12	12.20	11.86	12.05	12.06			
ORP (mV)	-20.1	-24.5	-28.8	-27.7	-32.0			

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 10:05. Set tubing intake at center of screen. Start sampling at 10:35. Sample ID: A03MW13D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/12/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	602.36 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	602.59 1/100 ft
Well ID #	MW-14	Land Surface Elevation	598.90 1/100 ft
	Upgradient ____ Downgradient	Screened Interval (below land surface)	6 to 15.95 1/100 ft
Weather Conditions	cloudy		
Air Temperature	45 ° F		
Total Depth (TWD) Below Top of Casing =	19.61 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	8.44 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.17 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.82 gal		
3 Casing Volumes =	5.46 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	210	200	187	200	200	200	200	
Time (Military)	16:55	17:00	17:05	17:10	17:15	17:20	17:25	
Depth to Groundwater Below Top of Casing (ft)	8.61	8.62	8.61	8.61	8.61	8.61	8.61	
Drawdown (ft)	-0.17	-0.18	-0.17	-0.17	-0.17	-0.17	-0.17	
pH (S.U.)	7.24	7.23	7.21	7.21	7.21	7.21	7.19	
Sp. Cond. (mS/cm)	1.404	1.401	1.399	1.399	1.399	1.395	1.392	
Turbidity (NTUs)	300	76.4	22.3	13.0	11.0	8.0	3.5	
Dissolved Oxygen (mg/L)	1.9	0.99	0.68	0.61	0.53	0.56	0.48	
Water Temperature (°C)	13.33	13.45	13.42	13.41	13.43	13.43	13.31	
ORP (mV)	-48.5	-63.1	-61.2	-63.0	-67.8	-65.8	-68.3	

Physical appearance at start — Color: tan; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 16:50. Set tubing intake at center of screen. Start sampling at 17:30. Sample ID: A03MW14-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	608.09 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	608.29 1/100 ft
Well ID #	MW-15	Land Surface Elevation	604.42 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	10 to 20 1/100 ft
Weather Conditions	clear skies		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	23.50 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	13.15 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.35 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.69 gal		
3 Casing Volumes =	5.06 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	210	150	100	100	100	175	100	75
Time (Military)	8:40	8:45	8:50	8:55	9:00	9:10	9:25	9:30
Depth to Groundwater Below Top of Casing (ft)	13.29	13.90	14.20	14.39	14.55	14.70	14.34	14.59
Drawdown (ft)	-0.14	-0.75	-1.05	-1.24	-1.40	-1.55	-1.19	-1.44
pH (S.U.)	9.20	9.25	9.31	9.33	9.32	9.20	9.18	9.16
Sp. Cond. (mS/cm)	0.821	0.817	0.818	0.835	0.850	0.919	0.965	0.983
Turbidity (NTUs)	41.50	30.00	28.80	30.00	36.70	53.50	63.50	63.00
Dissolved Oxygen (mg/L)	0.85	0.54	0.54	0.51	0.46	0.57	2.11	1.23
Water Temperature (°C)	13.47	13.44	12.74	12.80	12.85	13.17	12.73	12.7
ORP (mV)	-76.6	-86.7	-101.9	-124.7	-136.8	-138.1	-119.0	-137.2

Physical appearance at start — Color: tan; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID AIR: 0.0. Start pump at 8:35. at 9:00 changed pump; at 9:15 switched pump back. DGW at 9:20 = 14.08. Set tubing intake at center of screen. Start sampling at 10:10. Sample ID: A03MW15-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	608.09 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	608.29 1/100 ft
Well ID #	MW-15	Land Surface Elevation	604.42 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	10 to 20 1/100 ft
Weather Conditions	clear skies		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	23.50 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	13.15 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.35 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.69 gal		
3 Casing Volumes =	5.06 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	100	50	50	50	50	50		
Time (Military)	9:35	9:40	9:45	9:50	9:55	10:00		
Depth to Groundwater Below Top of Casing (ft)	14.65	14.69	14.63	14.61	14.68	14.71		
Drawdown (ft)	-1.50	-1.54	-1.48	-1.46	-1.53	-1.56		
pH (S.U.)	9.01	8.97	8.82	8.74	8.71	8.67		
Sp. Cond. (mS/cm)	1.080	1.111	1.208	1.282	1.294	1.337		
Turbidity (NTUs)	52.80	61.40	59.80	45.00	44.00	44.00		
Dissolved Oxygen (mg/L)	0.74	0.74	0.68	0.58	0.52	0.50		
Water Temperature (°C)	12.77	12.65	12.41	12.50	12.68	12.73		
ORP (mV)	-148.9	-150.8	-147.4	-145.6	-144.6	-142.3		

Physical appearance at start — Color: tan; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID AIR: 0.0. Start pump at 8:35. at 9:00 changed pump; at 9:15 switched pump back. DGW at 9:20 = 14.08. Set tubing intake at center of screen. Start sampling at 10:10. Sample ID: A03MW15-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/12/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	604.37 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	604.79 1/100 ft
Well ID #	MW-16	Land Surface Elevation	601.41 1/100 ft
	Upgradient ____ Downgradient	Screened Interval (below land surface)	7 to 17 1/100 ft
Weather Conditions	cloudy		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	20.10 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	9.60 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.50 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.71 gal		
3 Casing Volumes =	5.13 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	160	180	180	180			
Time (Military)	15:20	15:25	15:30	15:35	15:40			
Depth to Groundwater Below Top of Casing (ft)	9.64	9.63	9.63	9.63	9.63			
Drawdown (ft)	-0.04	-0.03	-0.03	-0.03	-0.03			
pH (S.U.)	7.08	7.03	7.02	7.02	7.01			
Sp. Cond. (mS/cm)	1.497	1.495	1.493	1.492	1.492			
Turbidity (NTUs)	5.46	3.47	1.51	1.50	0.98			
Dissolved Oxygen (mg/L)	0.60	0.65	0.92	0.52	0.49			
Water Temperature (°C)	13.64	13.57	13.59	13.64	13.64			
ORP (mV)	18.9	7.9	4.7	-2.4	-3.6			

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.4; PID Air: 0.4. Start pump at 15:15. Set tubing intake at center of screen. Start sampling at 15:50. Sample ID: A03MW16-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/12/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	606.97 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	607.15 1/100 ft
Well ID #	MW-17	Land Surface Elevation	603.79 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	7 to 16.76 1/100 ft
Weather Conditions	cloudy with sprinkles		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	20.08 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	10.02 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.06 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.64 gal		
3 Casing Volumes =	4.92 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	150	140	100	80	100	100		
Time (Military)	14:15	14:20	14:25	14:30	14:35	14:40		
Depth to Groundwater Below Top of Casing (ft)	10.37	10.43	10.46	10.41	10.43	10.42		
Drawdown (ft)	-0.35	-0.41	-0.44	-0.39	-0.41	-0.40		
pH (S.U.)	7.1	7.14	7.14	7.16	7.15	7.17		
Sp. Cond. (mS/cm)	2.52	2.511	2.514	2.515	2.509	2.515		
Turbidity (NTUs)	28.40	18.80	15.10	13.20	10.00	9.80		
Dissolved Oxygen (mg/L)	1.81	1.21	1.15	1.67	1.23	0.89		
Water Temperature (°C)	13.60	13.61	13.58	13.66	13.55	13.49		
ORP (mV)	-67.2	-70.4	-67.5	-72.3	-72.8	-72.9		

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 14:10. Set tubing intake at center of screen. Start sampling at 14:45. Sample ID: A03MW17-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	602.36 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	602.62 1/100 ft
Well ID #	MW-18	Land Surface Elevation	599.48 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	5 to 14 1/100 ft
Weather Conditions	cloudy		
Air Temperature	40 ° F		
Total Depth (TWD) Below Top of Casing =	17.73 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	8.45 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	9.28 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.51 gal		
3 Casing Volumes =	4.54 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	200	200	200	200	200		
Time (Military)	16:25	16:30	16:35	16:40	16:45	16:50		
Depth to Groundwater Below Top of Casing (ft)	8.84	8.78	8.80	8.79	8.79	8.79		
Drawdown (ft)	-0.39	-0.33	-0.35	-0.34	-0.34	-0.34		
pH (S.U.)	7.01	7.00	7.02	7.04	7.01	7.00		
Sp. Cond. (mS/cm)	1.050	1.070	1.082	1.084	1.088	1.094		
Turbidity (NTUs)	29.40	12.31	11.43	9.61	9.04	8.18		
Dissolved Oxygen (mg/L)	1.21	0.93	0.63	0.55	0.51	0.45		
Water Temperature (°C)	12.75	12.73	12.80	12.75	12.75	12.74		
ORP (mV)	47.9	38.5	33.0	30.2	31.6	31.2		

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.0; PID AIR: 0.0. Start pump at 16:20. Set tubing intake at center of screen. Start sampling at 16:55. Sample ID: A04BMW18-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/15/2007
Field Personnel: Emily Laity& Jeffery Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-19
Upgradient / Downgradient
Weather Conditions: cool, partly cloudy
Air Temperature: 40 ° F
Total Depth (TWD) Below Top of Casing = 23.26 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 10.55 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 12.71 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.07 gal
3 Casing Volumes = 6.22 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 601.36 1/100 ft
Outer Casing Elevation: 601.84 1/100 ft
Land Surface Elevation: 598.29 1/100 ft
Screened Interval (below land surface): 10 to 20.02 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200	200	200	200	
Time (Military)	9:05	9:10	9:15	9:20	9:25	9:30	9:35	
Depth to Groundwater Below Top of Casing (ft)	10.07	10.71	10.71	10.70	10.72	10.72	10.72	
Drawdown (ft)	0.48	-0.16	-0.16	-0.15	-0.17	-0.17	-0.17	
pH (S.U.)	6.97	6.97	6.99	6.97	6.98	6.97	6.97	
Sp. Cond. (mS/cm)	0.986	0.986	0.987	0.989	0.989	0.993	0.992	
Turbidity (NTUs)	2.60	1.20	0.82	0.49	0.48	0.46	0.45	
Dissolved Oxygen (mg/L)	2.05	1.83	1.73	1.97	1.91	1.86	1.88	
Water Temperature (°C)	13.89	14.24	14.36	14.41	14.50	14.37	14.48	
ORP (mV)	25.8	30.0	30.5	31.6	32.9	36.1	na	

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 9:00. Set tubing intake at center of screen. Start sampling at 9:40. Sample ID: A04BMW19-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	603.62 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	603.78 1/100 ft
Well ID #	MW-20	Land Surface Elevation	600.50 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	7 to 17 1/100 ft
Weather Conditions	clear		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	20.20 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	9.38 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	10.82 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.76 gal		
3 Casing Volumes =	5.29 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	Dup
250ml Poly	TSS	1	none	Dup

FIELD ANALYSES

Flow Rate (ml/min)	220	200	200	175	175			
Time (Military)	17:05	17:10	17:15	17:20	17:25			
Depth to Groundwater Below Top of Casing (ft)	9.85	9.89	9.96	9.90	9.89			
Drawdown (ft)	-0.47	-0.51	-0.58	-0.52	-0.51			
pH (S.U.)	7.17	7.09	7.07	7.07	7.06			
Sp. Cond. (mS/cm)	1.002	0.962	0.937	0.933	0.935			
Turbidity (NTUs)	17.00	5.72	1.87	1.75	1.74			
Dissolved Oxygen (mg/L)	1.54	1.08	1.24	1.17	0.99			
Water Temperature (°C)	13.23	13.40	13.41	13.37	13.32			
ORP (mV)	58.9	56.5	55.7	55.4	55.6			

Physical appearance at start — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 17:00. Set tubing intake at center of screen. Start sampling at 17:35. Sample ID: A04AMW20-U/F. Duplicate sample collected: A04AMW70U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	608.46 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	608.67 1/100 ft
Well ID #	MW-21	Land Surface Elevation	605.41 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	11 to 21 1/100 ft
Weather Conditions	sunny		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	21.00 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	13.77 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	7.23 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.18 gal		
3 Casing Volumes =	3.54 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	6	HNO3	MS/MSD
250ml Poly	TSS	3	none	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200	200	200		
Time (Military)	14:10	14:15	14:20	14:25	14:30	14:35		
Depth to Groundwater Below Top of Casing (ft)	14.28	14.31	14.34	14.33	14.33	14.35		
Drawdown (ft)	-0.51	-0.54	-0.57	-0.56	-0.56	-0.58		
pH (S.U.)	7.31	7.25	7.26	7.27	7.22	7.33		
Sp. Cond. (mS/cm)	1.988	2.026	2.035	2.050	2.052	2.064		
Turbidity (NTUs)	24.20	10.40	5.92	3.64	3.06	2.15		
Dissolved Oxygen (mg/L)	1.29	0.72	0.78	0.42	0.37	0.33		
Water Temperature (°C)	13.98	14.10	14.03	13.74	14.00	13.76		
ORP (mV)	-93.8	-95.2	-97.4	-102.3	-105.6	-114.8		

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 14:05. Set tubing intake at center of screen. Start sampling at 14:40. Sample ID: A04AMW21-U/F. MS/MSD collected at this well.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	601.35 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	601.73 1/100 ft
Well ID #	MW-22	Land Surface Elevation	598.09 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	7 to 17(1) 1/100 ft
Weather Conditions	light wind, cloudy		
Air Temperature	40 ° F		
Total Depth (TWD) Below Top of Casing =	20.19 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.40 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.79 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.08 gal		
3 Casing Volumes =	6.25 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	280	210	225	225	220	220	220	200
Time (Military)	13:19	13:24	13:29	13:34	13:39	13:44	13:49	14:00
Depth to Groundwater Below Top of Casing (ft)	7.58	7.52	7.52	7.52	7.51	7.53	7.53	7.51
Drawdown (ft)	-0.18	-0.12	-0.12	-0.12	-0.11	-0.13	-0.13	-0.11
pH (S.U.)	6.91	6.92	6.92	6.83	6.90	6.87	6.89	6.88
Sp. Cond. (mS/cm)	0.677	0.678	0.677	0.675	0.671	0.669	0.668	0.665
Turbidity (NTUs)	31.16	16.05	12.26	12.14	13.30	8.39	10.64	3.97
Dissolved Oxygen (mg/L)	0.96	0.56	0.34	0.30	0.26	0.24	0.18	0.21
Water Temperature (°C)	13.60	13.59	13.49	13.55	13.48	13.54	13.61	13.4
ORP (mV)	-118.0	-119.2	-120.6	-120.3	-121.3	-122.4	-123.5	-123.4

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 13:14. Set tubing intake at center of screen. Start sampling at 14:30. Sample ID: A04AMW22-U/F. (1) Start of screened interval is estimated.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**	Inner Casing Elevation	601.35 1/100 ft
Earth Tech Job #	**100657**	Outer Casing Elevation	601.73 1/100 ft
Well ID #	MW-22	Land Surface Elevation	598.09 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	7 to 17(1) 1/100 ft
Weather Conditions	light wind, cloudy		
Air Temperature	40 ° F		
Total Depth (TWD) Below Top of Casing =	20.19 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.40 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.79 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.08 gal		
3 Casing Volumes =	6.25 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200	200				
Time (Military)	14:05	14:10	14:15	14:20				
Depth to Groundwater Below Top of Casing (ft)	7.51	7.51	7.50	7.50				
Drawdown (ft)	-0.11	-0.11	-0.10	-0.10				
pH (S.U.)	6.90	6.89	6.89	6.89				
Sp. Cond. (mS/cm)	0.665	0.663	0.662	0.662				
Turbidity (NTUs)	2.68	1.42	1.39	1.39				
Dissolved Oxygen (mg/L)	0.21	0.20	0.20	0.20				
Water Temperature (°C)	13.35	13.30	13.34	13.34				
ORP (mV)	-126.6	-122.4	-122.6	-122.5				

Physical appearance at start	Color: clear	Physical appearance at sampling	Color: clear
	Odor: no		Odor: no
Sheen/Free Product	no sheen/no product	Sheen/Free Product	no sheen/no product

COMMENTS/OBSERVATIONS

Start pump at 13:14. Set tubing intake at center of screen. Start sampling at 14:30. Sample ID: A04AMW22-U/F. (1) Start of screened interval is estimated.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/15/2007
Field Personnel: Emily Laity & Jeffrey Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-23
Upgradient / Downgradient
Weather Conditions: cool, partly cloudy
Air Temperature: 40 ° F
Total Depth (TWD) Below Top of Casing = 19.60 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 6.40 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.20 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.15 gal
3 Casing Volumes = 6.45 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 600.50 1/100 ft
Outer Casing Elevation: 600.95 1/100 ft
Land Surface Elevation: 597.58 1/100 ft
Screened Interval (below land surface): 6 to 16 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	6	HNO3	MS/MSD
250ml Poly	TSS	3	none	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	250	210	200	190	200	200	200	200
Time (Military)	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45
Depth to Groundwater Below Top of Casing (ft)	6.45	6.48	3.48	6348.00	6.48	6.49	6.49	6.49
Drawdown (ft)	-0.05	-0.08	2.92	-6341.60	-0.08	-0.09	-0.09	-0.09
pH (S.U.)	7.15	7.09	7.05	7.04	7.01	7.00	7.00	7.00
Sp. Cond. (mS/cm)	0.608	0.599	0.605	0.609	0.611	0.612	0.612	0.612
Turbidity (NTUs)	8.44	4.78	2.43	2.04	2.00	1.40	1.40	1.39
Dissolved Oxygen (mg/L)	0.66	0.53	0.46	0.52	0.71	0.66	0.47	0.42
Water Temperature (°C)	13.09	13.12	13.01	12.82	12.80	13.01	13.03	13.04
ORP (mV)	44.1	36.1	27.9	17.1	9.5	0.1	-5.6	-8.9

Physical appearance at start — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.7; PID Air: 0.0. Start pump at 10:05. Note: Air bubbles in hose. Set tubing intake at center of screen. Start sampling at 10:50. Sample ID: A04AMW23-U/F. MS/MSD collected at this well.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	597.27 1/100 ft
Well ID #	MW-24	Land Surface Elevation	597.27 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	6.43 to 16.43(1) 1/100 ft
Weather Conditions	cloudy		
Air Temperature	45 ° F		
Total Depth (TWD) Below Top of Casing =	16.67 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	4.17 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.50 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.04 gal		
3 Casing Volumes =	6.11 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	210	250	200	200	200	200	200	200
Time (Military)	7:45	7:50	7:55	8:00	8:05	8:10	8:15	8:20
Depth to Groundwater Below Top of Casing (ft)	4.19	4.20	4.20	4.20	4.21	4.21	4.21	4.21
Drawdown (ft)	-0.02	-0.03	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04
pH (S.U.)	7.20	7.17	7.17	7.18	7.19	7.19	7.19	7.19
Sp. Cond. (mS/cm)	0.631	0.628	0.628	0.626	0.626	0.625	0.625	0.625
Turbidity (NTUs)	1.64	1.30	0.80	0.81	0.70	0.81	0.67	0.67
Dissolved Oxygen (mg/L)	0.58	0.42	0.44	0.59	0.92	0.52	0.31	0.26
Water Temperature (°C)	14.94	14.95	14.92	15.00	14.99	14.96	14.98	14.99
ORP (mV)	-140.6	-143.5	-146.4	-144.3	-146.6	-148.5	-148.1	-149

Physical appearance at start — Color: clear with black floating particles — Odor: chemical or petro — Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear with black floating particles — Odor: yes — Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 7:40. Set tubing intake at center of screen. Start sampling at 8:30. Sample ID: A04DMW24-U/F. Field Blank A04DMWFB-004. (1) Start of screened interval is estimated.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	**Guterl Steel FUSRAP Site, Lockport, New York**	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	**100657**	Outer Casing Elevation	597.27 1/100 ft
Well ID #	MW-24	Land Surface Elevation	597.27 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	6.43 to 16.43[1] 1/100 ft
Weather Conditions	cloudy		
Air Temperature	45 ° F		
Total Depth (TWD) Below Top of Casing =	16.67 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	4.17 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.50 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.04 gal		
3 Casing Volumes =	6.11 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	4	HNO3	Field Blank
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200							
Time (Military)	8:25							
Depth to Groundwater Below Top of Casing (ft)	4.21							
Drawdown (ft)	-0.04							
pH (S.U.)	7.20							
Sp. Cond. (mS/cm)	0.628							
Turbidity (NTUs)	0.61							
Dissolved Oxygen (mg/L)	0.24							
Water Temperature (°C)	15.01							
ORP (mV)	-159.2							

Physical appearance at start — Color: clear with black floating particles — Odor: chemical or petro — Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear with black floating particles — Odor: yes — Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 7:40. Set tubing intake at center of screen. Start sampling at 8:30. Sample ID: A04DMW24-U/F. Field Blank A04DMWFB-004. (1) Start of screened interval is estimated.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/16/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	N/A 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	596.93 1/100 ft
Well ID #	MW-26	Land Surface Elevation	596.93 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	7 to 17(1) 1/100 ft
Weather Conditions	cloudy		
Air Temperature	35 ° F		
Total Depth (TWD) Below Top of Casing =	16.90 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	3.80 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	13.10 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.14 gal		
3 Casing Volumes =	6.41 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	240	200	200	200	200	210	200	
Time (Military)	8:55	9:00	9:05	9:10	9:15	9:20	9:25	
Depth to Groundwater Below Top of Casing (ft)	3.90	3.90	3.90	3.90	3.90	3.90	3.90	
Drawdown (ft)	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
pH (S.U.)	7.15	7.12	7.12	7.11	7.10	7.10	7.09	
Sp. Cond. (mS/cm)	2.449	2.478	2.475	2.450	2.430	2.422	2.418	
Turbidity (NTUs)	28.70	14.00	8.00	4.50	2.50	2.08	1.81	
Dissolved Oxygen (mg/L)	0.34	0.30	0.30	0.38	0.26	0.25	0.25	
Water Temperature (°C)	13.62	13.71	13.66	13.68	13.69	13.68	13.58	
ORP (mV)	-6.8	-10.7	-21.6	-25.5	-25.7	-26.2	-26.3	

Physical appearance at start — Color: orange; Odor: no; Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.1; PID Air: 0.1. Start pump at 8:50. Rust colored iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 9:30. Sample ID: A04BMW26-U/F. (1) Start of screened interval is estimated.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	613.29 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	613.50 1/100 ft
Well ID #	MW-600D	Land Surface Elevation	610.54 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	13 to 23 1/100 ft
Weather Conditions	sunny		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	24.79 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	11.55 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	13.24 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.16 gal		
3 Casing Volumes =	6.47 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	200	190	200	200	190	200		
Time (Military)	15:25	15:30	15:35	15:40	15:45	15:50		
Depth to Groundwater Below Top of Casing (ft)	11.65	11.65	11.66	11.68	11.68	11.69		
Drawdown (ft)	-0.10	-0.10	-0.11	-0.13	-0.13	-0.14		
pH (S.U.)	6.60	6.59	6.59	6.58	6.58	6.57		
Sp. Cond. (mS/cm)	15.43	15.62	15.68	15.77	15.82	15.87		
Turbidity (NTUs)	7.86	7.61	2.18	1.55	1.30	1.30		
Dissolved Oxygen (mg/L)	0.47	0.68	0.04	0.30	0.29	0.26		
Water Temperature (°C)	13.66	13.51	13.48	13.23	13.20	13.15		
ORP (mV)	-0.5	-1.8	-1.7	-0.6	4.8	7.2		

Physical appearance at start — Color: rust colored; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.0. Start pump at 15:20. A large amount of iron bacteria at start of pumping. Set tubing intake at center of screen. Start sampling at 16:00. Sample ID: A05BMW600D-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	604.85 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	605.22 1/100 ft
Well ID #	MW-601D	Land Surface Elevation	602.42 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	9.5 to 19.5 1/100 ft
Weather Conditions	cool		
Air Temperature	45 ° F		
Total Depth (TWD) Below Top of Casing =	22.58 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	10.80 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.78 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.92 gal		
3 Casing Volumes =	5.76 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	150	160	175	175	175	175	
Time (Military)	18:00	18:05	18:10	18:15	18:20	18:25	18:30	
Depth to Groundwater Below Top of Casing (ft)	10.89	10.90	10.90	10.91	10.90	10.90	10.90	
Drawdown (ft)	-0.09	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	
pH (S.U.)	7.02	7.06	7.10	7.12	7.15	7.16	7.16	
Sp. Cond. (mS/cm)	1.909	1.872	1.830	1.810	1.800	1.789	1.786	
Turbidity (NTUs)	8.30	5.54	5.61	1.84	1.76	1.71	1.64	
Dissolved Oxygen (mg/L)	0.49	0.37	0.34	0.41	0.27	0.25	0.27	
Water Temperature (°C)	13.99	13.80	13.74	13.76	13.71	13.69	13.67	
ORP (mV)	-150.4	-155.9	-159.2	-160.6	-159.7	-158.1	-158.1	

Physical appearance at start — Color: clear; Odor: yes (slight); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID WELL: 0.1; PID AIR: 0.0. Start pump at 17:55. Set tubing intake at center of screen. Start sampling at 18:35. Sample ID: A04AMW601D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/15/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	605.005 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	604.295 1/100 ft
Well ID #	MW-602D	Land Surface Elevation	601.135 1/100 ft
____ Upgradient ____ Downgradient		Screened Interval (below land surface)	10 to 20 1/100 ft
Weather Conditions	cloudy		
Air Temperature	40 ° F		
Total Depth (TWD) Below Top of Casing =	22.10 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	9.95 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.15 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.98 gal		
3 Casing Volumes =	5.94 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	300	200	200	200	200	200	200	
Time (Military)	14:50	14:55	15:00	15:05	15:10	15:15	15:20	
Depth to Groundwater Below Top of Casing (ft)	10.05	10.02	10.01	10.02	10.02	10.02	10.02	
Drawdown (ft)	-0.10	-0.07	-0.06	-0.07	-0.07	-0.07	-0.07	
pH (S.U.)	7.00	7.01	7.01	7.01	7.01	7.00	7.03	
Sp. Cond. (mS/cm)	1.819	1.764	1.681	1.652	1.624	1.590	1.564	
Turbidity (NTUs)	28.10	21.00	12.70	9.17	6.85	5.43	5.14	
Dissolved Oxygen (mg/L)	0.36	0.33	0.32	0.33	0.26	0.25	0.24	
Water Temperature (°C)	13.94	13.75	13.63	13.60	13.57	13.56	13.64	
ORP (mV)	-47.1	-48.6	-47.6	-46.4	-46.5	-45.2	-43.4	

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.1; PID AIR: 0.0. Start pump at 14:45. Set tubing intake at center of screen. Start sampling at 15:25. Sample ID: A04AMW602D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/14/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	600.43 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.62 1/100 ft
Well ID #	MW-603D	Land Surface Elevation	597.69 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	9.5 to 19.5 1/100 ft
Weather Conditions	cloudy		
Air Temperature	55 ° F		
Total Depth (TWD) Below Top of Casing =	22.65 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.14 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	15.51 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.53 gal		
3 Casing Volumes =	7.58 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	250	200	200	200	200	200	200	
Time (Military)	7:55	8:00	8:05	8:10	8:15	8:20	8:25	
Depth to Groundwater Below Top of Casing (ft)	7.33	7.32	7.32	7.31	7.31	7.31	7.31	
Drawdown (ft)	-0.19	-0.18	-0.18	-0.17	-0.17	-0.17	-0.17	
pH (S.U.)	7.02	7.04	7.05	7.05	7.06	7.05	7.05	
Sp. Cond. (mS/cm)	1.067	1.062	1.060	1.059	1.060	1.065	1.068	
Turbidity (NTUs)	16.29	10.84	7.66	5.65	4.09	4.06	4.02	
Dissolved Oxygen (mg/L)	0.79	0.78	0.92	0.35	0.31	0.26	0.25	
Water Temperature (°C)	13.66	13.67	13.68	13.67	13.65	13.64	13.64	
ORP (mV)	89.8	40.1	17.9	9.1	1.7	-8.4	-14.4	

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.0; PID Air: 0.0. Start pump at 7:50. Set tubing intake at center of screen. Start sampling at 8:30. Sample ID: A04AMW603D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 11/15/2007
Field Personnel: Emily Laity & Jeffrey Rowley
Site Name: Guterl Steel FUSRAP Site, Lockport, New York
Earth Tech Job #: 100657
Well ID #: MW-604D
Upgradient ____ Downgradient ____
Weather Conditions: cloudy
Air Temperature: 40 ° F
Total Depth (TWD) Below Top of Casing = 18.08 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 7.62 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.46 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.70 gal
3 Casing Volumes = 5.11 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Teflon Tubing
Total Volume of Water Removed: N/A liter

Casing Diameter: 2 inches
Casing Material: PVC
Inner Casing Elevation: 595.98 1/100 ft
Outer Casing Elevation: 596.25 1/100 ft
Land Surface Elevation: 596.25 1/100 ft
Screened Interval (below land surface): 8.2 to 18.2 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	275	180	200	200	200	200		
Time (Military)	17:20	17:25	17:30	17:35	17:40	17:45		
Depth to Groundwater Below Top of Casing (ft)	7.83	7.80	7.80	7.80	7.78	7.81		
Drawdown (ft)	-0.21	-0.18	-0.18	-0.18	-0.16	-0.19		
pH (S.U.)	7.21	7.19	7.19	7.17	7.16	7.15		
Sp. Cond. (mS/cm)	1.572	1.572	1.584	1.595	1.599	1.603		
Turbidity (NTUs)	15.95	6.44	3.62	1.84	1.60	1.39		
Dissolved Oxygen (mg/L)	0.66	0.43	0.35	0.30	0.36	0.28		
Water Temperature (°C)	13.50	13.61	13.64	13.73	13.70	13.89		
ORP (mV)	50.8	44.0	42.1	38.5	37.5	37.9		

Physical appearance at start — Color: cloudy; Odor: no
Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no
Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.7; PID Air: 0.0. Start pump at 17:15. Set tubing intake at center of screen. Start sampling at 17:50. Sample ID: A04DMW604D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/16/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	598.11 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	598.24 1/100 ft
Well ID #	MW-605D	Land Surface Elevation	598.50 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	8 to 18 1/100 ft
Weather Conditions	cloudy		
Air Temperature	35 ° F		
Total Depth (TWD) Below Top of Casing =	18.50 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	4.12 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	14.38 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.34 gal		
3 Casing Volumes =	7.03 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	400	200	200	200	200	200	200	200
Time (Military)	7:50	7:55	8:00	8:05	8:10	8:15	8:20	8:25
Depth to Groundwater Below Top of Casing (ft)	4.19	4.20	4.19	4.20	4.20	4.20	4.20	4.20
Drawdown (ft)	-0.07	-0.08	-0.07	-0.08	-0.08	-0.08	-0.08	-0.08
pH (S.U.)	7.09	7.10	7.09	7.09	7.09	7.09	7.06	7.09
Sp. Cond. (mS/cm)	1.091	1.086	1.085	1.080	1.077	1.073	1.069	1.068
Turbidity (NTUs)	22.30	21.20	18.04	16.03	14.07	10.07	9.69	9.55
Dissolved Oxygen (mg/L)	1.28	0.89	0.47	0.34	0.28	0.25	0.25	0.25
Water Temperature (°C)	14.09	14.05	13.97	14.11	14.14	14.10	14.00	14
ORP (mV)	34.0	2.6	-0.4	-9.2	-15.0	-19.6	-16.4	-15.5

Physical appearance at start — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS

PID Well: 0.0; PID Air: 0.0. Start pump at 7:45. Set tubing intake at center of screen. Start sampling at 8:30. Sample ID: A04BMW605D-U/F

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/16/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	602.21 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	602.50 1/100 ft
Well ID #	MW-606DR	Land Surface Elevation	599.49 1/100 ft
	Upgradient / Downgradient	Screened Interval (below land surface)	12 to 22 1/100 ft
Weather Conditions	partly sunny		
Air Temperature	35 ° F		
Total Depth (TWD) Below Top of Casing =	20.90 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	8.31 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	12.59 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	2.05 gal		
3 Casing Volumes =	6.16 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	300	300	250	150	200	190	200	
Time (Military)	11:25	11:30	11:35	11:40	11:45	11:50	11:55	
Depth to Groundwater Below Top of Casing (ft)	8.80	8.84	8.77	8.65	8.65	8.65	8.65	
Drawdown (ft)	-0.49	-0.53	-0.46	-0.34	-0.34	-0.34	-0.34	
pH (S.U.)	7.26	7.18	7.16	7.14	7.13	7.15	7.16	
Sp. Cond. (mS/cm)	1.923	2.064	2.199	2.249	2.199	2.178	2.167	
Turbidity (NTUs)	54.50	36.00	21.00	21.50	15.20	14.20	13.20	
Dissolved Oxygen (mg/L)	1.24	0.69	0.78	0.60	0.56	0.53	0.56	
Water Temperature (°C)	11.96	12.31	12.06	11.31	11.56	11.58	11.67	
ORP (mV)	-69.2	-70.2	-71.1	-67.6	-70.6	-75.9	-76.9	

Physical appearance at start — Color: slightly cloudy; Odor: no

Physical appearance at sampling — Color: clear; Odor: no

Sheen/Free Product: no sheen/no product

Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: PID Well: 0.0; PID Air: 0.1. Start pump at 11:20. Set tubing intake at center of screen. Start sampling at 12:05. Sample ID: A03MW606DR-U/F.

ROUND 2 GROUNDWATER SAMPLING LOG

Date (mo/day/yr)	11/13/2007	Casing Diameter	2 inches
Field Personnel	Emily Laity & Jeffrey Rowley	Casing Material	PVC
Site Name	Guterl Steel FUSRAP Site, Lockport, New York	Inner Casing Elevation	600.38 1/100 ft
Earth Tech Job #	100657	Outer Casing Elevation	600.67 1/100 ft
Well ID #	MW-607D	Land Surface Elevation	597.93 1/100 ft
	Upgradient Downgradient	Screened Interval (below land surface)	7.4 to 17.4 1/100 ft
Weather Conditions	sunny		
Air Temperature	50 ° F		
Total Depth (TWD) Below Top of Casing =	19.78 1/100 ft		
Depth to Groundwater (DGW) Below Top of Casing =	7.90 1/100 ft		
Length of Water Column (LWC) = TWD - DGW =	11.88 1/100 ft		
1 Casing Volume (OCV) = LWC x 0.163 =	1.94 gal		
3 Casing Volumes =	5.81 gal		
Method of Well Evacuation	Peristaltic Pump		
Method of Sample Collection	Peristaltic Pump/Teflon Tubing		
Total Volume of Water Removed	N/A liter		

Container	Analysis (Method)	# Bottles	Preservative	QA/QC
4L Poly	U-234, U-235, U-238, Th-232, Ra-226, Ra-228, Gross alpha and beta	2	HNO3	
250ml Poly	TSS	1	none	

FIELD ANALYSES

Flow Rate (ml/min)	110	110	160	160	180	160	180	
Time (Military)	10:30	10:35	10:40	10:45	10:50	10:55	11:00	
Depth to Groundwater Below Top of Casing (ft)	8.06	8.04	8.11	8.21	8.23	8.22	8.24	
Drawdown (ft)	-0.16	-0.14	-0.21	-0.31	-0.33	-0.32	-0.34	
pH (S.U.)	6.95	6.96	6.92	6.92	6.93	6.94	6.91	
Sp. Cond. (mS/cm)	1.731	1.730	1.725	1.721	1.720	1.719	1.716	
Turbidity (NTUs)	40.00	17.01	13.46	10.68	10.22	9.40	9.18	
Dissolved Oxygen (mg/L)	0.57	0.47	0.31	0.55	0.38	0.24	0.21	
Water Temperature (°C)	13.18	12.98	12.96	13.16	13.21	13.21	13.20	
ORP (mV)	-152.7	-163.9	-165.9	-169.7	-176.9	-181.0	-186.0	

Physical appearance at start — Color: clear; Odor: yes (chemical or sulfur); Sheen/Free Product: no sheen/no product

Physical appearance at sampling — Color: clear; Odor: yes; Sheen/Free Product: no sheen/no product

COMMENTS/OBSERVATIONS: Start pump at 10:25. Set tubing intake at center of screen. Start sampling at 11:10. Sample ID: A03MW607D-U/F.

APPENDIX O

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	17-Jul-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-1	NM	TOC	599.92	6.99	592.93	
MW-2	NM	TOC	598.78	8.95	589.83	
MW-3	NM	TOC	599.03	5.82	593.21	
MW-4	NM	TOC	599.52	NM	NM	
MW-5	NM	TOC	598.52	5.45	593.07	
MW-06	NM	TOC	600.68	7.51	593.17	
MW-07	NM	TOC	601.32	NM	NM	
MW-08	NM	TOC	601.37	NM	NM	
MW-09	NM	TOC	599.7	8.70	591.00	
MW-10	NM	TOC	601.92	NM	NM	
MW-11	NM	TOC	599.79	NM	NM	
MW-12	NM	TOC	600.01	NM	NM	
MW-13S	NM	TOC	603.62	NM	NM	
MW-13D	NM	TOC	603.47	8.05	595.42	
MW-14	NM	TOC	602.36	7.61	594.75	
MW-15	NM	TOC	608.09	NM	NM	
MW-16	NM	TOC	604.37	8.58	595.79	
MW-17	NM	TOC	606.97	9.11	597.86	
MW-18	NM	TOC	602.36	NM	NM	
MW-19	NM	TOC	601.36	10.60	590.76	
MW-20	NM	TOC	603.62	9.20	594.42	
MW-21	NM	TOC	608.46	NM	NM	
MW-22	NM	TOC	601.35	7.30	594.05	
MW-23	NM	TOC	600.5	6.17	594.33	
MW-24	NM	GROUND	597.27	3.66	593.61	flush mount; no TOC elevation; ground elevation
MW-25	NM	GROUND	597.22	2.81	594.41	flush mount; no TOC elevation; ground elevation
MW-26	NM	GROUND	596.93	2.88	594.05	flush mount; no TOC elevation; ground elevation
MW-601D	NM	TOC	604.85	NM	NM	not drilled
MW-602D	NM	TOC	604.005	NM	NM	not drilled
MW-603D	NM	TOC	600.43	NM	NM	not drilled
MW-604D	NM	TOC	595.98	NM	NM	not drilled
MW-605D	NM	TOC	598.11	NM	NM	not drilled

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	17-Jul-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-606D	NM	TOC	601.49	NM	NM	not drilled
MW-606DR	NM	TOC	602.21	NM	NM	not drilled
MW-607D	NM	TOC	600.38	NM	NM	not drilled
MW-600S	NM	TOC	613.45	NM	NM	not drilled
MW-600D	NM	TOC	613.29	NM	NM	not drilled
MW-81-01	NM	TOC	NM	NM	NM	dry at 6.50 ft; no protective casing or lock
MW-81-02	NM	TOC	NM	NM	NM	dry at 5.50 ft
MW-105	NM	TOC	NM	5.36	NM	poor condition; no lock; hit by something
MW-81-04	NM	TOC	NM	NM	NM	not measured

NM = not measured

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	11-Sep-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-1	NM	TOC	599.92	7.36	592.56	
MW-2	NM	TOC	598.78	8.64	590.14	
MW-3	NM	TOC	599.03	5.88	593.15	
MW-4	NM	TOC	599.52	5.78	593.74	
MW-5	NM	TOC	598.52	5.75	592.77	
MW-06	NM	TOC	600.68	7.76	592.92	
MW-07	NM	TOC	601.32	8.03	593.29	
MW-08	NM	TOC	601.37	9.38	591.99	
MW-09	NM	TOC	599.7	8.76	590.94	
MW-10	NM	TOC	601.92	8.90	593.02	
MW-11	NM	TOC	599.79	9.55	590.24	
MW-12	NM	TOC	600.01	6.50	593.51	
MW-13S	NM	TOC	603.62	NM	NM	dry at 7.45 ft
MW-13D	NM	TOC	603.47	9.45	594.02	
MW-14	NM	TOC	602.36	9.40	592.96	
MW-15	NM	TOC	608.09	13.49	594.60	
MW-16	NM	TOC	604.37	10.6	593.77	
MW-17	NM	TOC	606.97	10.87	596.10	
MW-18	NM	TOC	602.36	8.73	593.63	
MW-19	NM	TOC	601.36	11.20	590.16	
MW-20	NM	TOC	603.62	9.78	593.84	
MW-21	NM	TOC	608.46	13.90	594.56	
MW-22	NM	TOC	601.35	7.34	594.01	
MW-23	NM	TOC	600.5	6.14	594.36	
MW-24	NM	GROUND	597.27	4.00	593.27	flush mount; no TOC elevation; ground elevation
MW-25	NM	GROUND	597.22	2.92	594.30	flush mount; no TOC elevation; ground elevation
MW-26	NM	GROUND	596.93	3.24	593.69	flush mount; no TOC elevation; ground elevation
MW-601D	NM	TOC	604.85	10.80	594.05	
MW-602D	NM	TOC	604.005	9.88	594.13	
MW-603D	NM	TOC	600.43	7.50	592.93	
MW-604D	NM	TOC	595.98	6.70	589.28	

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	11-Sep-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-605D	NM	TOC	598.11	4.30	593.81	
MW-606D	NM	TOC	601.49	8.80	592.69	
MW-606DR	NM	TOC	602.21	NM	NM	not measured/not drilled
MW-607D	NM	TOC	600.38	8.78	591.60	
MW-600S	NM	TOC	613.45	NM	NM	dry at 10.45 ft
MW-600D	NM	TOC	613.29	12.75	600.54	
MW-81-01	NM	TOC	NM	NM	NM	dry at 6.52 ft
MW-81-02	NM	TOC	NM	NM	NM	not measured
MW-105	NM	TOC	NM	5.36	NM	well tilted; broken well lid; muddy
MW-81-04	NM	TOC	NM	NM	NM	not measured

NM = not measured

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	13-Nov-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-1	11:35	TOC	599.92	7.00	592.92	PID: 0.2
MW-2	11:23	TOC	598.78	8.65	590.13	PID: 0.3
MW-3	12:03	TOC	599.03	5.80	593.23	PID: 0.3
MW-4	12:45	TOC	599.52	5.86	593.66	PID: 2.4
MW-5	12:09	TOC	598.52	5.74	592.78	PID: 2.1; Well cover broken; not locked
MW-06	11:42	TOC	600.68	7.43	593.25	PID: 0.5
MW-07	11:52	TOC	601.32	7.67	593.65	PID: 0.2
MW-08	11:30	TOC	601.37	9.06	592.31	PID: 1.0
MW-09	11:27	TOC	599.7	8.76	590.94	PID: 6.4
MW-10	11:45	TOC	601.92	8.45	593.47	PID: 0.2
MW-11	11:20	TOC	599.79	9.57	590.22	PID: 11.9 LNAPL
MW-12	12:06	TOC	600.01	6.75	593.26	PID: 0.5
MW-13S	7:43	TOC	603.62	NM	NM	no H2O; Dry
MW-13D	7:45	TOC	603.47	9.10	594.37	PID: 0.0
MW-14	9:50	TOC	602.36	8.48	593.88	PID: 0.3
MW-15	7:39	TOC	608.09	13.14	594.95	PID: 0.2
MW-16	9:56	TOC	604.37	9.65	594.72	PID: 0.2
MW-17	10:06	TOC	606.97	10.05	596.92	PID: 0.1
MW-18	10:38	TOC	602.36	8.45	593.91	PID: 0.2
MW-19	10:46	TOC	601.36	10.54	590.82	PID: 0.3
MW-20	7:20	TOC	603.62	9.39	594.23	PID: 0.0
MW-21	7.34	TOC	608.46	13.84	594.62	PID: 0.0
MW-22	12:00	TOC	601.35	7.40	593.95	PID: 0.5
MW-23	12:40	TOC	600.5	6.37	594.13	PID: 6.6
MW-24	12:21	GROUND	597.27	4.15	593.12	PID: 0.0
MW-25	12:35	GROUND	597.22	3.29	593.93	PID: 1.0
MW-26	12:29	GROUND	596.93	3.60	593.33	PID: 4.9
MW-601D	7:15	TOC	604.85	10.82	594.03	PID: 0.0
MW-602D	7:11	TOC	604.005	9.97	594.04	PID: 0.2
MW-603D	11:55	TOC	600.43	7.21	593.22	PID: 1.3
MW-604D	13.07	TOC	595.98	6.95	589.03	PID: 0.8
MW-605D	12:55	TOC	598.11	4.25	593.86	PID: 0.7

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	13-Nov-07
CLIENT	USACE	MEASURED BY	Emily Laity
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-606D	9:47	TOC	601.49	7.89	593.60	PID: 0.2
MW-606DR	7:52	TOC	602.21	8.91	593.30	PID: 0.0
MW-607D	9:42	TOC	600.38	7.89	592.49	PID: 0.1
MW-600S	10:19	TOC	613.45	NM	NM	PID: 0.2; Dry
MW-600D	10:21	TOC	613.29	11.67	601.62	PID: 0.3
MW-81-01	9:35	TOC	NM	NM	NM	PID: 0.1; Dry
MW-81-02	10:11	TOC	NM	NM	NM	PID: 1.6; Dry
MW-105	9:54	TOC	NM	NM	NM	PID: 0.1; damaged
MW-81-04	10:33	TOC	NM	NM	NM	PID: 0.1; Poss bly Dry, Well depth 5.83

NM = not measured

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	7-Mar-08
CLIENT	USACE	MEASURED BY	USACE
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-1	13:05	TOC	599.92	5.23	594.69	
MW-2	12:50	TOC	598.78	8.10	590.68	
MW-3	13:18	TOC	599.03	4.31	594.72	
MW-4	13:39	TOC	599.52	4.30	595.22	
MW-5	13:22	TOC	598.52	4.53	593.99	
MW-06	13:07	TOC	600.68	5.00	595.68	
MW-07	13:12	TOC	601.32	6.07	595.25	
MW-08	13:00	TOC	601.37	8.10	593.27	
MW-09	12:55	TOC	599.7	8.31	591.39	
MW-10	13:10	TOC	601.92	6.42	595.50	
MW-11	12:45	TOC	599.79	8.92	590.87	
MW-12	13:20	TOC	600.01	5.30	594.71	
MW-13S	NM	TOC	603.62	NM	NM	
MW-13D	14:20	TOC	603.47	4.25	599.22	
MW-14	14:18	TOC	602.36	4.39	597.97	
MW-15	14:10	TOC	608.09	8.00	600.09	
MW-16	NM	TOC	604.37	NM	NM	
MW-17	13:56	TOC	606.97	3.91	603.06	
MW-18	13:08	TOC	602.36	4.31	598.05	
MW-19	12:53	TOC	601.36	4.47	596.89	
MW-20	13:33	TOC	603.62	6.59	597.03	
MW-21	13:57	TOC	608.46	9.46	599.00	
MW-22	13:16	TOC	601.35	5.62	595.73	
MW-23	13:35	TOC	600.5	4.70	595.80	
MW-24	NM	GROUND	597.27	NM	NM	
MW-25	NM	GROUND	597.22	NM	NM	
MW-26	NM	GROUND	596.93	NM	NM	
MW-601D	13:28	TOC	604.85	8.38	596.47	
MW-602D	13:26	TOC	604.005	8.02	595.99	
MW-603D	13:14	TOC	600.43	5.01	595.42	
MW-604D	NM	TOC	595.98	NM	NM	
MW-605D	NM	TOC	598.11	NM	NM	

WATER LEVEL DATA SUMMARY

PROJECT	Guterl Steel FUSRAP Site	JOB NUMBER	100657
LOCATION	Lockport, New York	DATE	7-Mar-08
CLIENT	USACE	MEASURED BY	USACE
SURVEY DATUM	NAVD 88		
MEASURING DEVICE	water level meter		

WELL NUMBER	Time (Military)	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
		Description	Elevation (FT)			
MW-606D	14:20	TOC	601.49	3.75	597.74	
MW-606DR	14:24	TOC	602.21	4.26	597.95	
MW-607D	14:25	TOC	600.38	3.39	596.99	
MW-600S	14:05	TOC	613.45	4.40	NM	
MW-600D	14:03	TOC	613.29	6.05	607.24	
MW-81-01	14:25	TOC	NM	4.40	NM	
MW-81-02	13:55	TOC	NM	3.41	NM	
MW-105	14:10	TOC	NM	7.80	NM	frozen - top of ice
MW-81-04	14:15	TOC	NM	5.15	NM	

NM = not measured

APPENDIX P

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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

CLIENT USACE SUBJECT Sediment and Surface water Sampling pumphouse (S. side of Ohio St)

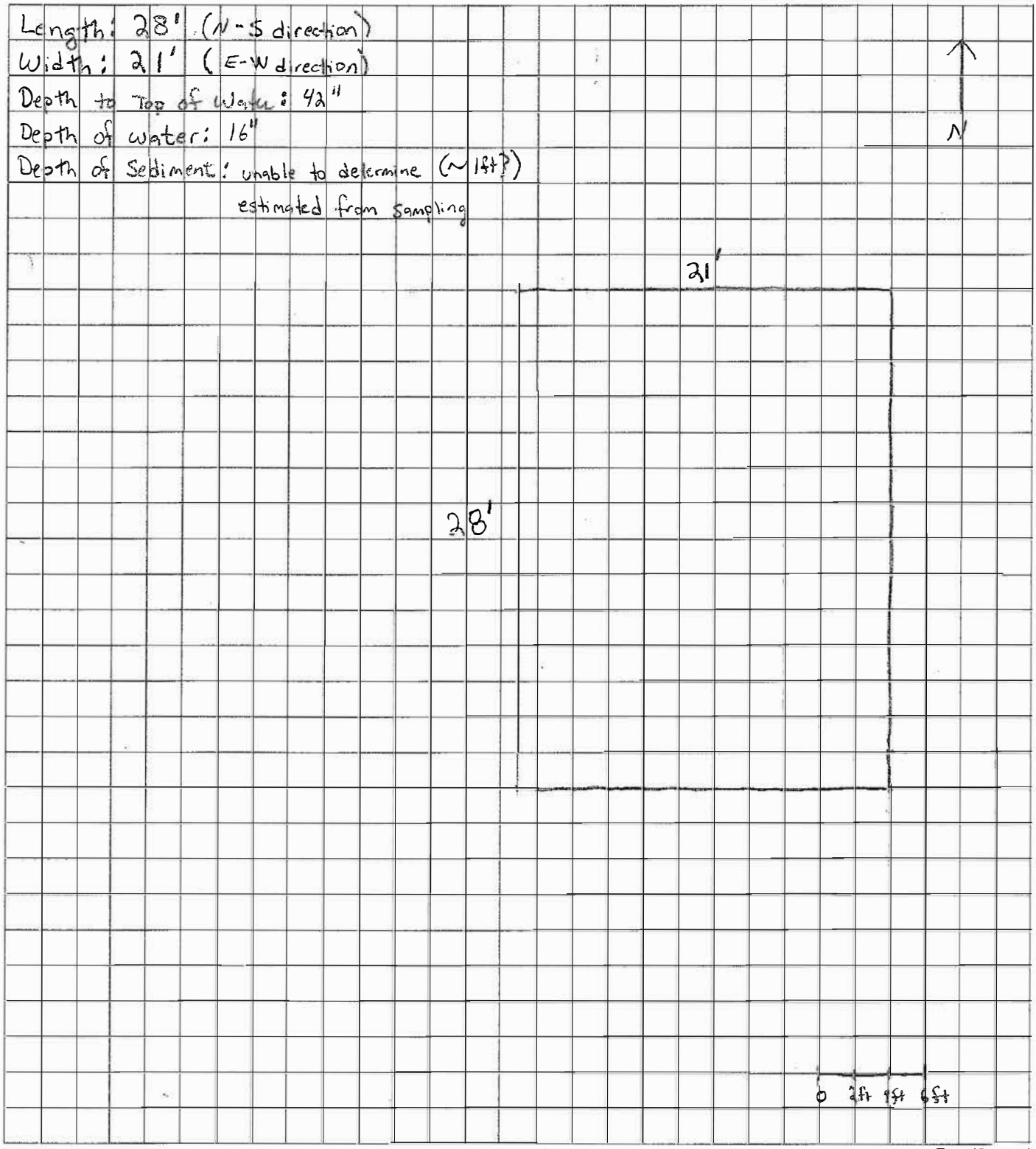
PROJECT Guterl Steel A08-A01-SD/SW-001

Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By ___ DATE ___

Length: 28' (N-S direction)
Width: 21' (E-W direction)
Depth to Top of Water: 42"
Depth of water: 16"
Depth of Sediment: unable to determine (~1ft?)
estimated from sampling



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface water Sampling Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DLZ DATE 08-06-08

A08-A01 - SD - 002 Drainage Grate S side Building 3 Approved By _____ DATE _____

24" X 24" (Length x width)

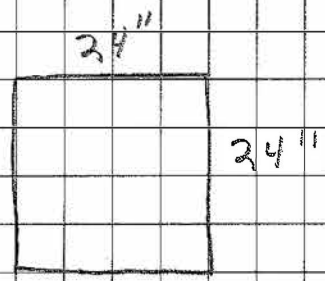
Top of Sediment: 5"

(Dry) no surface water

no visible inlets. But

Basin is filled w/ sediment

Depth of sediment (unknown: >6")



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

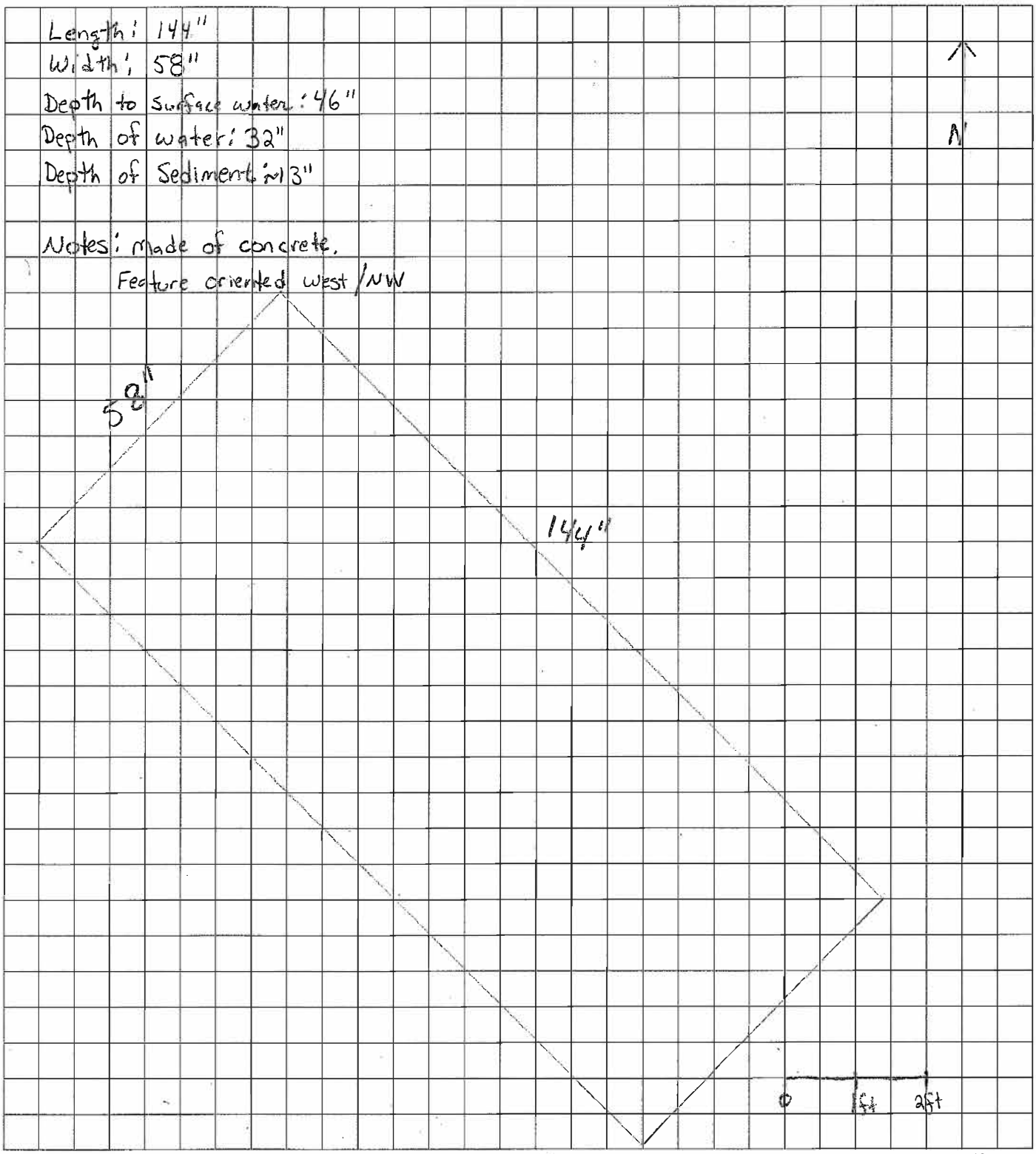
CLIENT USACE SUBJECT Sediment and Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Surface water sampling Reviewed By DCZ DATE 08-06-08

A08-A01-SD/SW-004 Unknown Basin to the West side of the Parking Lot. Approved By _____ DATE _____

Length: 144"
Width: 58"
Depth to surface water: 46"
Depth of water: 32"
Depth of Sediment: 13"

Notes: made of concrete.
Feature oriented west/NW



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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

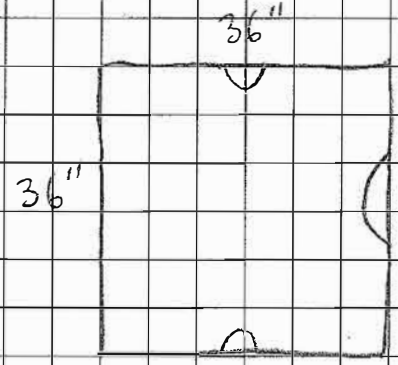
CLIENT USACE SUBJECT Sediment and Prepared By ELL DATE 08-01-08

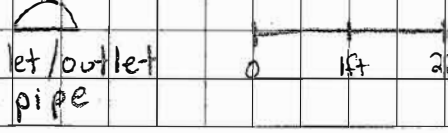
PROJECT Guterl Steel Surface water Sampling Reviewed By DLZ DATE 08-06-08

A08-A01-SD/SW-006 Manhole Grate Approved By ___ DATE ___

Length: 36"
Width: 36"
Depth to water: 29"
Depth of water: 9"
Depth of sediment ~0"

3 pipes
N pipe: 4" pipe (water at bottom of pipe)
S pipe: 4" pipe (water at bottom of pipe)
E pipe: 6" pipe (partially submerged)





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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

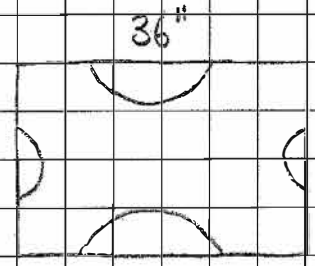
CLIENT USACE SUBJECT Sediment and Prepared By ELL DATE 08-01-08

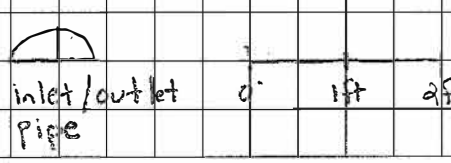
PROJECT Guterl Steel Surface Water Sampling Reviewed By DLZ DATE 08-06-08

A08-A01-SD/SW-007 Manhole Grate Approved By _____ DATE _____

Length: 36" (E-W Direction)
Width: 24" (N-S Direction)
Depth to Top of Water: 37"
Depth of Water: 1"
Depth of Sediment: ~1" (some rubble)

Notes: 4 pipes (inlet/outlet)
6" pipes (E and W sides)
12" pipes (partially submerged N and S sides)





EARTH TECH

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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling; Manhole Grate

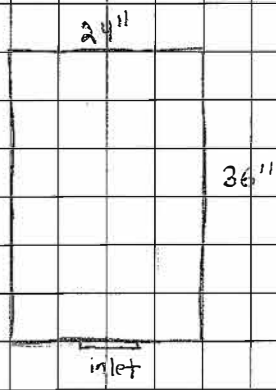
PROJECT Guterl Steel A08-A01-SD-008

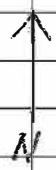
Prepared By ELL DATE 8-1-08

Reviewed By DLZ DATE 08-06-08

Approved By ____ DATE ____

Length = 36"
Width = 24"
Depth = 48" (Depth to Sediment)
Notes: 6" rubble on bottom
The only inlet is on the surface on the South side (screened opening 6"x6")





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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling; Manhole

PROJECT Guterl Steel A08-A01-SD-009

Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By _____ DATE _____

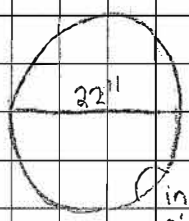
Diameter: 22" at Top 33" at bottom (opens up)

Depth: 47" (To top of Sediment)

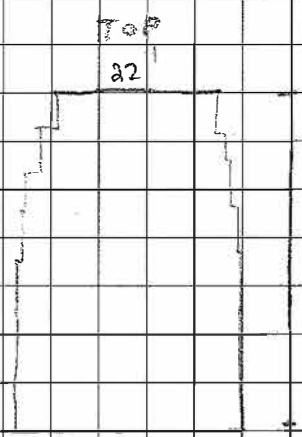
Notes: ~8" of Sediment (Saturated)

2" of water (No water during sampling event during 9/2007)

8" inlet pipe entering from the Southeast corner



cross-section view



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CALCULATION SHEET PAGE ____ OF ____

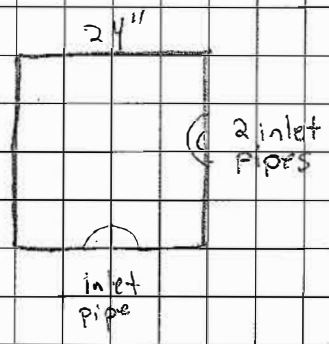
PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling Prepared By ELL DATE 08-01-08

PROJECT Gutzel Steel A08-A01-SD-010 Manhole Grate Reviewed By DLZ DATE 08-06-08

Approved By ____ DATE ____

Length: 24"
Width: 24"
Depth: 20" (to sediment)
Notes; ~18" of sediment
3 inlet pipes
2 on East side - 6" and 10"
1 on Southside - 10"
Sediment is moist



N

multiple inlet pipes vertically stacked

inlet pipe

0 1ft 2ft

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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

CLIENT USACE SUBJECT Sediment and surface water Sampling

PROJECT Guterl Steel oil water Separator

A08 - A01 - SD/SW - 011

Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By ___ DATE ___

Length: 144" (N-S Direction)

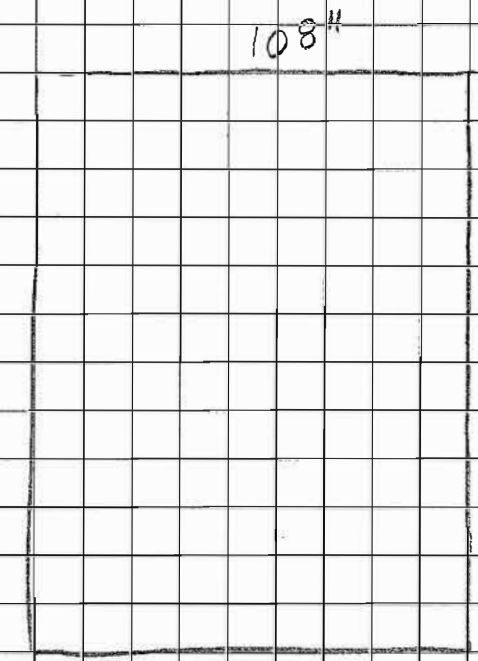
Width: 108" (E-W Direction) (measurements estimated due to large metal plates covering pit)

Depth to Top of water: 40"

Depth of water: 96"

Depth of Sediment: ~12"

Notes: in small Building East of Building 3



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface water Sampling Manhole Grate

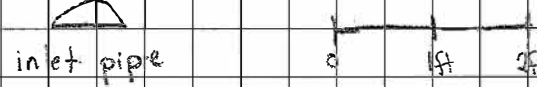
PROJECT Guterl Steel A08-A01-SD-013

Prepared By ELL DATE 08-01-08

Reviewed By DCZ DATE 08-06-08

Approved By ____ DATE ____

Length: 20"
Width: 20"
Depth: 31" (to sediment)
Notes: ~20" of sediment (probed)
1 inlet entering from the east ~18" pipe that is half submerged with sediment
The sediment is saturated.



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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

CLIENT USACE SUBJECT Sediment and Surface Water Sampling: Rectangular Basin East side of South Section

PROJECT Guterl Steel A08-B2-SD/SW-001

Prepared By ELL DATE 08-01-08

Reviewed By DL2 DATE 08-06-08

Approved By ___ DATE ___

Tot. Length: 92" (2 Basins combined)

Basin 1: Length 54"
Width 38"

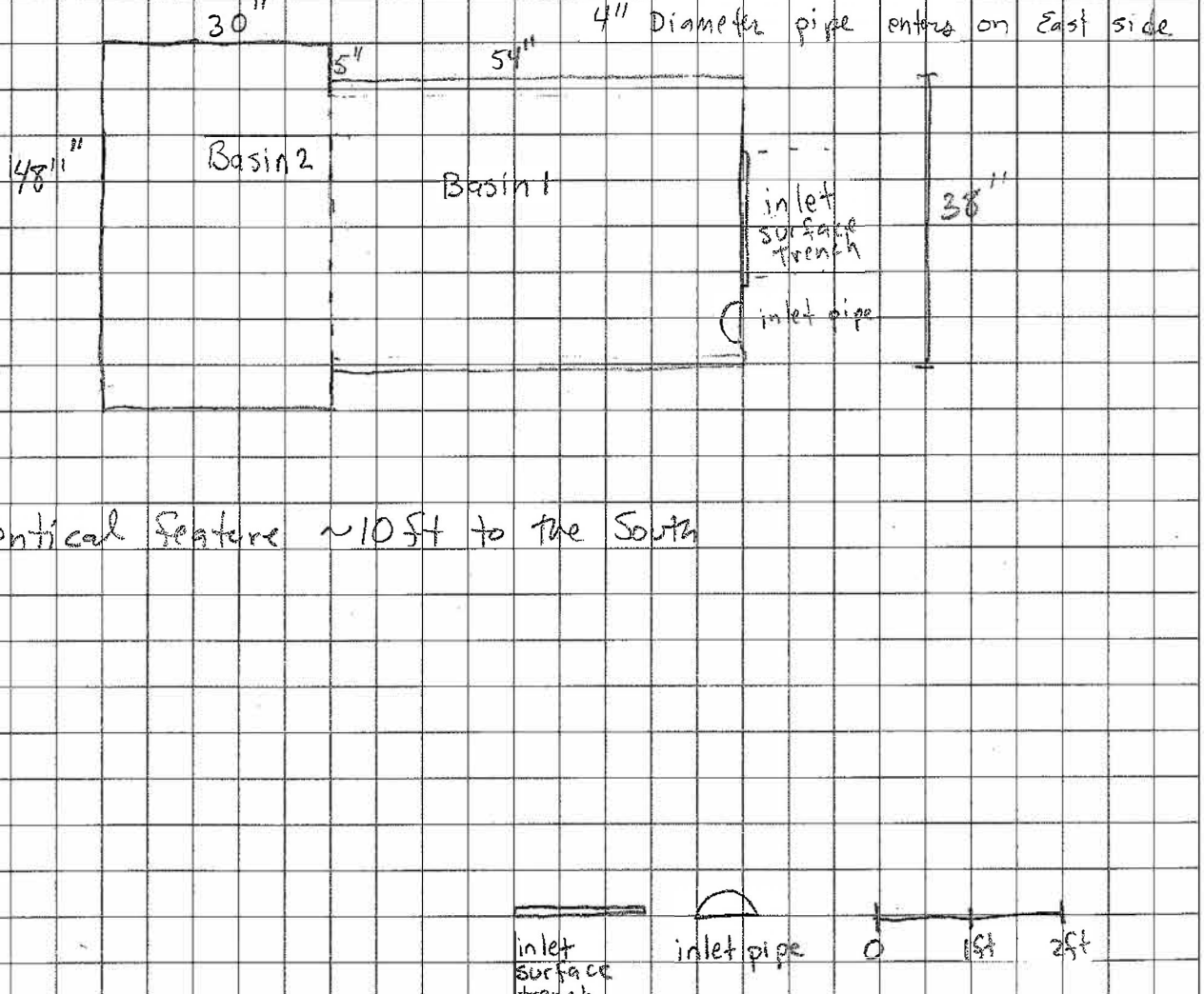
Basin 2: Grate on top
Length 48"
Width 30"

Notes: Sample collected from Basin 1

Basin 1: Depth to water: 52"
26" of water
~2" of sediment

Basin 2 no water
Depth to sediment: 19"
1" of Dry Sediment

20" surface Trench enters on E side.
4" Diameter pipe enters on East side



Identical feature ~10 ft to the South

EARTH TECH

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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling: Floor Trench in West Side of North Section

PROJECT Guterl Steel A08 - B2 - SD - 002

Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By _____ DATE _____

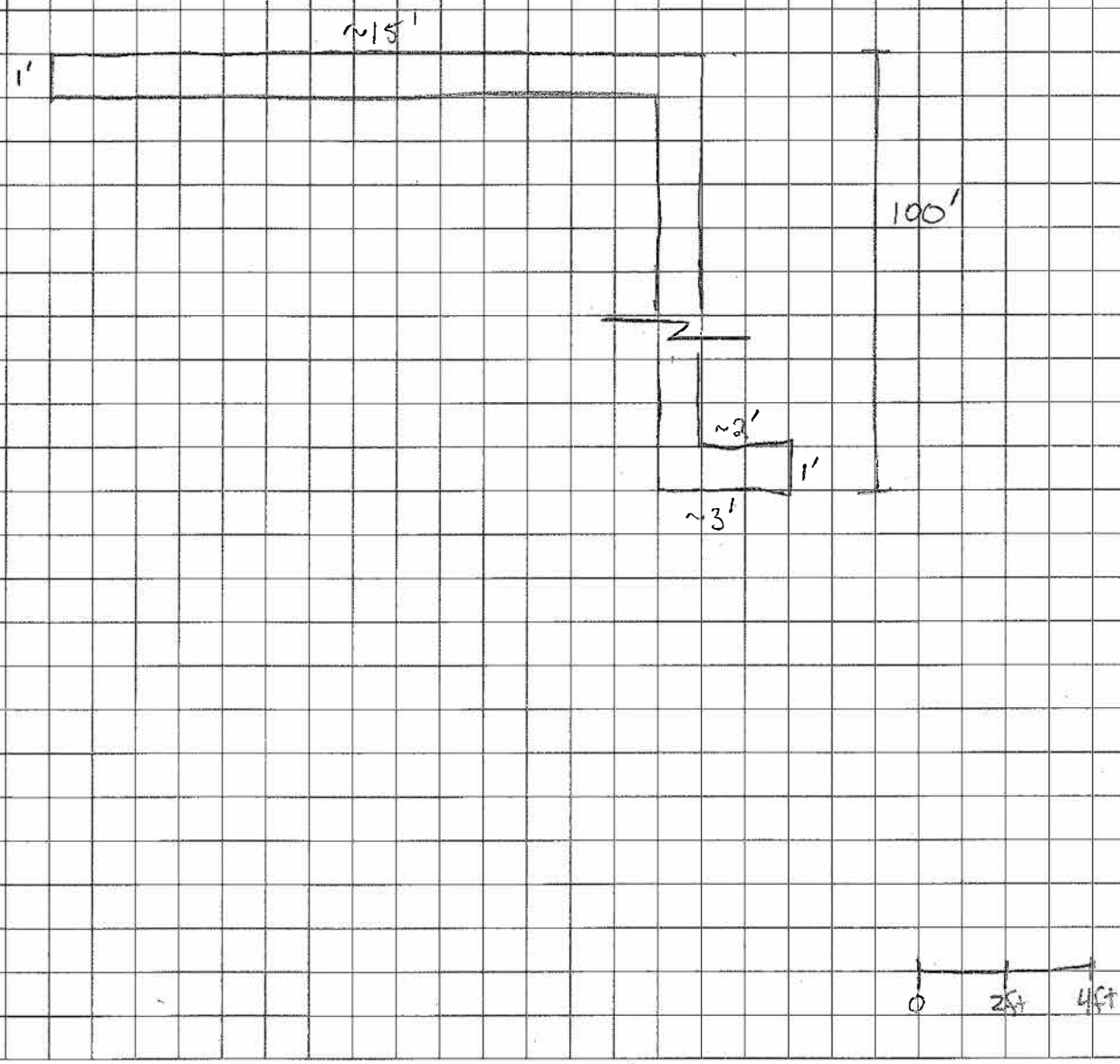
Trench Extends from North end of Building

Width: 12"

Depth: 10" (To top Sediment)

Notes: Average ~2" sediment in bottom (Drv)

Length: 100ft + 15ft + 3ft = 118 ft total



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling

PROJECT Guterl Steel

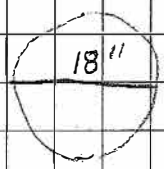
A08-B2-SD/SW-003 Round Manhole

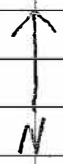
Prepared By ELL DATE 08-01-08

Reviewed By DLC DATE 08-06-08

Approved By _____ DATE _____

Diameter : 18"
Depth : 36" (To top of water)
Water Depth : 24"
Sediment Depth : ~10"
Notes: No inlets visible





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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling Rectangular Double Basin

PROJECT Guterl Steel A08 - B3-SW-001 A08 - B3-SD-002

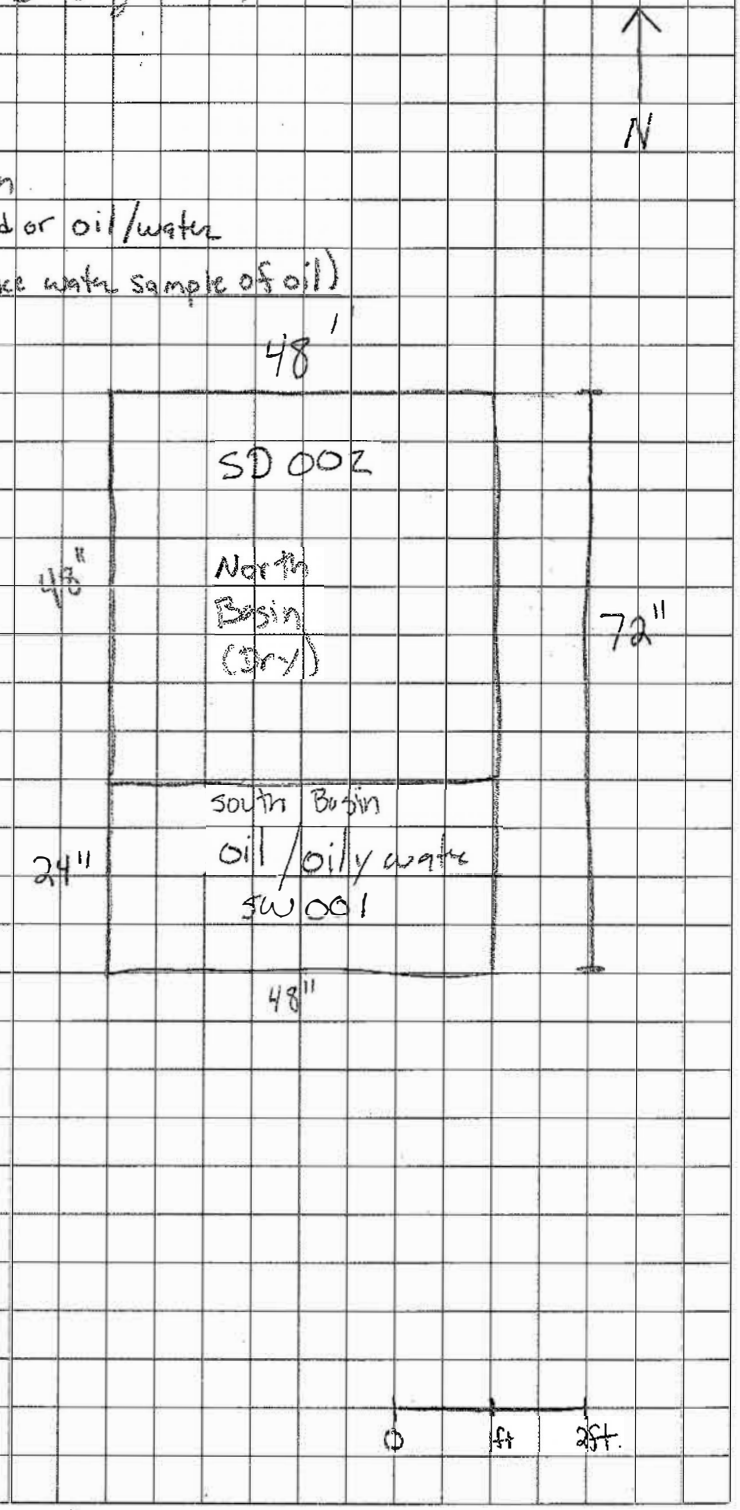
Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By _____ DATE _____

2 Basins with Thin metal wall Dividing The 2
48" wide (Both Basins)
72" Long for Both Basins
wall is 48" from The North
SW001 come from the South Basin
No sediment, It is all oil and or oil/water
13" to The top of "oil" (Surface water sample of oil)
Depth of "oil": 12"

North Basin
SD 002
22" To top of Sediment
~2" Deep of Sediment
No water in North Basin



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT US ACE SUBJECT Sediment and Surface Water Sampling: Covered Trench (North Side of South Section)

Prepared By ELL DATE 08-01-08

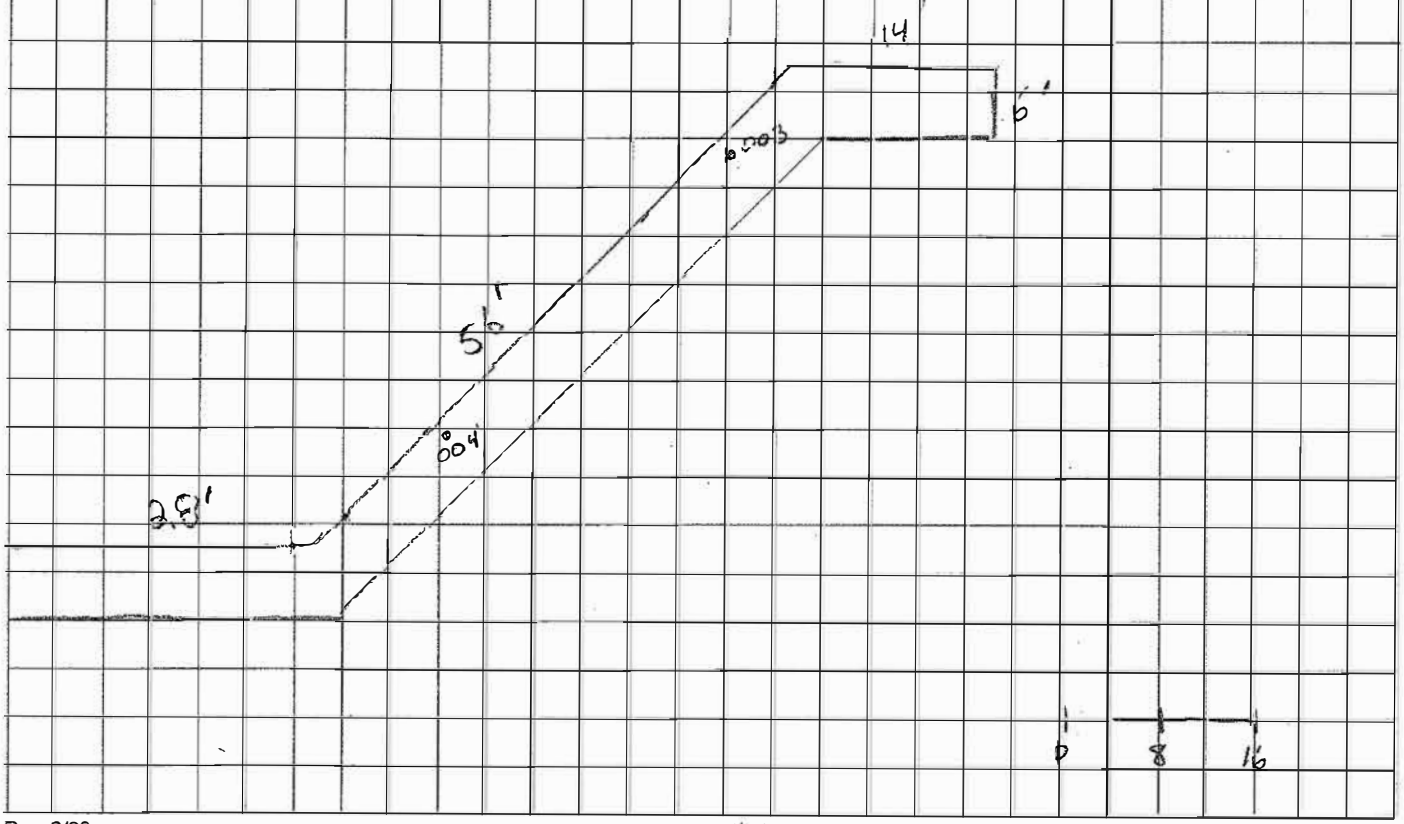
PROJECT Guterl Steel

Reviewed By DCZ DATE 08-06-08

A08-83-SD/SW-003
A08-83-SD/SW-004

Approved By _____ DATE _____

Trench has 3 segments (all connected)
From the west side:
Length: 28' (E-W Direction) Then
56' (NE/SW Direction) Then
14' (E-W Direction)
Width: 72"
Depth to Top of Water: 32"
Depth of water: 18"
Depth of Sediment: 46" (with Rubble)



EARTH TECH

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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

CLIENT USACE SUBJECT Sediment and Surface Water Sampling Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DLZ DATE 08-06-08

A08-B3-SD/SW-005
A08-B3-SD/SW-006

Big Trench in Building 3 (North Side) Approved By ___ DATE ___

2 sections separated by concrete barrier.

Section 1; sample-005

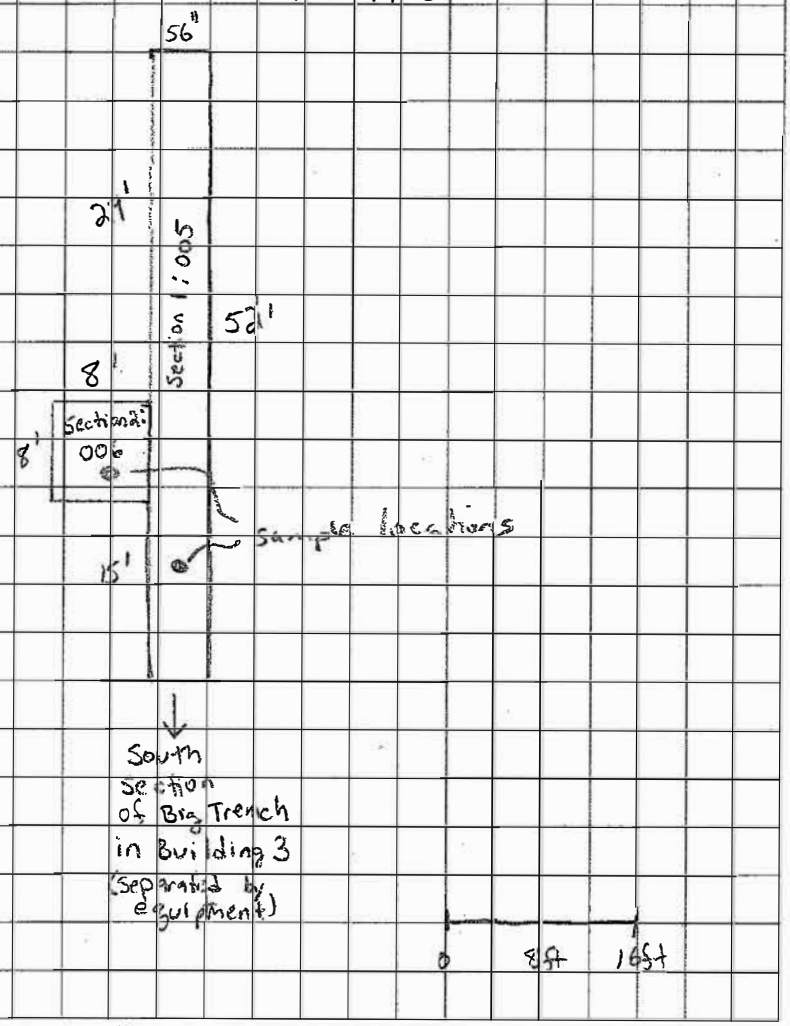
Length: 52' (N-S Direction)
Width: 56" (E-W Direction)
Depth to water: 24'
Depth of water: 48"
Depth of sediment: 6" with rubble

Notes: 29' from North side of Trench to Section 2 to the west.

Section 2; sample-006

Length: 8' (N-S Direction)
Width: 8' (E-W Direction)
Depth To top of water: 22"
Depth of water: 18"
Depth of sediment: 6" with rubble

Notes: Both Section 1 and Section 2 have rubble mixed in with sediment.



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling

PROJECT Guterl Steel

A08-B3-SD/SW-007
A08-B3-SD/SW-008

Big Trench in Building 3 (South Side)

Prepared By ELL DATE 08-01-08

Reviewed By DCZ DATE 08-06-08

Approved By ____ DATE ____

2 Sections Separated by concrete barrier

Section 1: Sample-008

Length: 42' (N-S Direction)

Width: 56" (E-W Direction)

Depth to Top of water: 24"

Depth of water: 48"

Depth of Sediment: ~6" with rubble

Notes: Section 2 is 17' from the South side on the West side of The Big Trench

Section 2: Sample-007

Length: 18' (E-W Direction)

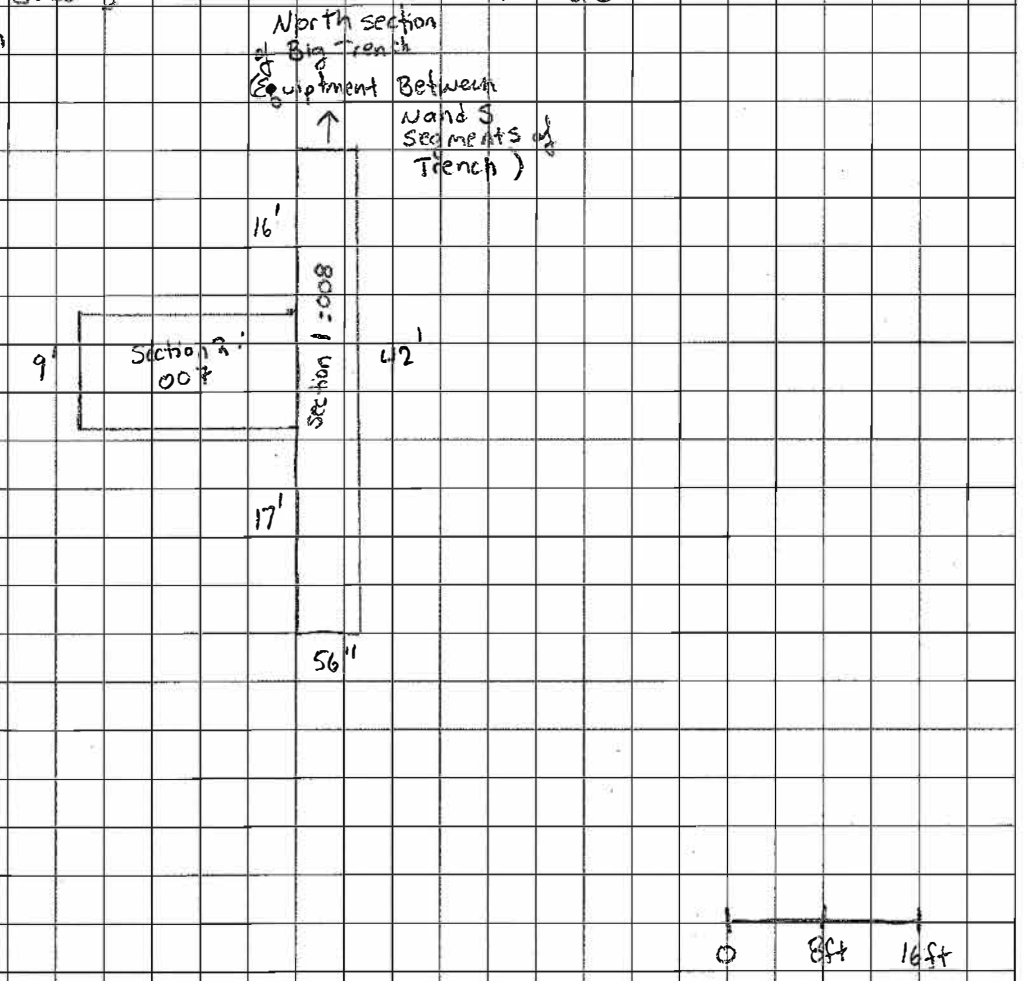
Width: 9' (N-S Direction) N

Depth to Top of water: 22"

Depth of water: 18"

Depth of Sediment: ~3" with rubble

Notes: Both Section 1 and Section 2 have rubble mixed in with Sediment



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

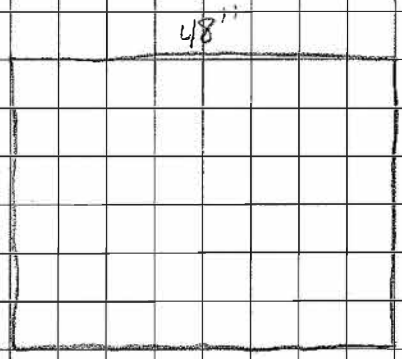
CLIENT USACE SUBJECT Sediment and Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Surface Water Sampling / Reviewed By DLZ DATE 08-06-08

A08 - B3 - SD/SW - 009 Square covered Basin Approved By _____ DATE _____

South side of South section

Length: 48" (E-W Direction)
Width: 36" (N-S Direction)
Depth to water: 42"
Depth of Water: 17"
Depth of Sediment: ~6"



N

0 1ft 2ft

EARTH TECH

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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling: Furnace Pit - SE corner of South Section

Prepared By ELL DATE 08-01-08

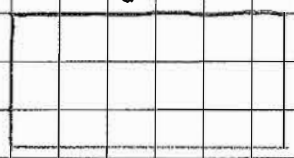
PROJECT Guterl Steel AOB-B3-SD-010

Reviewed By DLZ DATE 08-06-08

Approved By _____ DATE _____

Length: 34" (N-S Direction)
Width: 16" (E-W Direction)
Depth to Sediment: 20"
Depth of Sediment: ~6"

Notes: No water
Above Ground feature - possibly part of a furnace



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling; Furnace

PROJECT Gutrl Steel A08-B3-SD/SW-011

Prepared By ELL DATE 08-01-08

Reviewed By DCZ DATE 08-06-08

Approved By ____ DATE ____

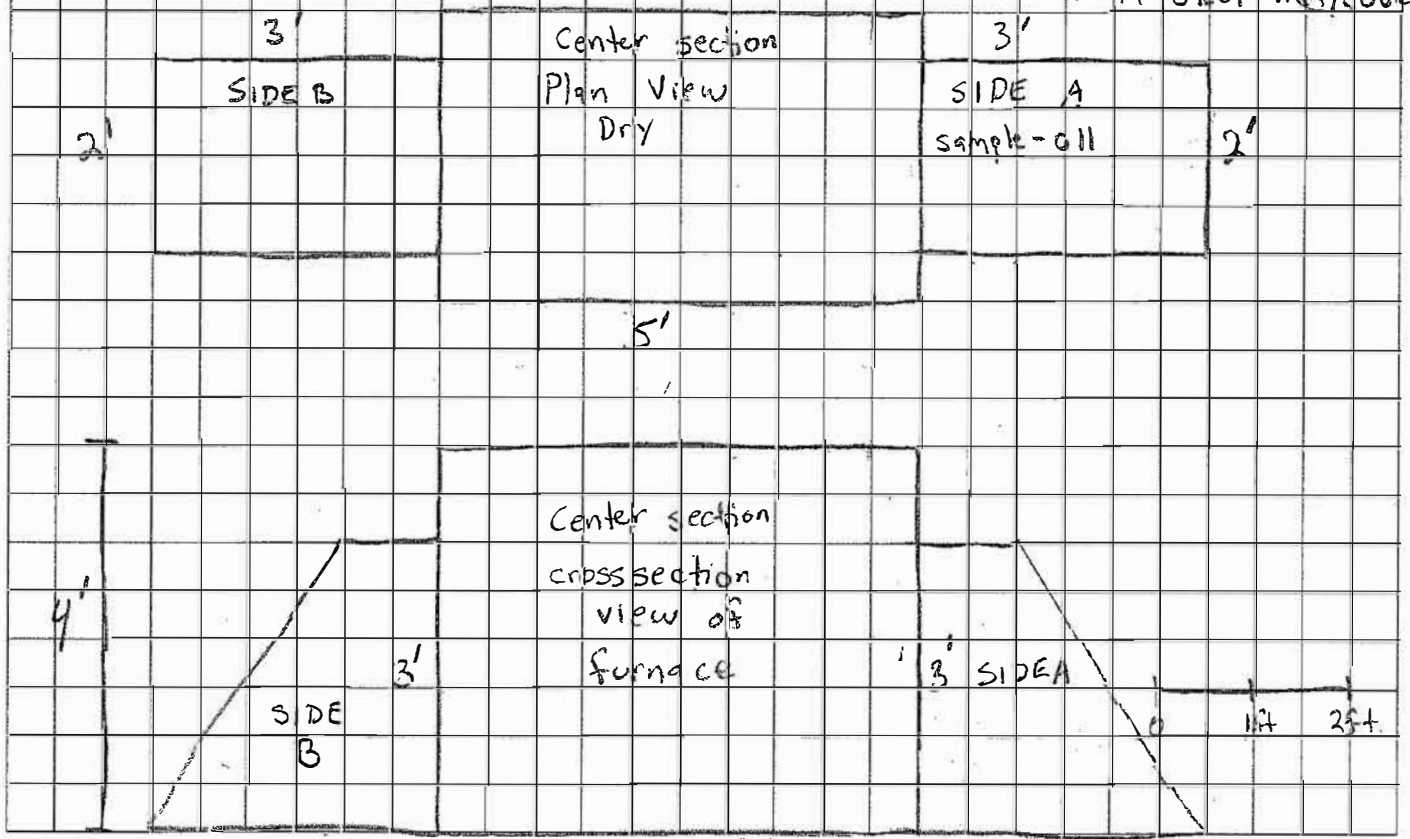
Length: 11' } Entire furnace unit.
Width: 3' }

Furnace has 2 sides (A & B) with a air control area in between at ground level.

SIDE A: (East)
- Length: 3'
- width: 2'
- Depth to Top of water: 41"
- Depth of water: 51"
- Depth of sediment: ~6' with rubble (brick)

center section
- Length ~5'
- width ~3
- Height ~4'

SIDE B: (West)
- Length: 3'
- width: 2'
- * Not accessible
- Assume similar to SIDE A
- Furnaces Brick with steel lids/covers



Rev. 2/99

scale: 4 sq./inch

F051/General

EARTH TECH

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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

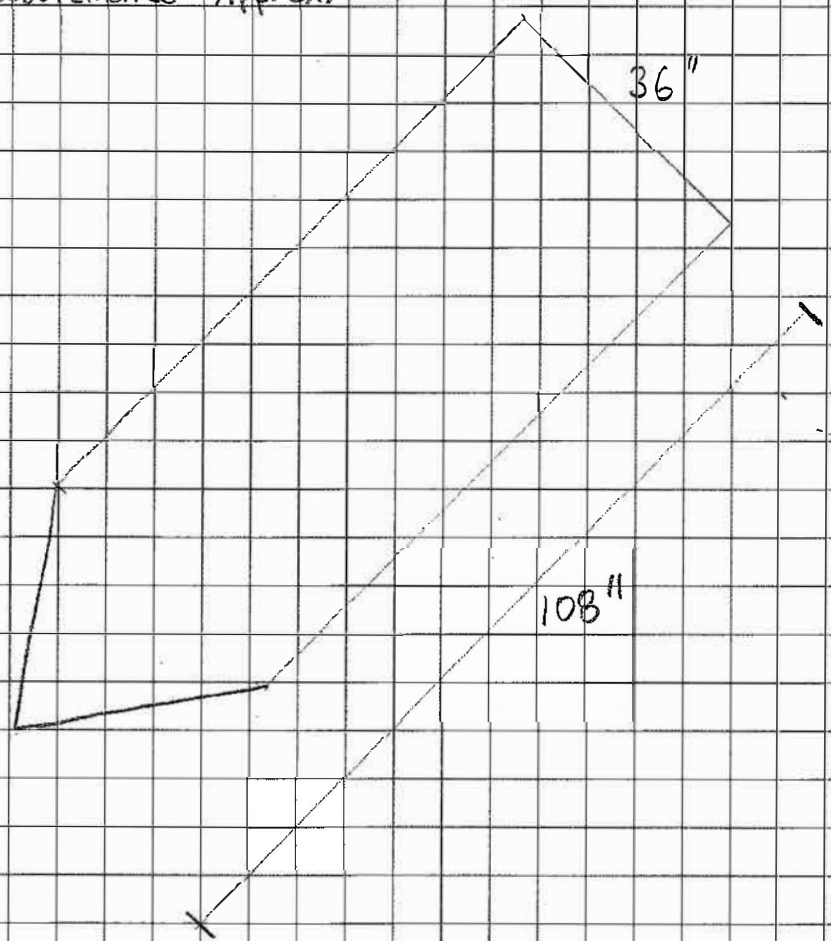
CLIENT USACE SUBJECT Sediment and Surface Water Sampling Prepared By ELL DATE 08-01-08

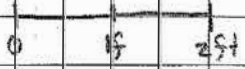
PROJECT Guterl Steel Reviewed By DLZ DATE 09-06-09

A08 - B3 - SD/SW - 012 Furnace Pit Approved By _____ DATE _____

Length: 108" (NE - SW Direction)
Width: 36" (NW - SE Direction)
Depth to Top of Water: 45"
Depth of Water: 98"
Depth of Sediment: ~6" with rubble (bricks)

Notes: Covered with Asbestos
Measurements Approx.





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A Tyco Infrastructure Services Company

CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling; Furnace

PROJECT Guterl Steel

A08 - A01 - SD/SW - 013

Prepared By EL DATE 08-01-08

Reviewed By DEZ DATE 08-06-08

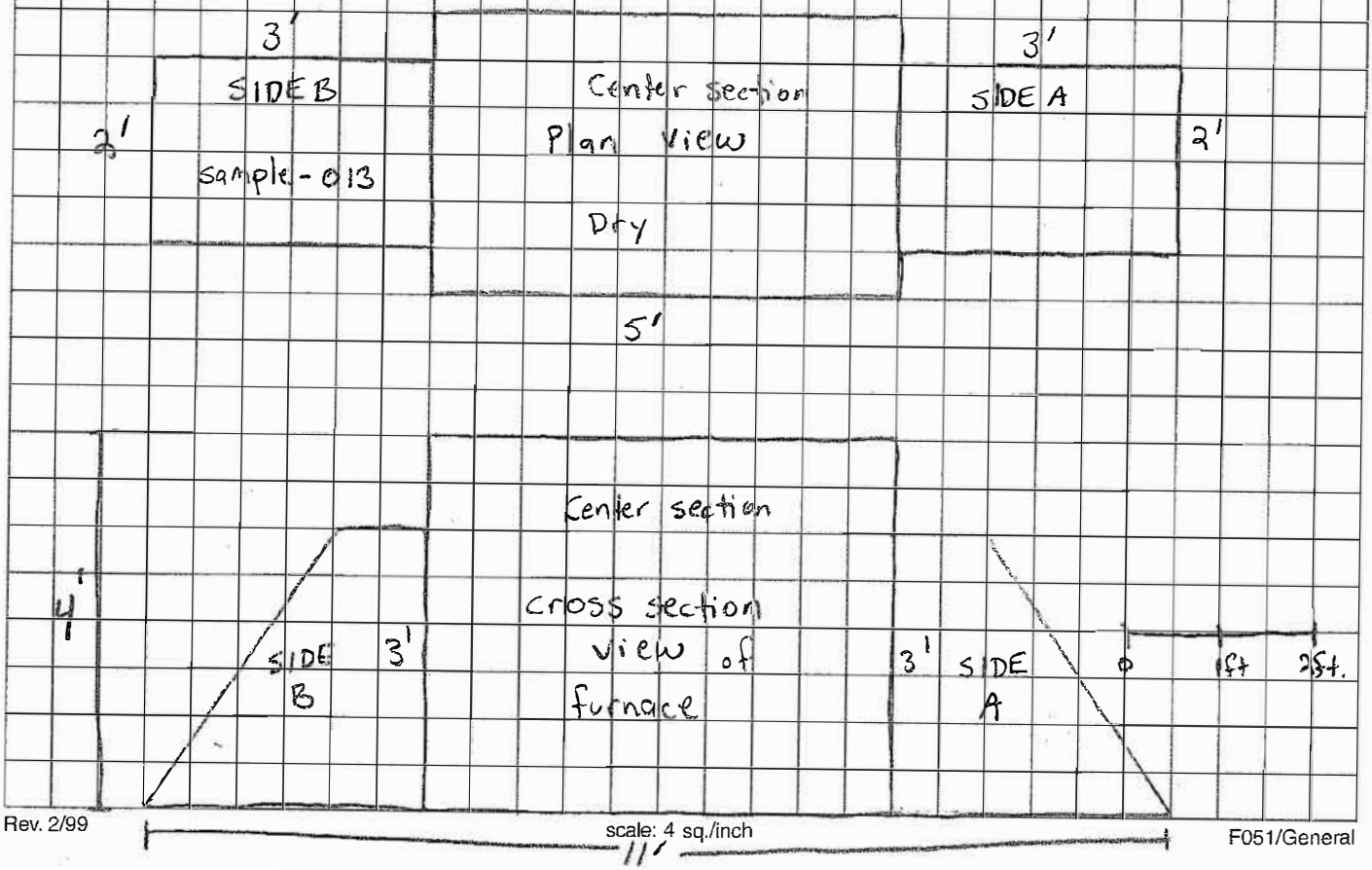
Approved By ____ DATE ____

Length: 11' > Entire furnace unit.
Width: 3'
Furnace has 2 sides (A & B) with an air control area in between at ground level.

SIDE A: (East)
Length: 3'
Width: 2'
* Not accessible assume similar to side B. Furnaces are brick with steel lids / covers

Center section
Length ~5'
width ~3'
Height ~4'

SIDE B: (West)
Length: 3'
Width: 2'
Depth to Top of water: 47"
Depth of water: 36"
Depth of sediment: ~6" (of rubble)



Rev. 2/99

scale: 4 sq./inch

F051/General

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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface Water Sampling: Furnace Pit

PROJECT Guterl Steel A08-B3-SD/SW-014

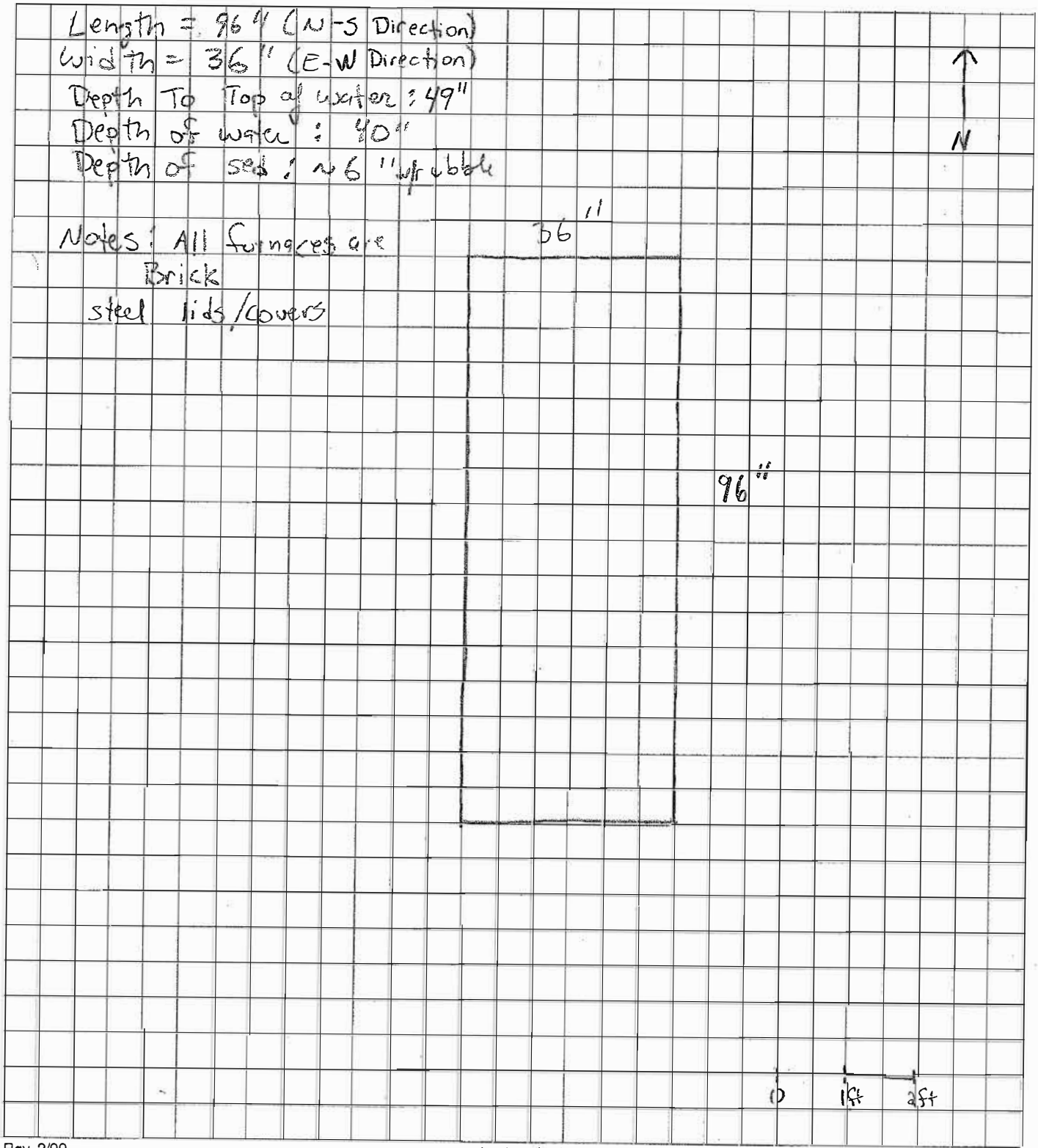
Prepared By ELL DATE 08-01-08

Reviewed By DCZ DATE 08-06-08

Approved By _____ DATE _____

Length = 96" (N-S Direction)
Width = 36" (E-W Direction)
Depth To Top of water: 49"
Depth of water: 40"
Depth of sed: ~6" rubble

Notes: All furnaces are Brick
steel lids/covers



EARTH TECH

A Tyco Infrastructure Services Company

CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface water Sampling; Furnace Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DLZ DATE 08-06-08

A08 - A01 - SD/SW - 015 Approved By ____ DATE ____

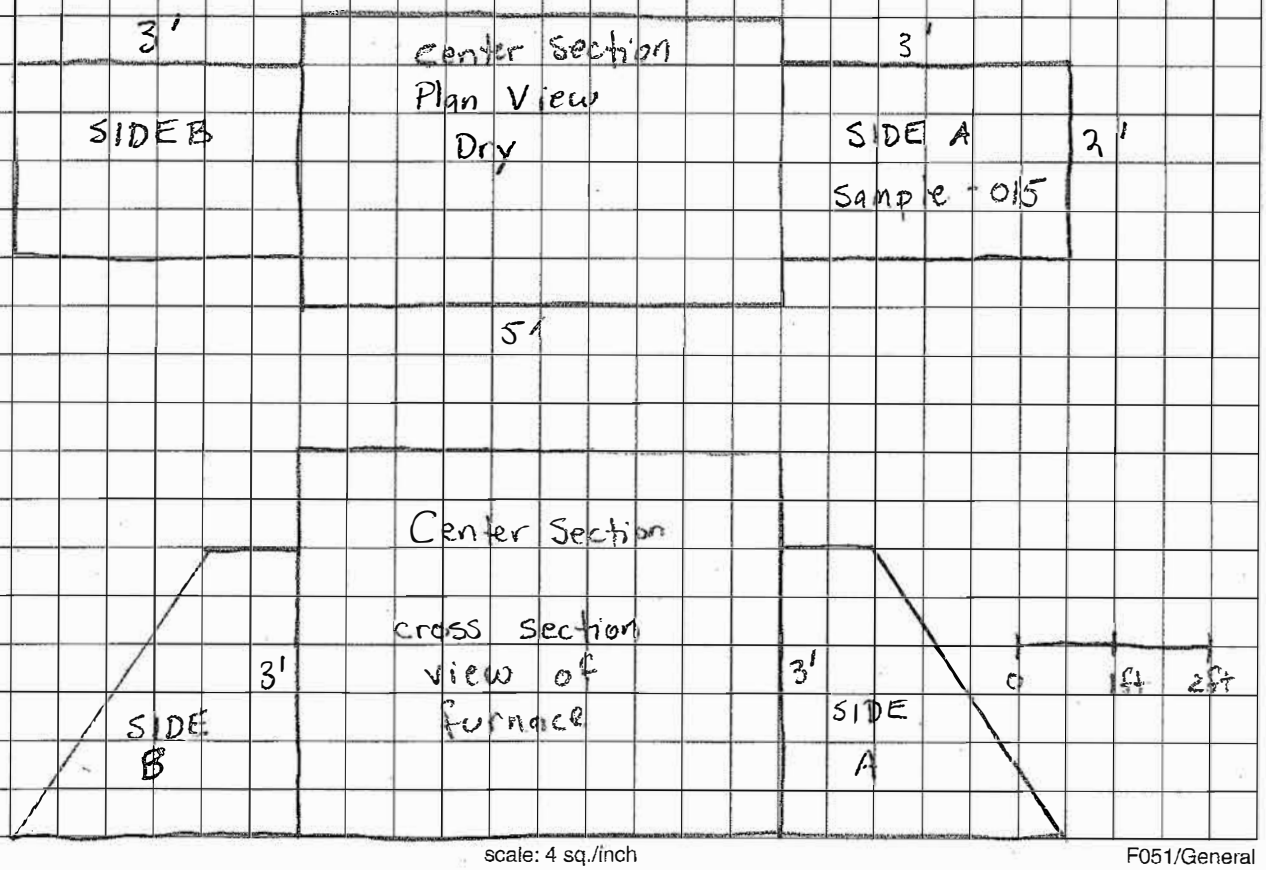
Length: 11' } Entire furnace unit
Width: 3' /
Furnace has 2 sides (A & B) with an air control area in between at ground level

SIDE A: (East)
Length: 3'
Width: 2'
Depth to Top of Water: 4½"
Depth of Water: 8"
Depth of Sediment: ~6" (rubble)

Center Section
Length: ~5'
Width: ~3'
Height: ~4'

SIDE B: (West)
Length: 3'
Width: 2'
Depth to Top of Water: 4.5"
Depth of Water: 3"
Depth of Sediment: ~6" (rubble)

*Furnaces are brick with steel lids/covers



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CALCULATION SHEET PAGE ____ OF ____

PROJECT NO. _____

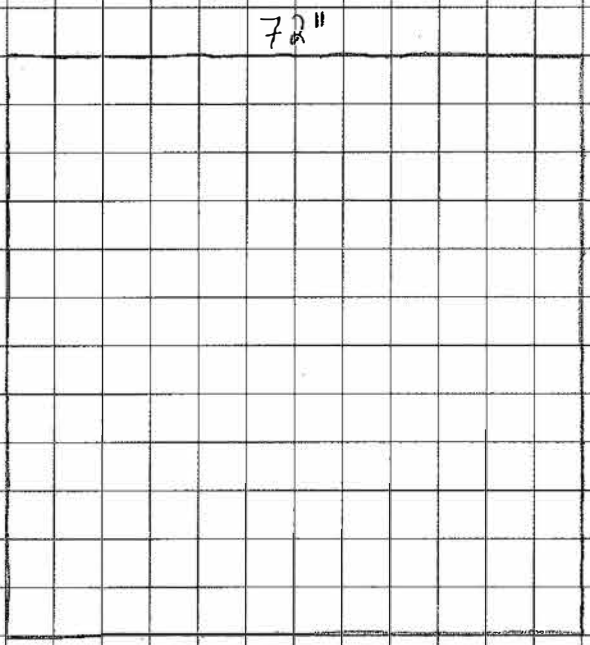
CLIENT USACE SUBJECT Sediment and Surface Water Sampling : Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DCZ DATE 08-06-08

A08-B04 & B09 - SD/SW-001 Vault on South Side Approved By _____ DATE _____

Length: 72" (N-S Direction)
Width: 72" (E-W Direction)
Depth to water: 32"
Depth of water: 5"
Depth of Sediment: ½"

Notes: Concrete structure
Covered with outward
opening metal doors.



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CALCULATION SHEET PAGE ___ OF ___

PROJECT NO. ___

CLIENT USACE

PROJECT Guterl Steel

A08-B04 & B09-SD/SW-002

SUBJECT Sediment and Surface Water Sampling: Covered N-S Trench South End of Trench

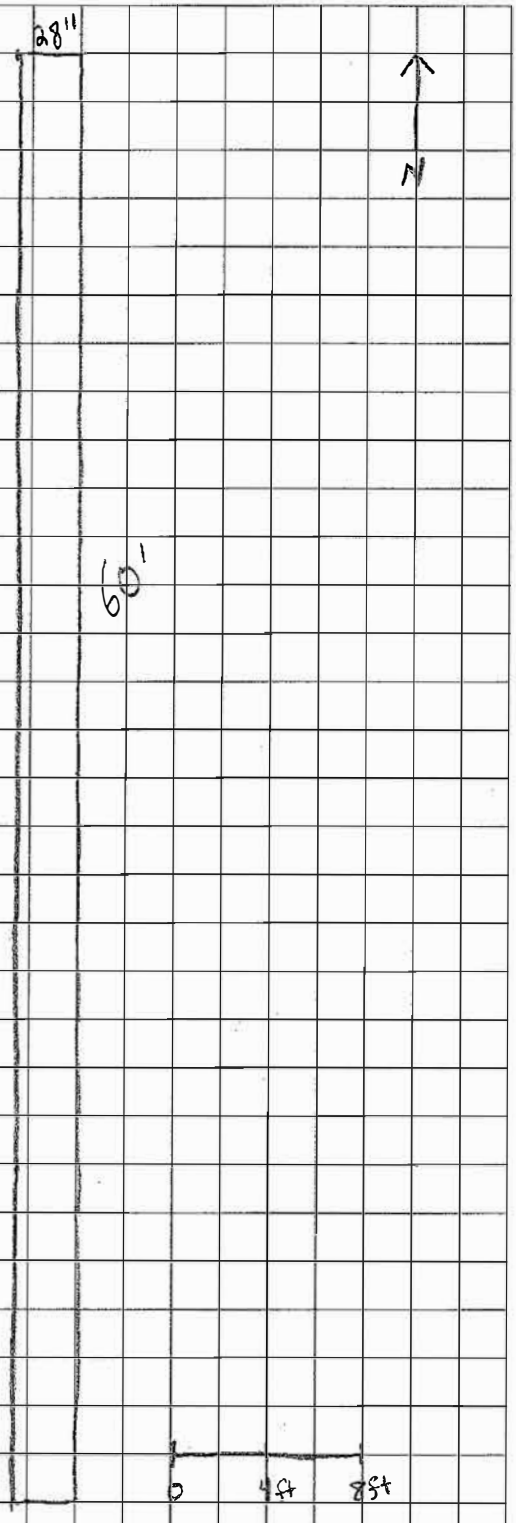
Prepared By ELL DATE 08-01-08

Reviewed By DLZ DATE 08-06-08

Approved By ___ DATE ___

Length: 60' (N-S Direction)
Width: 28" (E-W Direction)
Depth to water: 42"
Depth of water: 64"
Depth of Sediment: ~6" (moderate rubble)

Notes: Concrete walls.
Trench possibly extends further to the North and South.



EARTH TECH

A Tyco Infrastructure Services Company

CALCULATION SHEET PAGE ____ OF ____

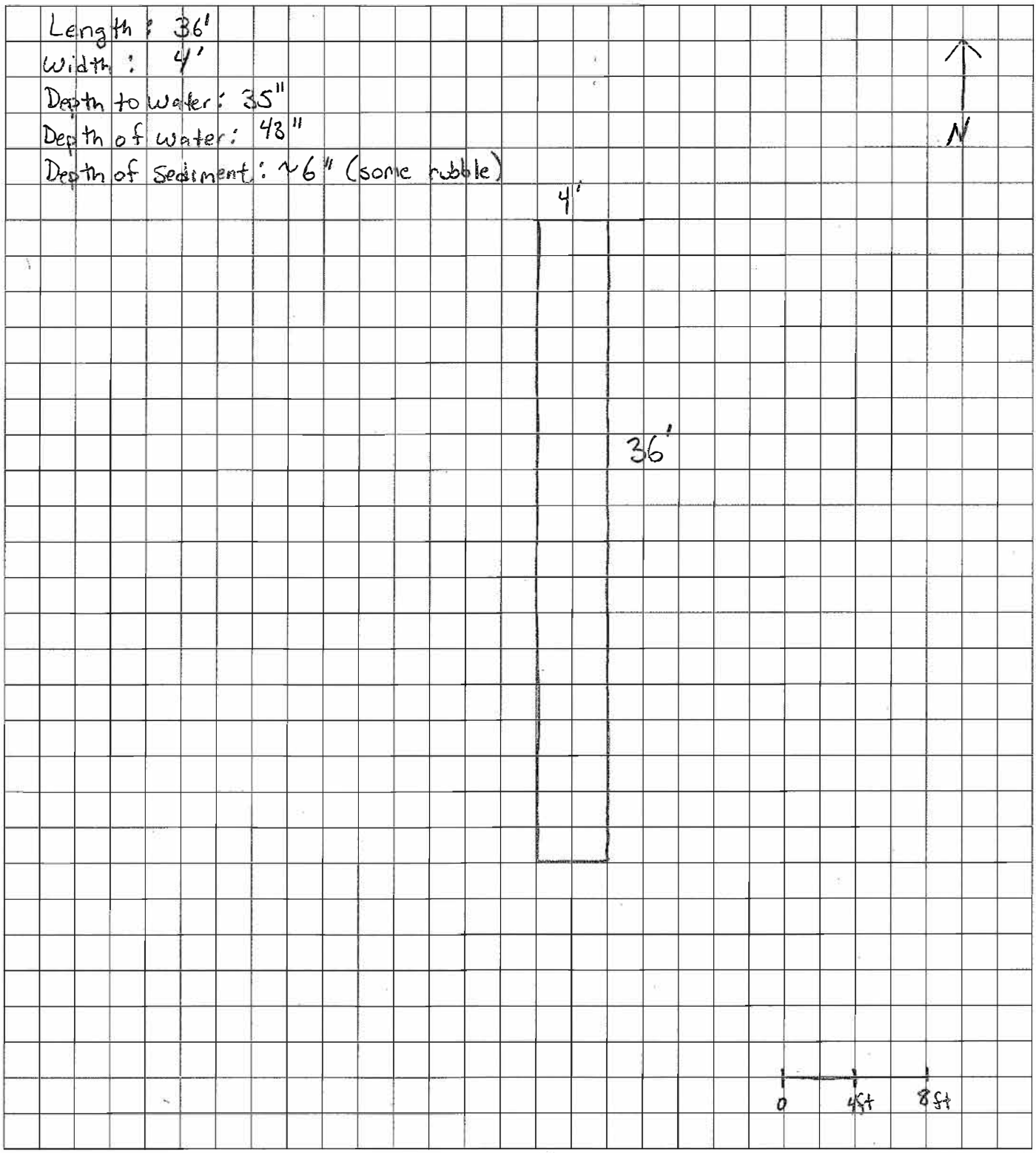
PROJECT NO. ____

CLIENT USACE SUBJECT Sediment and Surface water Sampling: Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DEZ DATE 08-06-08

A08 - B04 & B09 - SD/SW - 003 Open N-S trench (Northern of 2 open Trenches) Approved By ____ DATE ____

Length: 36'
Width: 4'
Depth to water: 35"
Depth of water: 48"
Depth of Sediment: ~6" (some rubble)



EARTH TECH

A Tyco Infrastructure Services Company

CALCULATION SHEET PAGE ____ OF ____

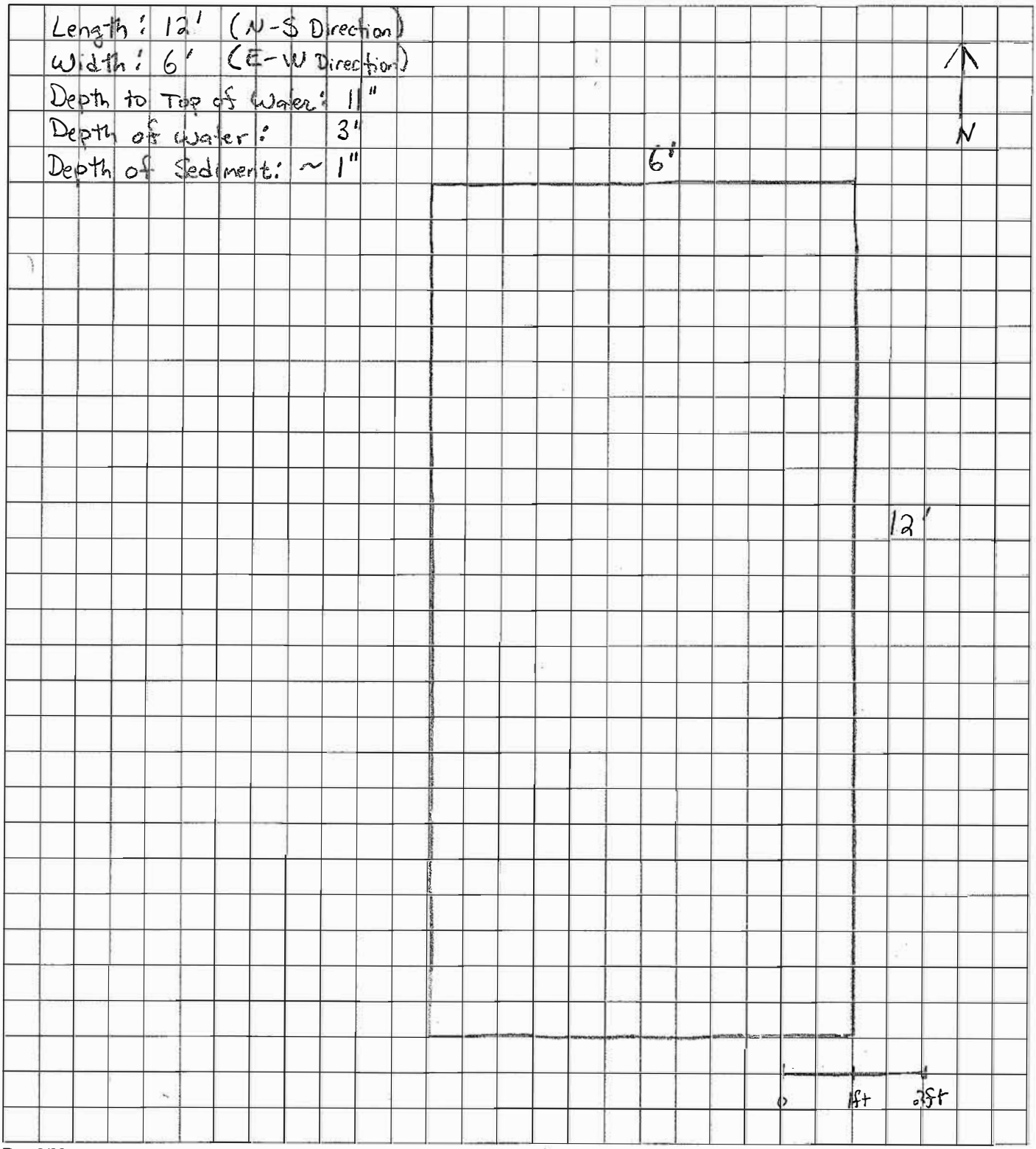
PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Prepared By EL DATE 08-01-08

PROJECT Guterl Steel Surface water Sampling: Reviewed By DLZ DATE 08-06-08

AOB-B04 & B09 - SD/SW - 004 Open rectangular basin Approved By _____ DATE _____

Length: 12' (N-S Direction)
Width: 6' (E-W Direction)
Depth to Top of Water: 1"
Depth of water: 3'
Depth of Sediment: ~ 1"



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CALCULATION SHEET PAGE ____ OF ____

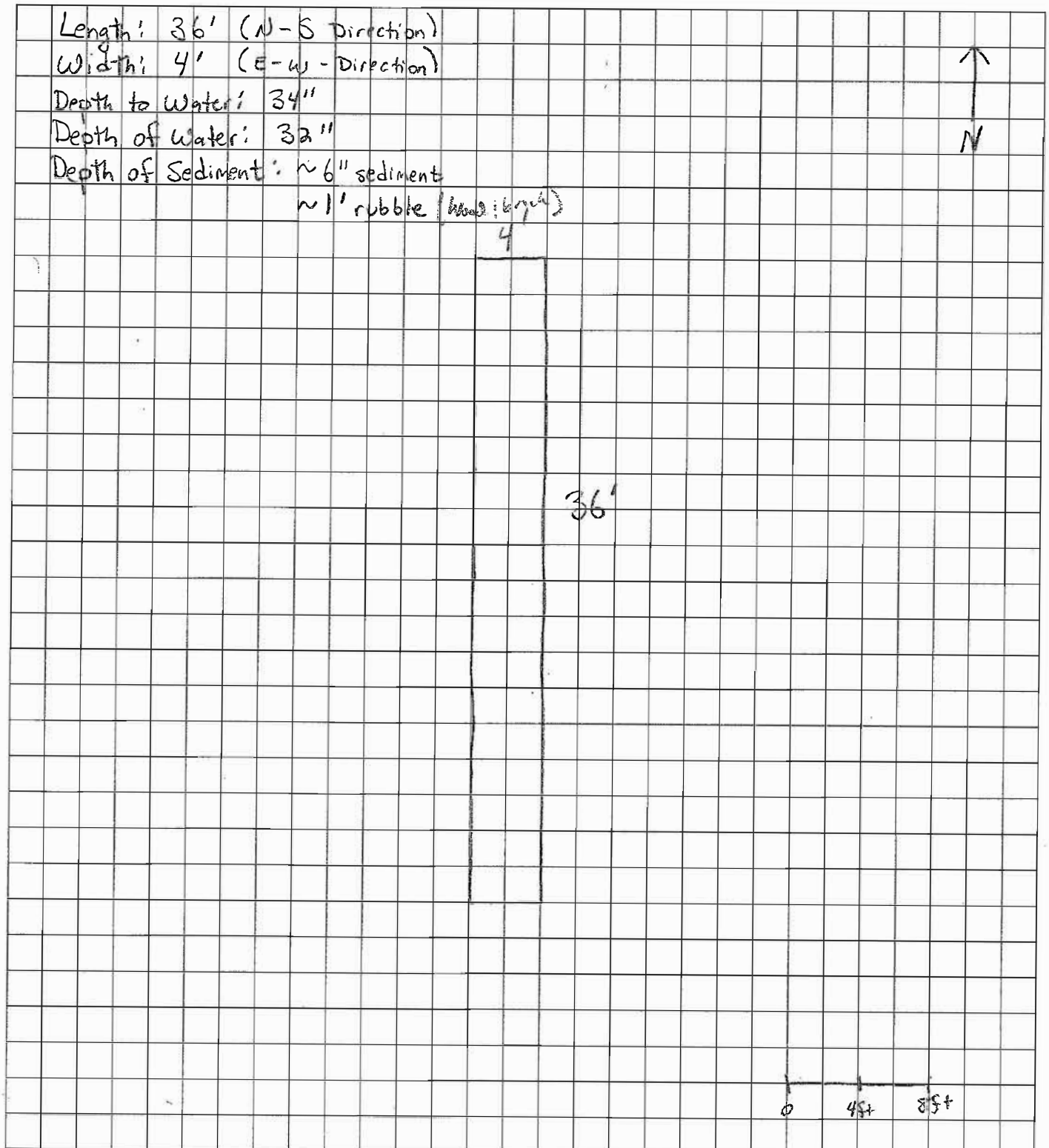
PROJECT NO. _____

CLIENT USACE SUBJECT Sediment and Surface water Sampling: Prepared By ELL DATE 08-01-08

PROJECT Guterl Steel Reviewed By DCZ DATE 08.06.08

A08-B04&B09-SD/SW-005 Open N-S trench (Southern of 2 open Trenches) Approved By _____ DATE _____

Length: 36' (N-S Direction)
Width: 4' (E-W Direction)
Depth to Water: 34"
Depth of Water: 32"
Depth of Sediment: ~6" sediment
~1' rubble (wood; trash)



Client: USACE

Project: Guterl Steel

Subject: Sediment and Surface Water Sampling

Prepared By: ELL

Date: 08-01-08

A08-B24-SD-001 through A08-B24-SD-007

Building 24 Trenches

001 / 007
L: 50'
W: 20"
D to sed: 8"
D of sed: 2"
No water

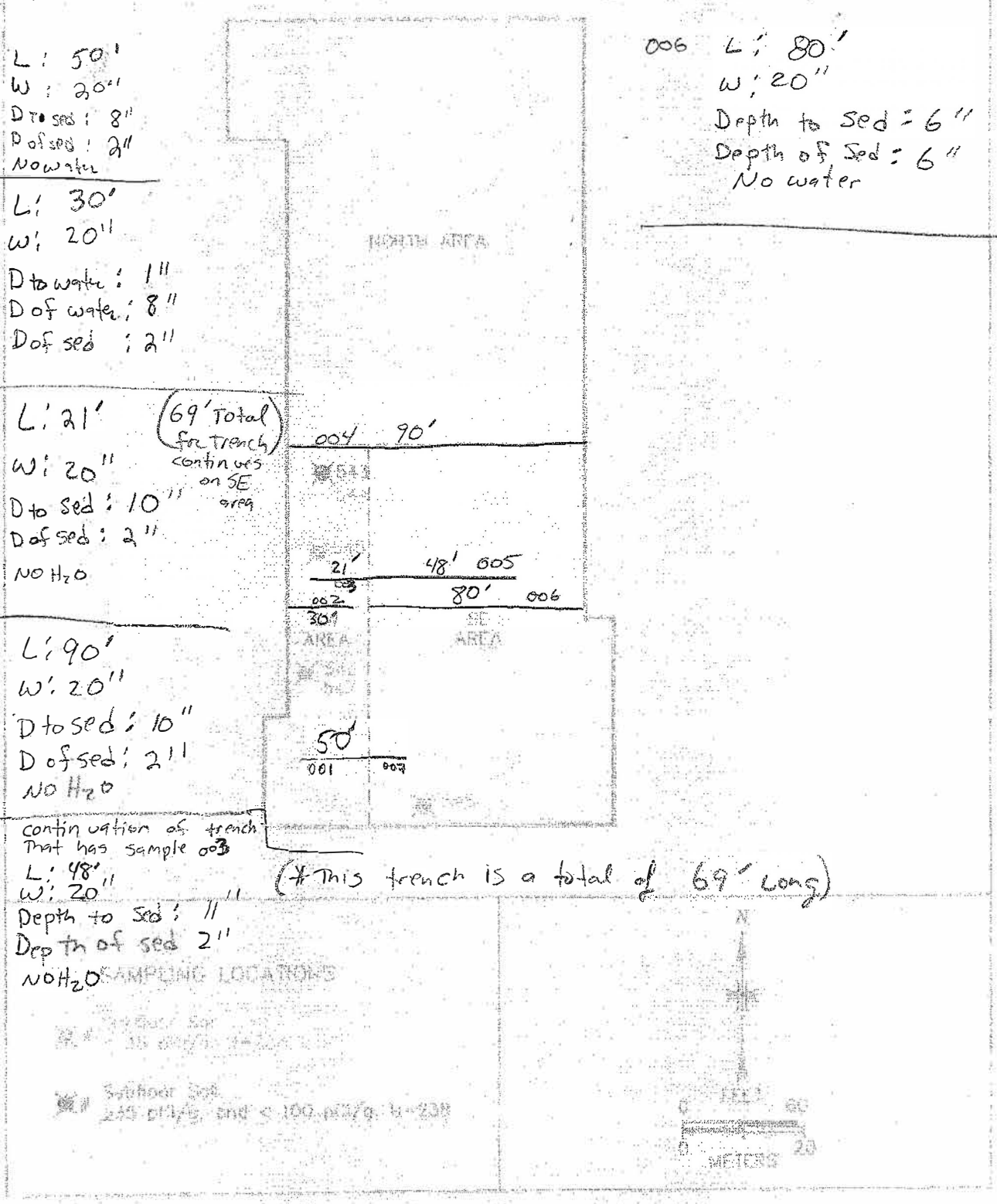
002
L: 30'
W: 20"
D to water: 1"
D of water: 8"
D of sed: 2"

003
L: 21' (69' Total for trench continues on SE area)
W: 20"
D to sed: 10"
D of sed: 2"
NO H_2O

004
L: 90'
W: 20"
D to sed: 10"
D of sed: 2"
NO H_2O

005
continuation of trench that has sample 003
L: 48'
W: 20"
Depth to Sed: 11"
Depth of sed 2"
NO H_2O

006
L: 80'
W: 20"
Depth to Sed = 6"
Depth of Sed: 6"
No water



(* This trench is a total of 69' long)

FIGURE 32: Building 24 – Sampling Locations

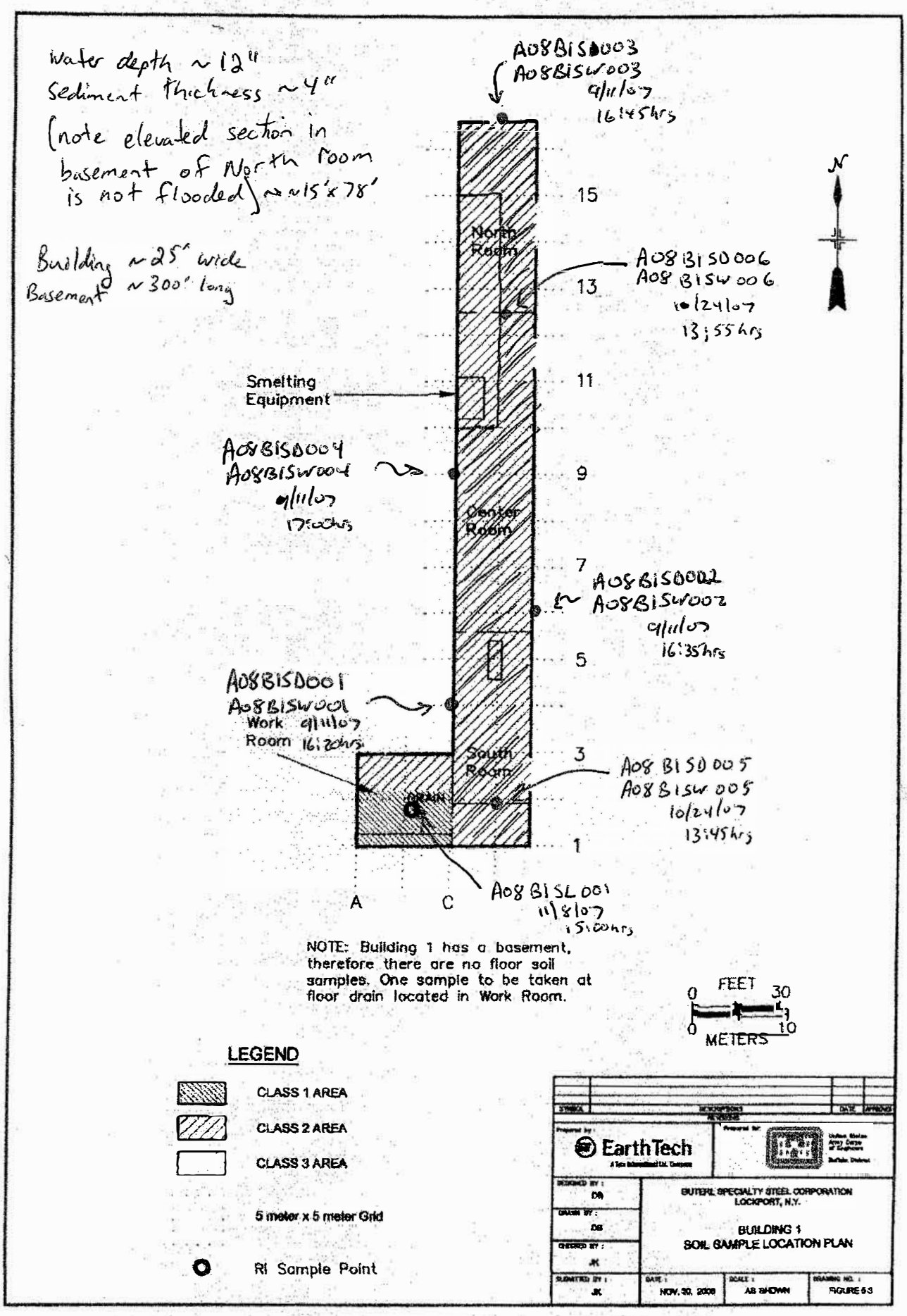

water depth ~12"
Sediment thickness ~4"
(note elevated section in basement of North room is not flooded) ~15'x78'
Building ~25' wide
Basement ~300' long
A08BISD003
A08BISW003
9/11/07
16:45hrs
N
15
North Room
A08BISD006
A08BISW006
10/24/07
13:55hrs
13
Smelting Equipment
11
A08BISD004
A08BISW004
9/11/07
17:00hrs
9
Center Room
7
A08BISD002
A08BISW002
9/11/07
16:35hrs
5
A08BISD001
A08BISW001
Work Room 9/11/07
16:20hrs
South Room
3
A08BISD005
A08BISW005
10/24/07
13:45hrs
DRAIN
1
A08BISL001
11/8/07
15:00hrs
A
C
NOTE: Building 1 has a basement, therefore there are no floor soil samples. One sample to be taken at floor drain located in Work Room.
0 FEET 30
0 METERS 10
LEGEND
CLASS 1 AREA
CLASS 2 AREA
CLASS 3 AREA
5 meter x 5 meter Grid
RI Sample Point
EarthTech
BUTLER SPECIALTY STEEL CORPORATION
LOCKPORT, N.Y.
BUILDING 1
SOIL SAMPLE LOCATION PLAN
DESIGNED BY : DB
DRAWN BY : DB
CHECKED BY : JK
SUBMITTED BY : JK
DATE : NOV. 30, 2008
SCALE : AS SHOWN
DRAWING NO. : FIGURE 5-3

Photo 1: A08-B2-001 (SW/SD).

Photo 2: A08-B2-002 (SD).

Photo 3: A08-B2-003 (SW/SD).

Photo 4: A08-B3-001 (SW).

Photo 5: A08-B3-002 (SD).

Photo 6: A08-B3-003 (SW/SD).

Photo 7: A08-B3-004 (SW/SD).

Photo 8: A08-B3-005 (SW/SD).

Photo 9: A08-B3-006 (SW/SD).

Photo 10: A08-B3-007 (SW/SD).

Photo 11: A08-B3-008 (SW/SD).

Photo 12: A08-B3-009 (SW/SD).

Photo 13: A08-B3-010 (SW/SD).

Photo 14: A08-B3-011 (SW/SD).

Photo 15: A08-B3-012 (SW/SD).

Photo 16: A08-B3-013 (SW/SD).

Photo 17: A08-B3-014 (SW/SD).

Photo 18: A08-B3-015 (SW/SD).

Photo 19: A08-B4/9-001 (SW/SD).

Photo 20: A08-B4/9-002 (SW/SD).

Photo 21: A08-B4/9-003 (SW/SD).

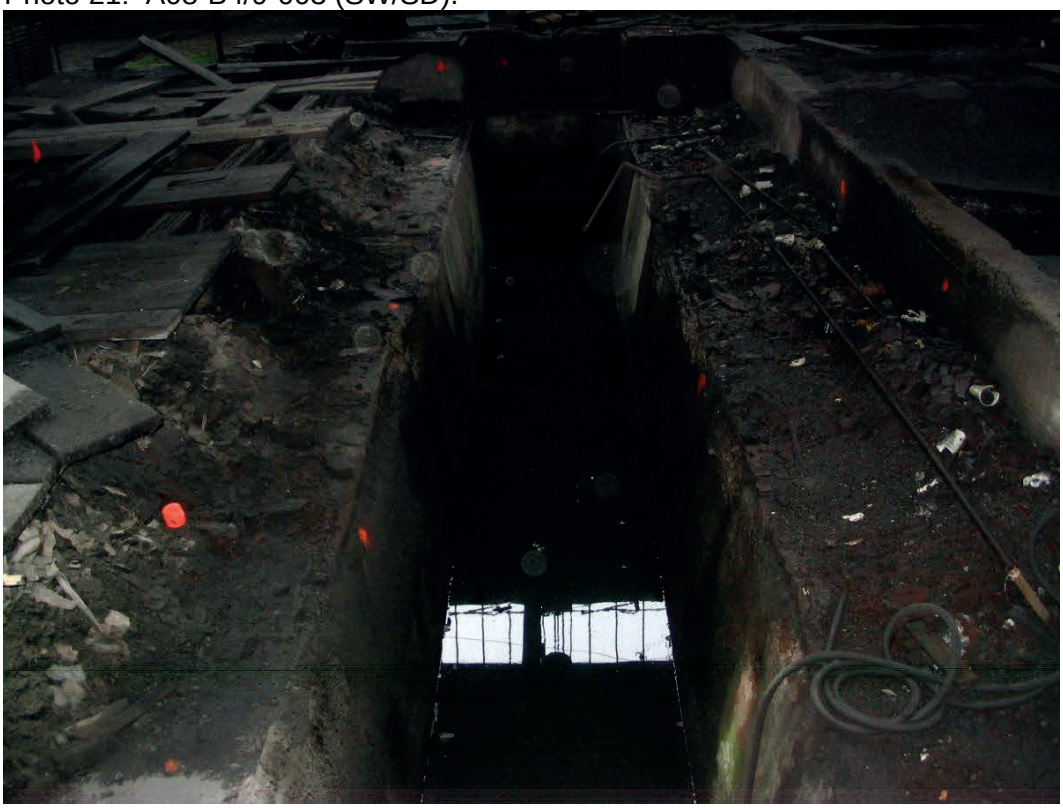


Photo 22: A08-B4/9-004 (SW/SD).

Photo 23: A08-B4/9-005 (SW/SD).

Photo 24: A08-B24-001 (SD).

Photo 25: A08-B24-002 (SD).

Photo 26: A08-B24-003 (SD).

Photo 27: A08-B24-004 (SD).

Photo 28: A08-B24-005 (SD).

Photo 29: A08-B24-006 (SD).

Photo 30: A08-B24-007 (SD).

Photo 31: A08-A01-001 (SW/SD).

Photo 32: A08-A01-002 (SD).

Photo 33: A08-A01-003 (SD).

Photo 34: A08-A01-004 (SW/SD).

Photo 35: A08-A01-005 (SW/SD).

Photo 36: A08-A01-006 (SW/SD).

Photo 37: A08-A01-007 (SW/SD).

Photo 38: A08-A01-008 (SD).

Photo 39: A08-A01-009 (SD).

Photo 40: A08-A01-010 (SD).

Photo 41: A08-A01-011 (SW/SD).

Photo 42: A08-A01-012 (SW/SD).

Photo 43: A08-A01-013 (SW/SD).

Photo 44: A09 (SW/SD).

Photo 45: A08-B6-001 (SD).

Photo 46: A08-B6-002 (SD).

Photo 47: A08-B8-001 (SW/SD).

Photo 48: A08-B8-002 (SW/SD).