

**1529 Route 206 (Block 320, Lot 5)
Joan's Cleaners Site
Tabernacle Township, New Jersey**

**Volume II of II
Appendices**

**Remedial Investigation and
Remedial Action Selection
Term Contract
Number A-73073**



Submitted to:



STATE OF NEW JERSEY
Department of
Environmental Protection
401 East State Street,
Trenton, New Jersey

Submitted By:



THE Louis Berger Group, INC.

412 Mount Kemble Avenue
Morristown, New Jersey 07960

APPENDIX A

Photo Log

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**



Photograph 1: Looking East, behind the commercial complex home to the former Joan's Cleaners Dry Cleaning facility (Site), located on 1529 Route 206, Tabernacle, New Jersey.



Photograph 2: Facing the former Joan's Cleaners Dry Cleaning facility, currently occupied by Subway restaurant.

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**



Photograph 3: Facing East, a view of the parking lot and two sanitary manholes; lines run perpendicular to the septic field behind the complex.



Photograph 4: View facing North from the edge of the septic field.

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**



Photograph 4: View of the septic field facing East, looking towards the commercial complex.



Photograph 5: Looking South at the current commercial complex, note that the Site is currently occupied by Subway, adjacent to Dunkin Donuts.

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**



Photograph 6: Front of the Site.



Photograph 7: Close up of Summit Drilling during monitoring well installation; drilling at MW02 (on Site) using a Hollow Stem Auger (HSA).

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**



Photograph 8: Typical set-up; HSA, support truck, cones.



Photograph 9: Completed flushmount well with cement pad (MW02).

**APPENDIX A
JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY
PHOTODOCUMENTATION LOG**

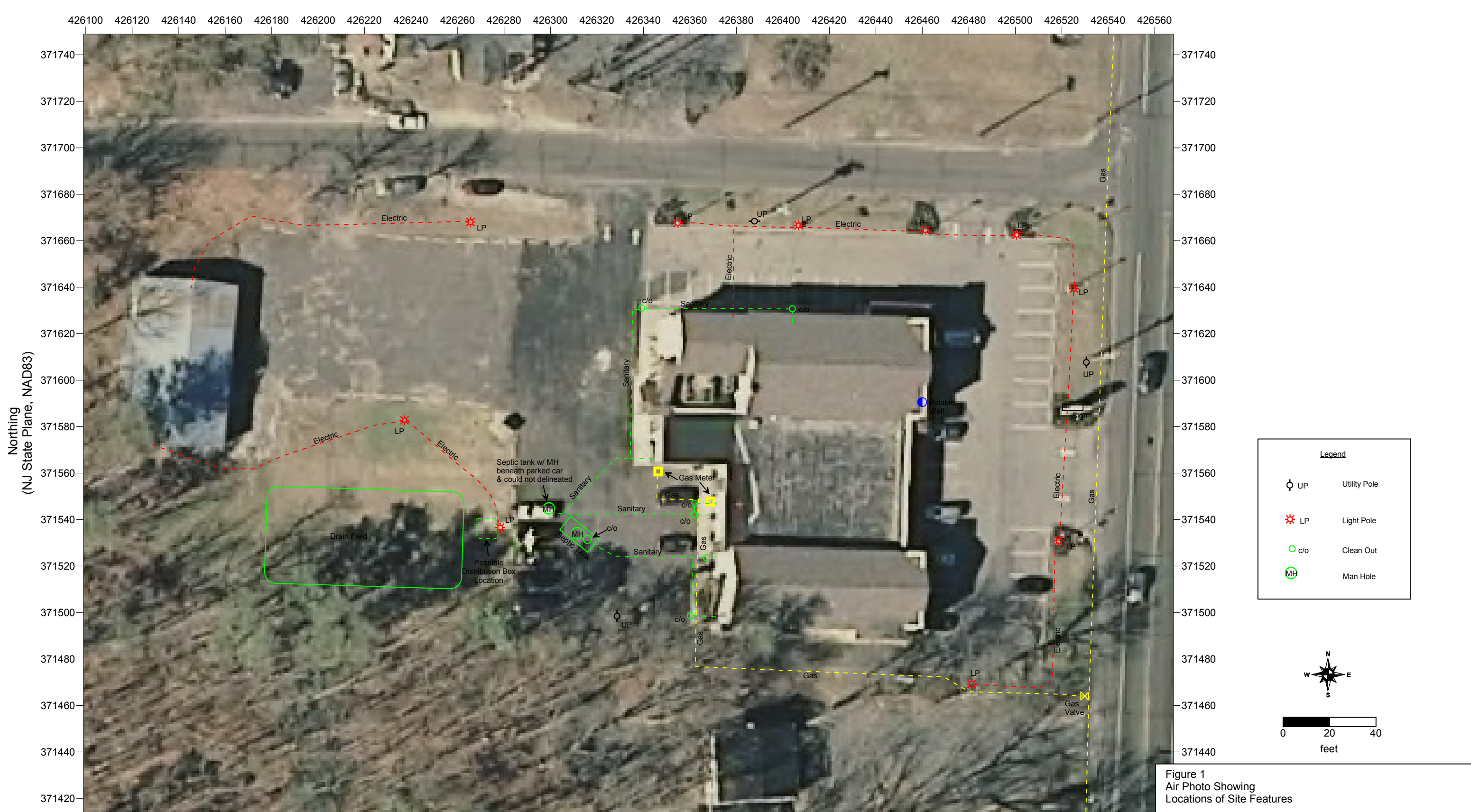


Photograph 10: Close up of Mud Rotary Rig, used to install 3 deep wells (MW13, MW14 and MW07).



Photograph 11: On-Site drum staging (adjacent to septic field) of non-hazardous soil cuttings and purge water during monitoring well installation.

APPENDIX B
Geophysical Findings



Legend

- Utility Pole
- Light Pole
- Clean Out
- Man Hole

Figure 1
Air Photo Showing
Locations of Site Features

NOTE: 1) Base map produced from New Jersey 2007 Orthophotography obtained from the New Jersey Information Warehouse. File: F14D12.sid
 2) The distances and locations shown on this figure should be considered approximate. Coordinates around the perimeter of the map are NJ State Plane Coordinates and were obtained from GPS data collected at the time of the investigation and the georeferenced 2007 Orthophotography.
 3) The items shown on this figure may not be all inclusive. AGS does not warrant the fact that additional buried features/utilities may be present which could not be identified by AGS personnel during this investigation.

Location:
Former Joan's Cleaners Site
1529 US Route 206
Tabernacle Twp., New Jersey

Prepared For:
The Louis Berger Group, Inc.
412 Mt. Kemble Avenue
Morristown, NJ

AGS Reference:
10-2381/dj
7/09/2010



Easting
(NJ State Plane, NAD83)

Northing
(NJ State Plane, NAD83)

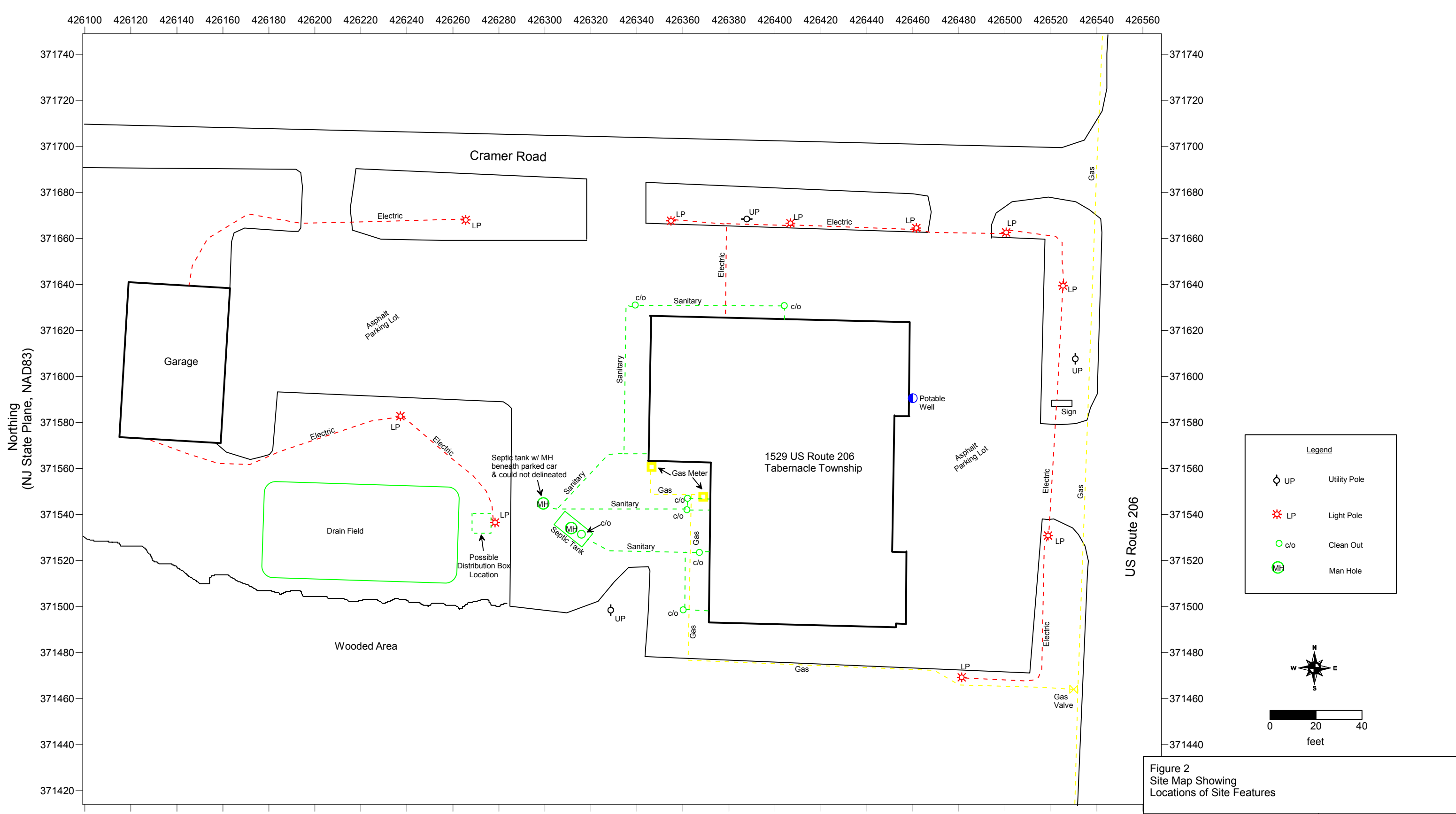


Figure 2
Site Map Showing
Locations of Site Features

NOTE: 1) Base map produced from New Jersey 2007 Orthophotography obtained from the New Jersey Information Warehouse. File: F14D12.sid
2) The distances and locations shown on this figure should be considered approximate. Coordinates around the perimeter of the map are NJ State Plane Coordinates and were obtained from GPS data collected at the time of the investigation and the georeferenced 2007 Orthophotography.
3) The items shown on this figure may not be all inclusive. AGS does not warrant the fact that additional buried features/utilities may be present which could not be identified by AGS personnel during this investigation.

Location:
Former Joan's Cleaners Site
1529 US Route 206
Tabernacle Twp., New Jersey

Prepared For:
The Louis Berger Group, Inc.
412 Mt. Kemble Avenue
Morristown, NJ

AGS Reference:
10-2381/dj
7/09/2010



APPENDIX C
Laboratory Data Reports and EDDs

APPENDIX D

Soil Boring and Groundwater Screening Logs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB-01
WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection		PROJECT NO.: CKT-324K0
PROJECT: Joan's Cleaners		DATE STARTED: 7/19/2010
DRILLING CONTRACTOR: Summit Drilling Co., Inc.		DATE FINISHED: 7/19/2010
DRILLING METHOD: Direct Push		DRILLER: K. Barber
BOREHOLE DATA		WELL DATA
Diameter (in): 2	Completion: N/A	INSPECTOR: P. Lamont
Total Depth (ft): 20.00	Total Depth (ft): N/A	NORTHING: N/A
Sampler: Macrocore	Screen Length (ft) /Slot (in): N/A	EASTING: N/A
Depth to Water (ft): 18	Depth to Water (ft): N/A	GROUND ELEVATION (ft): N/A
Depth to Rock (ft): N/A	Permit No.: N/A	TOC ELEVATION (ft): N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dark yellowish orange (10YR6/6) fine SAND, some Silt; dry.	Silty Sand
	2								
	4		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	6								
	8		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	10								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-01

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Light olive brown (5Y5/6) medium to fine SAND, trace Silt; moist.	
	14								
	16		SP				<1	Light olive brown (5Y5/6) medium to fine SAND, trace Silt; wet.	Collected SB-01 from 17.5-18.0 ft bgs
	18								Water Level at 18 ft bgs
	20								End of Boring at 20 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-02

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND and Silt; moist.	Silty Sand
	14		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	Sand
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	Collected SB-02 from 18.0-18.5 ft bgs
	18								Water Level at 18 ft bgs
	20								End of Boring at 20 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB-03

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 7/20/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 7/20/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING: N/A	
Total Depth (ft):	20.00	Total Depth (ft):	N/A	EASTING: N/A	
Sampler:	Macrocore	Screen Length (ft) /Slot (in): N/A		GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	17.74	Depth to Water (ft): N/A		TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.: N/A			

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, little Silt; dry.	Sand
	2								
	4		SP-SM				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, little Silt; moist.	
	6		SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, some Silt; moist.	Silty Sand
	8								
	10		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10 YR5/4) coarse to medium SAND, trace Silt; moist.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-03

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; moist.	
	14								
	16		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND; wet.	Collected TWP-02 from 15.0-20.0 ft bgs Collected SB-03 from 17.5-18.0 ft bgs
	18		SP				<1	Grayish Orange (10YR7/4) coarse to medium SAND; wet.	Water Level at 17.74 ft bgs
	20								End of Boring at 20 ft bgs




The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-04

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND, trace Silt; moist.	
	14								
	16		SP				<1	Grayish orange (10YR7/4) medium to fine SAND; wet.	Collected SB-04 from 16.5-17.0 ft bgs  Water Level at 17 ft bgs End of Boring at 20 ft bgs
	18		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	
	20								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB-05

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 7/20/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 7/20/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	20.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Macrocore	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	16.95	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	2								
	4		SM				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, and Silt; moist.	Silty Sand
	6								
	8		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to medium SAND; moist.	Sand
	10		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-05

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, and Silt; moist.	Silty Sand
	14		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; moist.	Sand
	16		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	Collected TWP-01 from 15-20 ft bgs Water Level at 16.95 ft bgs
	18		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	Collected SB-05 from 16.9-17.4 ft bgs
	20								End of Boring at 20 ft bgs




The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-06

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	14								
			SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; moist.	
	16		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND; wet.	Collected SB-06 from 16.5-17.0 ft bgs  Water Level at 17 ft bgs End of Boring at 20 ft bgs
			SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	
	18								
	20								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-07

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks	
	12	[Dotted pattern]	SP		[Diagonal hatching]		<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.		
	14									
	16	[Dotted pattern]	SP		[Diagonal hatching]		<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected sample SB-07 from 16.5-17.0 ft bgs ∇ Water Level at 17 ft bgs	
	18									
	19									
	20									End of Boring at 20 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB-09

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 7/19/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 7/19/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING: N/A	
Total Depth (ft):	20.00	Total Depth (ft):	N/A	EASTING: N/A	
Sampler:	Macrocore	Screen Length (ft) /Slot (in): N/A		GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Grayish orange (10YR7/4) fine SAND, trace Silt; dry.	Sand
	2		GM				<1	Grayish orange (10YR7/4) medium to fine GRAVEL, some medium to fine Sand, trace Silt ; dry.	Sandy Gravel
	4		SP				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; moist.	Sand
	8		SP				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; moist.	
	9		SP				<1	Dusky yellow (5Y6/4) coarse to fine SAND, trace Silt; moist.	
	10		SP				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-09

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dark yellowish brown (10YR6/6) coarse to fine SAND, little medium to fine Gravel; moist.	
			SP				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; moist.	
	14								
			SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; moist.	Collected SB-09 from 17.0-17.5 ft bgs
	16		SP				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, trace Silt; saturated.	Water Level at 17 ft bgs \approx
	18								
	20								End of Boring at 20 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: SB-10

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 7/20/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 7/20/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING: N/A	
Total Depth (ft):	36.00	Total Depth (ft):	N/A	EASTING: N/A	
Sampler:	Macrocore	Screen Length (ft) /Slot (in): N/A		GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	17	Depth to Water (ft):	N/A	TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, some Silt; dry.	Silty Sand
	2								
	4		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist .	Sand
	6								
	8		SM				<1	Grayish orange pink (5YR7/2) to dark yellowish orange (10YR6/6) fine SAND, and Silt; moist.	Silty Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB-10

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND; saturated.	
	34								
	36								End of Boring at 36 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB11

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	N. Walton	
Total Depth (ft):	25.00	Total Depth (ft):	N/A	NORTHING: N/A	
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	EASTING: N/A	
Depth to Water (ft):	18.2	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	Sand
	2								
	4								
	6		SP-SM SP-SM				<1 <1	Pale yellowish brown (10YR6/2) medium to fine SAND, little Clayey Silt; moist. Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	8								
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	




The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB11

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12								
	14								
	16		SP-SM				<1	Moderate yellowish brown (10YR5/4) to grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	
	18		SP-SM				<1	Dark yellowish orange (10YR6/6) to light brown (5YR5/6) medium to fine SAND, little Silt; wet.	Collected soil sample SB11 from 17.7 to 18.2 ft bgs  Water Level at 18.2 ft bgs
	20		SP-SM				<1	Dark yellowish brown (10YR4/2) to grayish orange (10YR7/4) coarse to fine SAND, little Silt; wet.	
	22								
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB12

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	18.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Grayish black (N2) to moderate yellowish brown (10YR5/4) coarse to fine SAND, little Silt, little medium to fine Gravel; moist.	Sand
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	4		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	6		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	8		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB12

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP-SM					Grayish orange (10YR7/4) to light brown (5YR5/6) coarse to fine SAND, little Silt; moist.	
	14								
	16								
	18		SP-SM					Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	<p>Collected soil sample SB12 from 18.0 to 18.5 ft bgs</p> <p>∇ Water Level at 18.5 ft bgs</p>
	20								
	22		SP-SM					Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; wet.	<p>End of Boring at 25 ft bgs</p>
	24								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB13

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	18.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Moderate yellowish brown (10YR5/4) to grayish black (N2) coarse to fine SAND, little Silt, little coarse to fine Gravel; dry.	Sand
	2		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	4		SP-SM				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; moist.	
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; moist.	
	8		SP-SM				<1		
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB13

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP-SM					Dark yellowish brown (10YR4/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	14								
	16								
	18		SP-SM					Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; wet.	Collected soil sample SB13 from 18.0 to 18.5 ft bgs ∇ Water Level at 18.5 ft bgs
	20								
	22		SP-SM					Moderate yellowish brown (10YR5/4) to grayish orange (10YR7/4) coarse to fine SAND, little Silt; wet.	End of Boring at 25 ft bgs
	24								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB14

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	18.8	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	Sand
	2								
	4								
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	8								
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB14

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12								
	14								
	16		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	18								Collected soil samples SB14 and DUP01 from 18.3 to 18.8 ft bgs
	20		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	Water Level at 18.8 ft bgs
	22		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	
	24		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; wet.	
									End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB15

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	N. Walton	
Total Depth (ft):	25.00	Total Depth (ft):	N/A	NORTHING: N/A	
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	EASTING: N/A	
Depth to Water (ft):	20.5	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, little Silt; moist.	Sand
	2								
	4								
	6		SP-SM				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, little Silt; moist.	
	8								
	10		SP-SM				<1	Dark yellowish brown (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB15

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP-SM					Dark yellowish brown (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND, little Silt, trace medium to fine Gravel; moist.	
	14								
	16		SP-SM					Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR6/6) coarse to fine SAND, little Silt; moist.	
	18								
	20		SP-SM					Dark yellowish brown (10YR6/6) coarse to fine SAND, little Silt; wet.	
	22		SP-SM						
	24								

Water Level at 20.5 ft bgs
 Collected soil sample SB15 from 20.0 to 20.5 ft bgs
 End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB16

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	18	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dark yellowish orange (10YR6/6) to white (N9) coarse to fine SAND, little Silt, trace medium to fine Gravel; dry.	Sand
	2		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt, trace fine Gravel; moist.	
	4		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	6		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	8		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB16

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP-SM					Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	14								
	16								
	18								
	18		SP-SM					Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	∇ Water Level at 18 ft bgs Collected soil sample SB16 from 18.0 to 18.5 ft bgs
	20								
	20		SP-SM					Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt, trace medium to fine Gravel; wet.	
	22								
	22		SP-SM					Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; wet.	
	24								
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB17

Page 2 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
			SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, some Clayey Silt; moist.	Silty Sand
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	Sand
	8								
	10		SP-SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt, trace medium to fine Gravel; moist.	
	12		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB17

Page 3 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	14								
			SP-SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; moist.	
	16								
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	Collected soil sample SB17 from 17.5 to 18.0 ft bgs
	18								
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	Water Level at 18 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB17

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	20		SP-SM				<1	Dark yellowish brown (10YR4/2) medium to fine SAND, little Silt; wet.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	
	22								
	24								
									End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB18

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0-6

PROJECT: Joan's Cleaners

DATE STARTED: 6/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/13/2012

DRILLING METHOD: Direct Push

DRILLER: J. MacLellan

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	2	Completion:	N/A	NORTHING: N/A	
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING: N/A	
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in): N/A		GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	18	Depth to Water (ft):	N/A	TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	Sand
	2								
	4								
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	8								
	10		SP-SM				<1	Dark yellowish orange (10YR6/6) to dark yellowish brown (10YR4/2) medium to fine SAND, little Silt, trace fine Gravel; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0-6

BORING NO.: SB18

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12	[Pattern]	SP	[Pattern]	[Pattern]		<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; moist.	
	14								
	16								
	18	[Pattern]	SP-SM	[Pattern]	[Pattern]		<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	<p style="text-align: center;">∇</p> Water Level at 18 ft bgs Collected soil sample SB18 from 18.0 to 18.5 ft bgs
	20	[Pattern]	SP-SM	[Pattern]	[Pattern]		<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	22	[Pattern]	SP-SM	[Pattern]	[Pattern]		<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	
	24	[Pattern]		[Pattern]	[Pattern]				
									End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: SB19

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/2/2012

DRILLING METHOD: Direct Push

DRILLER: J. Cessaro

BOREHOLE DATA		WELL DATA		INSPECTOR: M.Cameron	
Diameter (in):	4	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	40.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	21	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt.	Asphalt
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND; dry.	Sand
	6		SP				<1	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	10		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND, moist.	
			SP				<1	Grayish orange (10YR7/4) to moderate yellowish brown (10YR5/4) coarse to fine SAND, trace fine Gravel; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB19

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32		SP				<1	Moderate yellowish brown (10YR6/6) coarse to fine SAND; wet.	
	34								
	36		SP				<1	Grayish orange (10YR7/4) to moderate yellowish brown (10YR5/4) coarse to medium SAND; saturated.	
	38								Collected soil sample SB19B from 38.7 to 39.3 ft bgs
	40		SP				<1	Moderate yellowish brown (10YR6/6) to moderate reddish brown (10R4/6) medium to fine SAND, trace Silt; saturated.	End of Boring at 40 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: SB20

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/2/2012

DRILLING METHOD: Direct Push

DRILLER: J. Cessaro

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	4	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	40.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt; dry.	Asphalt
	2		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND; moist.	Sand
	6		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND; moist.	
	10		SP-SM				<1	Moderate yellowish brown (10YR6/6) coarse to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB20

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	34								
	36		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND; wet.	Collected soil sample SB20B from 36.5 to 37.0 ft bgs
	38								
	40								End of Boring at 40 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: SB21

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/2/2012

DRILLING METHOD: Direct Push

DRILLER: J. Cessaro

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	4	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	40.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt; dry.	Asphalt
	2		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	Sand
	6		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	
	10		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace coarse to fine Gravel; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB21

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.	
	34								
	36		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to fine SAND; saturated.	
	38		SP-SM				<1	Light brown (5YR5/6) to grayish orange (10YR7/4) medium to fine SAND, little Clayey Silt; saturated.	Collected soil sample SB21B from 38.5 to 39.0 ft bgs
	40								End of Boring at 40 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: SB22

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/2/2012

DRILLING METHOD: Direct Push

DRILLER: J. Cessaro

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	4	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	40.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt; dry.	Asphalt
	2		SP				<1	Grayish brown (5YR3/2) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; moist.	Sand
	6		SP				<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB22

Page 2 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SM				<1	Grayish orange (10YR7/4) to moderate yellowish brown (10YR5/4) fine SAND, some Silt, some coarse to fine Gravel; dry.	Gravelly Silty Sand
	12		SP-SM				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; moist.	Sand
	16		SP				33.2	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND; moist.	Collected soil sample SB22A from 17.4 to 17.9 ft bgs
	18		SP				782	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; wet.	∇ Water Level at 17.5 ft bgs
	20		SP				150	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	
	22								
	24								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB22

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	26		SP				80	Dark yellowish orange (10YR6/6) medium to fine SAND; wet.	
	28								
	30		SP				4.8	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	
	30		SP				4.8	Dark yellowish orange (10YR6/6) coarse to fine SAND; saturated.	
	32								
	34								
	36		SP				65	Grayish orange (10YR7/4) to moderate reddish brown (10R4/6) coarse to fine SAND; saturated.	
	38		SP-SM				97	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) medium to fine SAND, little Clayey Silt; saturated.	Collected soil sample SB22B from 38.6 to 39.1 ft bgs
	40								End of Boring at 40 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB23

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.



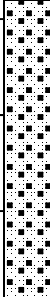

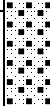

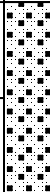

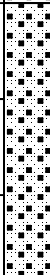

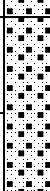


DATE FINISHED: 2/2/2012

DRILLING METHOD: Direct Push

DRILLER: J. Cessaro

BOREHOLE DATA		WELL DATA		INSPECTOR: M.Cameron	
Diameter (in):	4	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES: Lithology from 0 to 10 ft bgs based on log for SB22.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt; dry.	Asphalt
	2		SP				<1	Grayish brown (5YR3/2) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; moist.	Sand
	4		SP				<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	
	6		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	
	10		SP				31.7	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: SB23

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12								
	14								
	16		SP				11.9	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) medium to fine SAND; moist.	Collected soil sample SB23A from 17.7 to 18.2 ft bgs Water Level at 17.5 ft bgs
	18		SP				118	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND; wet.	
	20		SP				83	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND, trace Silt; saturated.	
	22								Collected soil sample SB23B from 23.8 to 24.3 ft bgs
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB24

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.



















DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING: N/A	
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING: N/A	
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in): N/A		GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	18.2	Depth to Water (ft):	N/A	TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) Asphalt and Sub-base; dry.	Asphalt
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	4								
	6		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to fine SAND, trace Silt; dry.	
	10		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB24

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP					Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; moist.	
	14								
	16								
	18		SP					Pale yellowish orange (10YR8/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	 Water Level at 18.2 ft bgs
	20		SP					Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt; saturated.	
	22								
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB25

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA

WELL DATA

INSPECTOR: C. Watt

Diameter (in): 6

Completion: N/A

NORTHING: N/A

Total Depth (ft): 25.00

Total Depth (ft): N/A

EASTING: N/A

Sampler: Acetate Sleeve

Screen Length (ft) /Slot (in): N/A

GROUND ELEVATION (ft): N/A

Depth to Water (ft): 18.8

Depth to Water (ft): N/A

TOC ELEVATION (ft): N/A

Depth to Rock (ft): N/A

Permit No.: N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) Asphalt and Sub-base; dry.	Asphalt
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	6		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	
	8		ML				<1	Moderate yellowish brown (10YR5/4) SILT, some medium to fine Sand; moist.	Sandy Silt
	10		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB25

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12	[Dotted pattern]	SP	[Cross-hatch pattern]	[Diagonal lines pattern]		1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	
	14								
	16								
	18	[Dotted pattern]	SP	[Cross-hatch pattern]	[Diagonal lines pattern]		1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	∇ Water Level at 18.8 ft bgs Collected soil samples SB25A and SB25AE from 18.5 to 19.0 ft bgs.
	20								
	22	[Dotted pattern]	SP	[Cross-hatch pattern]	[Diagonal lines pattern]		<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	End of Boring at 25 ft bgs
	24								



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB26

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	18.2	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) Asphalt and Sub-base; dry.	Asphalt
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	6		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; dry.	
	7		SM				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, some Silt; dry.	Silty Sand
	8		SP				<1	Moderate reddish brown (10R4/6) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB26

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP					Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	
	14								
	16		SP				1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	Collected soil samples SB26A and SB26AE from 18.0 to 18.5 ft bgs.
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; wet.	Water Level at 18.2 ft bgs
	22								
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB27

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA

WELL DATA

INSPECTOR: C. Watt

Diameter (in): 6

Completion: N/A

NORTHING: N/A

Total Depth (ft): 25.00

Total Depth (ft): N/A

EASTING: N/A

Sampler: Acetate Sleeve

Screen Length (ft) /Slot (in): N/A

GROUND ELEVATION (ft): N/A

Depth to Water (ft): 18

Depth to Water (ft): N/A

TOC ELEVATION (ft): N/A

Depth to Rock (ft): N/A

Permit No.: N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) Asphalt and Sub-base; dry.	Asphalt and Gravel
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; dry.	Sand
	4		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; dry.	
	6		SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, some Silt; dry.	Silty Sand
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; dry.	Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; dry.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB27

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP					Pale yellowish orange (10YR8/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14								
	16		SP					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	18								
	20		SP						<p>Water Level at 18 ft bgs</p> <p>Collected soil samples SB27A and SB27AE from 18.0 to 18.5 ft bgs.</p>
	22								
	24		SP						<p>End of Boring at 25 ft bgs</p>



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB28

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	15.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Grayish brown (5YR3/2) SILT; dry.	Silt
	2		SP-SM				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	Sand
	4		SP-SM				<1	Dark yellowish orange (10YR6/6) fine SAND, little Silt; moist.	
	6		SM				<1	Yellowish gray (5Y7/2) fine SAND, some Silt; moist.	Silty Sand
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt, trace medium to fine Gravel; moist.	Sand
	10		SP				<1	Moderate brown (5YR4/4) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; dry.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB28

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP					Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	Collected soil samples SB28A and SB28AE from 15.0 to 15.5 ft bgs.
	14								
	16		SP					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	 Water Level at 15.5 ft bgs
	18								
	20		SP						End of Boring at 25 ft bgs
	22								
	24								



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB29

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA

WELL DATA

INSPECTOR: C. Watt

Diameter (in): 6

Completion: N/A

NORTHING: N/A

Total Depth (ft): 25.00

Total Depth (ft): N/A

EASTING: N/A

Sampler: Acetate Sleeve

Screen Length (ft) /Slot (in): N/A

GROUND ELEVATION (ft): N/A

Depth to Water (ft): 15.5

Depth to Water (ft): N/A

TOC ELEVATION (ft): N/A

Depth to Rock (ft): N/A

Permit No.: N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Grayish brown (5YR3/2) SILT; dry.	Silt
	2		GP				<1	Grayish orange (10YR7/4) medium to coarse GRAVEL; dry.	Gravel
	6		ML				<1	Very pale orange (10YR8/2) SILT, some medium to fine Sand; wet.	Silt
	8		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; moist.	Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) fine SAND; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB29

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	Collected soil samples SB29A and SB29AE from 15.0 to 15.5 ft bgs.
	14								
	16		SP					Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt.	 Water Level at 15.5 ft bgs
	18								
	20		SP					Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt.	End of Boring at 25 ft bgs
	22								
	24								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: SB30

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1-6

PROJECT: Joan's Cleaners

DATE STARTED: 5/3/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 5/3/2012

DRILLING METHOD: Direct Push

DRILLER: B. Shinn

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	N/A
Total Depth (ft):	25.00	Total Depth (ft):	N/A	EASTING:	N/A
Sampler:	Acetate Sleeve	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Grayish brown (5YR3/2) SILT, and medium to fine Sand, trace coarse to medium Gravel; dry.	Sandy Silt
	2		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; dry.	Sand
	4		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	
	6		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	8								
	10		SP-SM				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1-6

BORING NO.: SB30

Page 2 of 2

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP-SM					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, little Silt; wet.	
	14								
	16		SP-SM					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, little Silt; saturated.	Collected soil samples SB30A and SB30AE from 17.0 to 17.5 ft bgs. ∇ Water Level at 17.5 ft bgs
	18								
	20		SP-SM					Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) medium to fine SAND, little Silt; saturated.	End of Boring at 25 ft bgs
	22								
	24								



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW101
WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection		PROJECT NO.: CKT-324K1
PROJECT: Joan's Cleaners		DATE STARTED: 7/21/2010
DRILLING CONTRACTOR: Summit Drilling Co., Inc.		DATE FINISHED: 7/21/2010
DRILLING METHOD: Direct Push		DRILLER: K. Barber
BOREHOLE DATA		WELL DATA
Diameter (in): 6	Completion: N/A	INSPECTOR: P. Lamont
Total Depth (ft): 83.00	Total Depth (ft): N/A	NORTHING: 371671.19
Sampler: Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in): N/A	EASTING: 426448.49
Depth to Water (ft): 18	Depth to Water (ft): N/A	GROUND ELEVATION (ft): N/A
Depth to Rock (ft): N/A	Permit No.: N/A	TOC ELEVATION (ft): N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	2								
	4		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	6								
	8		SP-SM				<1	Light brown (5YR5/6) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; moist.	Sand
	10								
	12		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; moist.	
	14								



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, little fine Gravel; saturated.	Collected GW101B from 40.0 to 43.0 ft bgs
	42								
	44		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND; saturated.	
	46								
	48		SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R 4/6) medium to fine SAND, and Silt; saturated.	Silty Sand, Collected GW101C from 50.0 to 53.0 ft bgs
	50								
	52		SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to fine SAND, and white (N7) Silt; saturated.	
	54		SP SP				<1 <1	Light brown (5YR5/6) coarse SAND overlaying a 0.1-foot layer of Silt; saturated. Grayish orange pink (5YR7/2) coarse SAND; saturated.	Sand
	56		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW101D from 60.0 to 63.0 ft bgs





The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW101

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW101E from 70.0 to 73.0 ft bgs
	72								
	74								
	76								
	78								
	80								Collected GW101F from 80.0 to 83.0 ft bgs
	82								End of Boirng at 83 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, little fine Gravel; saturated.	Collected GW102B from 40.0 to 43.0 ft bgs
	42								
	44		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt; saturated.	
	46								
	48		SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) medium to fine SAND, and Silt; saturated.	Silty Sand, Collected GW102C from 50.0 to 53.0 ft bgs
	50								
	52		SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to fine SAND, and white (N7) Silt; saturated.	
	54		SP SP				<1 <1	Light brown (5YR5/6) coarse SAND overlaying a 0.1-foot layer of Silt; saturated. Grayish orange pink (5YR7/2) coarse SAND; saturated.	Sand
	56		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW102D from 60.0 to 63.0 ft bgs





The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW102

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW102E from 70.0 to 73.0 ft bgs
	72								
	74								
	76								
	78								
	80								Collected GW102F from 80.0 to 83.0 ft bgs
	82								End of Boring at 83 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW103

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/28/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/28/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372082.65
Total Depth (ft):	83.00	Total Depth (ft):	N/A	EASTING:	425579.53
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	28	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Black (N1) Asphalt	
	0-2		SM				<1	Light brown (5YR5/6) coarse to medium SAND, some Silt, little medium to fine Gravel, overlying a 0.1-foot layer of black (N1) asphalt; moist.	Silty Sand
	4		ASPHALT				<1	Black (N1) Asphalt	
	4-6		SP-SM				<1	Dark yellowish brown (10YR4/2) coarse to medium SAND, little Silt; dry.	Sand
	6-8		SP-SM				<1	Dusky yellow (5Y6/4) coarse to medium SAND, little Silt; dry.	
	8-10		SP-SM				<1	Light brown (5YR5/6) medium to fine SAND, little Silt; dry.	
	10-12		SP				<1	Moderate yellow (5Y7/6) medium to fine SAND, trace Silt; dry.	
	12-14		SP-SM				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; dry.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW103

Page 3 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40								Collected GW103BP from 40.0 to 43.0 ft bgs
	42								
	44								
	46								
	48								
	50								Collected GW103CU from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60								Collected GW103DU and from 60.0 to 63.0



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) to dusky yellow (5YR6/4) medium to fine SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) to dusky yellow (5YR6/4) coarse to fine SAND, trace Silt; saturated.	
	22								
	24		SP-SM				<1	Pale yellowish orange (10YR8/6) coarse to medium SAND, little Silt; saturated.	
	26		SM				<1	Dusky yellow (5YR6/4) fine SAND, and Silt; saturated.	Silty Sand
	28		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Sand, Collected GW105A from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish orange (10YR8/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish orange (10YR8/6) medium to fine SAND, little Silt; saturated.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW105

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62								
	64								
	66								
	68								
	70								
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW106

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 10/7/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 10/7/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373519.72
Total Depth (ft):	73.00	Total Depth (ft):	N/A	EASTING:	426662.14
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	28	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate brown (5YR4/4) to light brown (5YR5/6) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	10		SP				<1	Light brown (5YR5/6) coarse to fine SAND, trace Silt; moist.	Sand
	12		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	14		SP				<1	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, trace Silt; moist.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	18		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	
	20		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	
	22		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	
	22		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	26								
	28		SP				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND, trace Silt; saturated.	Water Level at 28 ft bgs
	30								Collected GW106AP from 30.0 to 33.0 ft bgs
	32		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace fine Gravel; saturated.	
	34								
	36		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little fine Gravel; saturated.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW106

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
			SM				<1	Dark yellowish orange (10YR6/6) fine SAND, and Silt; saturated.	Collected GW106DU from 60.0 to 63.0 ft bgs
	62		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; saturated.	Sand
	64		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse SAND; saturated.	
			SP-SM				<1	Moderate yellowish brown (10YR5/4) to moderate reddish orange (10R4/6) medium to fine SAND, little Silt; saturated.	
	68		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	70		NA						
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW107

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 7/26/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 7/26/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373029.94
Total Depth (ft):	79.00	Total Depth (ft):	N/A	EASTING:	426420.63
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	28	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate brown (5YR4/4) to light brown (5YR5/6) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	10		SP				<1	Light brown (5YR5/6) coarse to fine SAND, trace Silt; moist.	Sand
	12		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	14		SP				<1	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, trace Silt; moist.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	18		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	
	20		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	
	22		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	
	22		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	26								
	28		SP				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND, trace Silt; saturated.	Water Level at 28 ft bgs
	30								Collected GW107A from 30 to 33 ft bgs
	32		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace fine Gravel; saturated.	
	34								
	36		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little fine Gravel; saturated.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW107

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
			SM				<1	Dark yellowish orange (10YR6/6) fine SAND, and Silt; saturated.	
	62		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; saturated.	Sand
	64		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse SAND; saturated.	
	66		SP-SM				<1	Moderate yellowish brown (10YR5/4) to moderate reddish orange (10R4/6) medium to fine SAND, little Silt; saturated.	
	68		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	Collected GW107E from 70 to 73 ft bgs and GW107F from 76 to 79 ft bgs
	70		NA						
	72								
	74								
	76								
	78								End of Boring at 79 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW108

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 10/6/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 10/6/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372539.66
Total Depth (ft):	79.00	Total Depth (ft):	N/A	EASTING:	426624.85
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	28	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate brown (5YR4/4) to light brown (5YR5/6) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	10		SP				<1	Light brown (5YR5/6) coarse to fine SAND, trace Silt; moist.	Sand
	12		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	14		SP				<1	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, trace Silt; moist.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	18		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	
	20		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	Collected GW108AAP from 30.0 to 33.0 ft bgs
	22		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; wet.	
			SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	26								
	28		SP				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND, trace Silt; saturated.	Water Level at 28 ft bgs
	30								Collected GW108AU from 30.0 to 33.0 ft bgs
	32		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace fine Gravel; saturated.	
	34								
	36		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little fine Gravel; saturated.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW108

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
			SM				<1	Dark yellowish orange (10YR6/6) fine SAND, and Silt; saturated.	Collected GW108DP from 60.0 to 73.0 ft bgs
	62		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; saturated.	Sand
	64		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse SAND; saturated.	
	66		SP-SM				<1	Moderate yellowish brown (10YR5/4) to moderate reddish orange (10R4/6) medium to fine SAND, little Silt; saturated.	
	68		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	70		NA						Collected GW108EP from 70.0 to 73.0 ft bgs
	72								
	74								
	76								Collected GW108FU from 76.0 to 79.0 ft bgs
	78								End of Boring at 79 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; wet.	Water Level at 18 ft bgs
	18								
	20		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	Collected GW109AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) coarse to fine SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Moderate yellow (5Y7/6) coarse to fine SAND, trace Silt; saturated.	Collected GW109AP from 30.0 to 33.0 ft bgs
	30								
	32		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt; saturated.	
	34								
	36		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	






The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW109

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW109DP from 60.0 to 63.0 ft bgs
	64		NA						
	66								
	68								
	70								
	72								
	74								
	76								Collected GW109FU from 76.0 to 79.0 ft bgs
	78								End of Boring at 79 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, little fine Gravel; saturated.	Collected GW110BU from 40.0 to 43.0 ft bgs
	42								
	44		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt; saturated.	
	46								
	48		SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) medium to fine SAND, and Silt; saturated.	Silty Sand, Collected GW110CP from 50.0 to 53.0 ft bgs
	50								
	52		SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to fine SAND, and white (N7) Silt; saturated.	
	54		SP SP				<1 <1	Light brown (5YR5/6) coarse SAND, overlaying a 0.1-foot layer of Silt; saturated. Grayish orange pink (5YR7/2) coarse SAND; saturated.	Sand
	56		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW110DU from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW110

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW110EP from 70.0 to 73.0 ft bgs
	72								
	74								
	76								
	78								
	80								Collected GW110FU from 80.0 to 83.0 ft bgs
	82								End of Boirng at 83 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, little fine Gravel; saturated.	Collected GW111BU from 40.0 to 43.0 ft bgs
	42								
	44		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt; saturated.	
	46								
	48		SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) medium to fine SAND, and Silt; saturated.	Silty Sand, Collected GW111CP from 50.0 to 53.0 ft bgs
	50								
	52		SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to fine SAND, and white (N7) Silt; saturated.	
	54		SP SP				<1 <1	Light brown (5YR5/6) coarse SAND overlaying a 0.1-foot layer of Silt; saturated. Grayish orange pink (5YR7/2) coarse SAND; saturated.	Sand
	56		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW111DU from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW111

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW111EU from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW112

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/30/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/30/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373074.46
Total Depth (ft):	83.00	Total Depth (ft):	N/A	EASTING:	426688.88
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	28	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate brown (5YR4/4) to light brown (5YR5/6) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	10		SP				<1	Light brown (5YR5/6) coarse to fine SAND, trace Silt; moist.	Sand
	12		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; moist.	
	14		SP				<1	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, trace Silt; moist.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Collected GW112BP from 40 to 43 ft bgs
	42								
	44		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	
	46								
	48		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	50		SP				<1	Pale brown (5YR5/2) coarse to medium SAND, trace Silt; saturated.	
	52		SP-SM				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND, little fine Gravel; saturated.	
	54							Dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; saturated.	Collected GW112CP and GW112DUPP from 50 to 53 ft bgs
	56		SM				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, some Silt; saturated.	Silty Sand
	58		SM				<1	Dark yellowish orange (10YR6/6) fine SAND, and Silt; saturated.	
	60		SM				<1	Dark yellowish orange (10YR6/6) fine SAND, and Silt; saturated.	Collected GW112DP from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW112

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; saturated.	Sand
	64		SP				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse SAND; saturated.	
	66		SP-SM				<1	Moderate yellowish brown (10YR5/4) to moderate reddish orange (10R4/6) medium to fine SAND, little Silt; saturated.	
	68		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	70		NA					Grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	72								Collected GW112EP from 70.0 to 73.0 ft bgs
	74								
	76								
	78								
	80								Collected GW112FP from 80.0 to 83.0 ft bgs
	82								End of Boring at 83 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) coarse SAND, trace Silt; saturated.	Collected GW115AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Dusky yellow (5Y6/4) to light olive (10Y5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW115AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to medium SAND; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SM				<1	Moderate yellow (5Y7/6) fine SAND, some Silt; saturated.	Silty Sand, Collected and GW115BP from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt, little fine Gravel; saturated.	Sand
	46								
	48		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW115CP from 50.0 to 53.0 ft bgs
	50								
	52		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	Collected GW115DU from 60.0 to 63.0 ft bgs
	54								
	56		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	Collected GW115DU from 60.0 to 63.0 ft bgs
	58								
	60		NA						End of Boring at 63 ft bgs
	62								



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) coarse to medium SAND, little fine Gravel; saturated.	Collected GW116BU from 40.0 to 43.0 ft bgs
	42								
	44		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt; saturated.	
	46								
	48		SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R 4/6) medium to fine SAND, and Silt; saturated.	Silty Sand, Collected GW116CU from 50.0 to 53.0 ft bgs
	50								
	52		SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to fine SAND, and white (N7) Silt; saturated.	
	54		SP SP				<1 <1	Light brown (5YR5/6) coarse SAND overlaying a 0.1-foot layer of Silt; saturated. Grayish orange pink (5YR7/2) coarse SAND; saturated.	Sand
	56		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected GW116DP from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW116

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW116EU from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Water Level at 18 ft bgs Collected GW118AAU from 20.0 to 23.0 ft bgs
	18								
	20		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	22								
	24		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt, trace fine Gravel; saturated.	Collected GW118AP from 30.0 to 33.0 ft bgs
	26								
	28		SP SP-SM				<1 <1	Yellowish gray (5Y7/2) coarse SAND, trace fine Gravel; saturated. Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	
	30								
	32		SM				<1	Grayish orange (10YR7/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	34		SP SP-SM				<1 <1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated. Pale brown (5YR5/2) coarse to fine SAND, trace Silt; saturated.	Sand
	36		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt, trace fine Gravel; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40						<1	Dark yellowish orange (10YR6/6) coarse SAND, little fine Gravel; saturated.	Collected GW118BP from 40.0 to 43.0 ft bgs
		SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND; saturated.	
		SP					<1	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt; saturated.	
	42							Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	44						<1	Light brown (5YR5/6) coarse to medium SAND; saturated.	
	46		SM				<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Silty Sand
	48		SM				<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Collected GW118CU and GW118DUPU from 50.0 to 53.0 ft bgs
	52		SP-SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Sand
	54								
	56		SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	58		SP				<1	Light brown (5YR5/6) coarse SAND, little fine Gravel; saturated.	Sand
		SP					<1	Dusky brown (5YR2/2) medium to fine SAND, trace Silt; saturated.	
	60		SP-SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Collected GW118DU from 60.0 to 63.0 ft bgs






The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW118

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW118EP from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Collected GW119AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt, trace fine Gravel; saturated.	
	26								
	28		SP SP-SM				<1 <1	Yellowish gray (5Y7/2) coarse SAND, trace fine Gravel; saturated. Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	Collected GW119AU from 30.0 to 33.0 ft bgs
	30								
	32		SM				<1	Grayish orange (10YR7/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	34		SP SP-SM				<1 <1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated. Pale brown (5YR5/2) coarse to fine SAND, trace Silt; saturated.	Sand
	36		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt, trace fine Gravel; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40						<1	Dark yellowish orange (10YR6/6) coarse SAND, little fine Gravel; saturated.	Collected GW119BP from 40.0 to 43.0 ft bgs
		SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND; saturated.	
		SP					<1	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt; saturated.	
	42							Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	44						<1	Light brown (5YR5/6) coarse to medium SAND; saturated.	
	46		SM				<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Silty Sand
	48		SM				<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Collected GW119CU from 50.0 to 53.0 ft bgs
	52		SP-SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Sand
	56		SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	58		SP				<1	Light brown (5YR5/6) coarse SAND, little fine Gravel; saturated.	Sand
		SP					<1	Dusky brown (5YR2/2) medium to fine SAND, trace Silt; saturated.	
	60		SP-SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Collected GW119DU from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW119

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								Collected GW119EU from 68.0 to 71.0 ft bgs
	70								End of Boring at 71 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW120

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/9/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/9/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373841.55
Total Depth (ft):	73.00	Total Depth (ft):	N/A	EASTING:	427612.75
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	10.5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Light olive brown (5Y5/6) medium to fine SAND, trace Silt; dry.	Sand
	2								
	4		SP				<1	Light brown (5YR6/4) coarse to medium SAND, trace Silt; moist.	
	6								
	8		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	Collected GW120P from 8.0 to 11.0 ft bgs
	10		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	Water Level at 10.5 ft bgs
	12		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND, some fine Gravel; saturated.	Gravelly Sand
	12		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Sand
	13		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little Silt; saturated.	
	14		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND,	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; saturated.	Collected GW120BP from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) coarse to fine SAND, trace Silt; saturated.	
	46								
	48		SP				<1	Dusky yellow (5Y6/4) to pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW120CP from 50.0 to 53.0 ft bgs
	50								
	52		SP				<1	Dusky yellow (5Y6/4) to pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	
	54		NA						
	56								Collected GW120DU from 60.0 to 63.0 ft bgs
	58								
	60								



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW120

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62								
	64								
	66								
	68								
	70								Collected GW120EP from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) coarse SAND, trace Silt; saturated.	Collected GW122AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Dusky yellow (5Y6/4) to light olive (10Y5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW122AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to medium SAND; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SM				<1	Moderate yellow (5Y7/6) fine SAND, some Silt; saturated.	Silty Sand, Collected GW122BU from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt, little fine Gravel; saturated.	Sand
	46								
	48		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW122CP from 50.0 to 53.0 ft bgs
	50								
	52		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	54								
	56		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		NA						Collected GW122DU from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) coarse SAND, trace Silt; saturated.	Collected GW123AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Dusky yellow (5Y6/4) to light olive (10Y5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW123AP and GW123DUPU from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	38		SP SP-SM				<1 <1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to medium SAND; saturated.	
								Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SM				<1	Moderate yellow (5Y7/6) fine SAND, some Silt; saturated.	Silty Sand, Collected GW123BP from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt, little fine Gravel; saturated.	Sand
	46								
	48		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW123CP from 50.0 to 53.0 ft bgs
	50								
	52		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	54								
	56		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		NA						Collected GW123DP from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) coarse SAND, trace Silt; saturated.	Collected GW124AAU from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Dusky yellow (5Y6/4) to light olive (10Y5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW124AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to medium SAND; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SM				<1	Moderate yellow (5Y7/6) fine SAND, some Silt; saturated.	Silty Sand, Collected GW124BP from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt, little fine Gravel; saturated.	Sand
	46								
	48		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW124CP from 50.0 to 53.0 ft bgs
	50								
	52		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	54								
	56		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		NA						Collected GW124DP from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	Water Level at 16 ft bgs
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, trace fine Gravel; saturated.	Collected GW126AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, little fine Gravel; saturated.	
	26		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	28		SP				<1	Yellowish gray (5Y7/2) coarse to medium SAND, little fine Gravel; saturated.	
	30		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND; saturated.	
	30		SP-SM				<1	Grayish orange pink (5YR7/2) coarse to medium SAND, little Silt; saturated.	Collected GW126AP from 30.0 to 33.0 ft bgs
	32		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt; saturated.	
	34		SP				<1	Light brown (5YR6/4) coarse to medium SAND; saturated.	
	34		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	36		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND, and fine Gravel; saturated.	Gravelly Sand
	36		SP				<1		Sand
	38							Pale yellowish brown (10YR6/2) to light brown (5Y6/4) medium to fine SAND, trace Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Grayish red (10R4/2) coarse SAND; saturated.	Collected GW1126BP from 40.0 to 43.0 ft bgs
			SP				<1	Light olive brown (5Y5/6) medium to fine SAND; saturated.	
	42		SM				<1	Light gray (N7) to dark yellowish orange (10YR6/6) fine SAND, some Silt; saturated.	Silty Sand
	44		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, some Silt; saturated.	
	46								
	48		SM				<1	Grayish orange pink (5YR7/2) fine SAND, some Silt; saturated.	Collected GW126CP from 50.0 to 53.0 ft bgs
	50								
	52		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse SAND; saturated.	Sand
	54		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	56		SP				<1	Grayish orange pink (5YR7/2) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	58								
	60		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW126DP from 60.0 to 63.0 ft bgs






The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW126

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								Collected GW126EP from 68.0 to 71.0 ft bgs
	70								End of Boring at 71 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks	
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	∇ Water Level at 16 ft bgs	
	18									
	20		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, trace fine Gravel; saturated.		
	22									
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, little fine Gravel; saturated.		
	26		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.		
	28		SP				<1	Yellowish gray (5Y7/2) coarse to medium SAND, little fine Gravel; saturated.		
	30		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND; saturated.		
	30		SP-SM				<1	Grayish orange pink (5YR7/2) coarse to medium SAND, little Silt; saturated.		
	32		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt; saturated.		
	34		SP				<1	Light brown (5YR6/4) coarse to medium SAND; saturated.		
	34		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.		
	36		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND, and fine Gravel; saturated.		Collected GW127AP from 30.0 to 33.0 ft bgs
	36		SP				<1			
	38							Pale yellowish brown (10YR6/2) to light brown (5Y6/4) medium to fine SAND, trace Silt; saturated.	Sand	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Grayish red (10R4/2) coarse SAND; saturated.	Collected GW127BP from 40.0 to 43.0 ft bgs
			SP				<1	Light olive brown (5Y5/6) medium to fine SAND; saturated.	
	42		SM				<1	Light gray (N7) to dark yellowish orange (10YR6/6) fine SAND, some Silt; saturated.	Silty Sand
	44		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, some Silt; saturated.	
	46								
	48		SM				<1	Grayish orange pink (5YR7/2) fine SAND, some Silt; saturated.	
	50								Collected GW127CP from 50.0 to 53.0 ft bgs
	52		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse SAND; saturated.	
	54		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	56		SP				<1	Grayish orange pink (5YR7/2) to grayish orange (10YR7/4) medium to fine SAND, trace Silt; saturated.	
	58								Collected GW127DP from 60.0 to 63.0 ft bgs
	60		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	






The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW127

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						
	64								
	66								
	68								
	70								Collected GW127EP from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW128

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/19/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/19/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372225.52
Total Depth (ft):	73.00	Total Depth (ft):	N/A	EASTING:	427561.43
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	12	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Grayish orange (10YR7/4) SILT; dry.	Silt
	2		SM				<1	Grayish orange (10YR7/4) fine SAND, and Silt; dry.	Silty Sand
	4		SP				<1	Light olive brown (5Y5/6) medium to fine SAND, trace Silt; moist.	Sand
	8		SP				<1	Light olive brown (5Y5/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) medium to fine SAND, trace Silt; moist.	Water Level at 12 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	Collected GW128P from 15.0 to 18.0 ft bgs
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to medium SAND, trace fine Gravel; saturated.	
	22								
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace fine Gravel; saturated.	
	26								
	28		SP				<1	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium Sand, trace fine Gravel; saturated.	Collected GW128AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Moderate yellow (5Y7/6) to moderate yellowish brown (10YR5/4) coarse to medium SAND, little Silt; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND,	
	38		SM				<1	little Silt; saturated.	Silty Sand



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40	SM					<1	Dark yellowish orange (10YR6/6) to dusky yellow (5Y6/4) coarse to medium SAND, some Silt; saturated.	Collected GW128BP from 40.0 to 43.0 ft bgs
	42	SM					<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, and Silt; saturated.	
	44	SM					<1	Dark yellowish orange (10YR6/6) to dark reddish brown (10R3/4) coarse to fine SAND, some Silt; saturated.	
	46	SM					<1	Moderate olive brown (5Y4/4) to light gray (N7) fine SAND, and Silt; saturated.	
	48	SM					<1	Dusky yellow (5Y6/4) to light olive brown (5Y5/6) medium to fine SAND, some Silt; saturated.	
	50								Collected GW128CP from 50.0 to 53.0 ft bgs
	52						<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	54	SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	56	SP-SM					<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	58	NA							Sand
	60								
									Collected GW128DU from 60.0 to 63.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW128

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62								
	64								
	66								
	68								
	70								Collected GW128EP from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to medium SAND, trace fine Gravel; saturated.	Collected GW129AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace fine Gravel; saturated.	
	26								
	28		SP				<1	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace fine Gravel; saturated.	Collected GW129AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Moderate yellow (5Y7/6) to moderate yellowish brown (10YR5/4) coarse to medium SAND, little Silt; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	38		SM				<1	Dark yellowish orange (10YR6/6) to dusky yellow (5Y6/4) coarse to medium SAND, some Silt; saturated.	Silty Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW129

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	64								
	66								
	68								
	70								Collected GW129EU and GW129EP from 70.0 to 73.0 ft bgs
	72								
	74								
	76								
	78								
	80								Collected GW129FP from 80.0 to 83.0 ft bgs
	82								End of Boring ar 83 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW131

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/24/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/24/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	P. Lamont	
Total Depth (ft):	83.00	Total Depth (ft):	N/A	NORTHING: 371676.91	
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	EASTING: 427516.38	
Depth to Water (ft):	12	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Moderate brown (5YR4/4) SILT; moist.	Silt
	1		SM				<1	Moderate brown (5YR4/4) coarse to medium SAND, some Silt; moist. Moderate brown (5YR4/4) fine SAND, and Silt; moist.	Silty Sand
	2		SM				<1		
	3		SM				<1		
	4		SP				<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	Sand
	5		SP				<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt,	Gravelly Sand
	6		SP				<1		
	7		SP				<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	Sand
	8		SP				<1	Dark yellowish orange (10YR6/6) to dusky yellow (5Y6/4) medium to fine SAND, trace Silt; moist.	
	9		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) to yellowish gray (5Y7/2) medium to fine SAND, trace Silt; saturated.	Water Level at 12 ft bgs Collected GW131P from 13.0 16.0 ft bgs
	10		SP				<1		
	11		SP				<1		
	12		SP				<1		
	13		SP				<1		
	14		SP				<1		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Collected GW131AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt, trace fine Gravel; saturated.	
	26								
	28		SP SP-SM				<1 <1	Yellowish gray (5Y7/2) coarse SAND, trace fine Gravel; saturated. Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	Collected GW131AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM SP				<1 <1	Grayish orange (10YR7/4) medium to fine SAND, some Silt; saturated.	Silty Sand Sand
	34		SP SP-SM				<1 <1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated. Pale brown (5YR5/2) coarse to fine SAND, trace Silt; saturated.	
	36		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt, trace fine Gravel; saturated. Dark yellowish orange (10YR6/6) coarse SAND, little fine Gravel; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40	SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND; saturated.	Collected GW131BU from 40.0 to 43.0 ft bgs
		SP					<1	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt; saturated.	
	42	SP					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	44	SP					<1	Light brown (5YR5/6) coarse to medium SAND; saturated.	
	46	SM					<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Silty Sand
	48	SM					<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Collected GW131CP from 50.0 to 53.0 ft bgs
	50								
	52	SP-SM					<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Sand
	54								
	56	SM					<1	Dusky yellow (5Y6/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	58	SP					<1	Light brown (5YR5/6) coarse SAND, little fine Gravel; saturated.	Sand
		SP					<1	Dusky brown (5YR2/2) medium to fine SAND, trace Silt; saturated.	
	60	SP-SM					<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Collected GW131DU from 60.0 to 63.0 ft bgs
	62	NA							



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW131

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	64								
	66								
	68								
	70								Collected GW131EU from 70.0 to 73.0 ft bgs
	72								
	74								
	76								
	78								
	80								Collected GW131FP from 80.0 to 83.0 ft bgs
	82								End of Boring at 83 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW132

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/25/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/25/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	INSPECTOR: P. Lamont	
Total Depth (ft):	53.00	Total Depth (ft):	N/A	NORTHING: 370794.19	
Sampler: Acetate Sleeve/Split Spoon		Screen Length (ft) /Slot (in):	N/A	EASTING: 427480.93	
Depth to Water (ft):	17.8	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Light brown (5YR6/4) SILT; dry.	Silt
	1		SM				<1	Light brown (5YR6/4) medium to fine SAND, some Silt; dry.	Silty Sand
	2								
	3								
	4		SM				<1	Light brown (5YR6/4) medium to fine SAND, some Silt; dry.	
	5								
	6		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, and Silt; moist.	
	7		SM				<1	Light brown (5YR6/4) medium to fine SAND, some Silt; moist.	
	8		SM				<1	Light brown (5YR6/4) fine SAND, some Silt; moist.	
	9		SM				<1	Light brown (5YR6/4) to grayish orange (10YR7/4) fine	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	26		SP				<1	Light brown (5YR6/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
	28		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.	Collected GW132AP from 30.0 to 33.0 ft bgs
	30								
	32		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little fine Gravel; saturated.	
	34		SP				<1	Moderate yellowish brown (10YR5/4) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	
	36		SP-SM				<1	Dusky yellow (5Y6/4) coarse to medium SAND, little Silt; saturated.	
	38		SP-SM				<1	Moderate yellow (5Y7/6) to yellowish gray (5Y7/2) fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP-SM				<1	Yellowish gray (5Y7/2) to dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Collected GW132BP from 40.0 to 43.0 ft bgs
			SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; saturated.	Silty Sand
	42		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	Sand
	44		SP				<1	Dusky yellow (5Y6/4) coarse to fine SAND, trace Silt; saturated.	
	46								
	48		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
			SP				<1	Pale reddish brown (10R5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW132CP from 50.0 to 53.0 ft bgs
	50								
	52		SP				<1	Moderate reddish brown (10R4/6) coarse SAND, trace Silt; saturated.	End of Boirng at 53 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PTD	Description	Remarks
	26		SP-SM				<1	Dusky yellow (5Y6/4) to moderate reddish brown (10R4/6) coarse to fine SAND, little Silt, trace fine Gravel; saturated.	
	28		SP				<1	Yellowish gray (5Y7/2) coarse SAND, trace fine Gravel; saturated.	
	30		SP-SM				<1	Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	
	32		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, some Silt; saturated.	Silty Sand
	34		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	Sand, Collected GW133AU from 30.0 to 33.0 ft bgs
	34		SP				<1	Pale brown (5YR5/2) coarse to fine SAND, trace Silt; saturated.	
	34		SP-SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	
	36		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt, trace fine Gravel; saturated.	
	38		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND, little fine Gravel; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40	SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND; saturated.	Collected GW133BP from 40.0 to 43.0 ft bgs
		SP					<1	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt; saturated.	
		SP					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	42								
	44	SP					<1	Light brown (5YR5/6) coarse to medium SAND; saturated.	
	46	SM					<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Silty Sand
	48	SM					<1	Dusky yellow (5Y6/4) to light gray (N7) medium to fine SAND, and Silt; saturated.	Collected GW133CP from 50.0 to 53.0 ft bgs
	50								
	52	SP-SM					<1	Dusky yellow (5Y6/4) medium to fine SAND, little Silt; saturated.	Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW133

Page 6 of 6

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68								
	70								Collected GW133EP from 70.0 to 73.0 ft bgs
	72								End of Boirng at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) coarse SAND, trace Silt; saturated.	Collected GW135AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Dusky yellow (5Y6/4) to light olive (10Y5/4) coarse to medium SAND, trace Silt; saturated.	Collected GW135AP from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	34								
	36		SP-SM				<1	Pale yellowish brown (10YR6/2) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	38		SP				<1	Dark yellowish orange (10YR6/6) to grayish red (10R4/2) coarse to medium SAND; saturated.	
			SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SM				<1	Moderate yellow (5Y7/6) fine SAND, some Silt; saturated.	Silty Sand, Collected GW135BP from 40.0 to 43.0 ft bgs
	42								
	44		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt, little fine Gravel; saturated.	Sand
	46								
	48		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	Collected GW135CP from 50.0 to 53.0 ft bgs
	50								
	52		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	54								
	56		SP-SM				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	58								
	60		NA						Collected GW135DU from 60.0 to 63.0 ft bgs
	62								End of Boirng at 63 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 7

BORING NO.: GW136

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/13/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/13/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	P. Lamont	
Total Depth (ft):	73.00	Total Depth (ft):	N/A	NORTHING: 371614.82	
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	EASTING: 428469.27	
Depth to Water (ft):	12	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dusky yellow (5Y6/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; dry.	Sand
	2								
	4		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt, trace coarse Sand; moist.	
	6								
	8		SP-SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10							fine SAND, little Silt; moist.	
	12	SP					<1	Yellowish gray (5Y7/2) to light brown (5YR5/6) coarse SAND, and medium to fine Gravel; saturated.	Water Level at 12 ft bgs Gravelly Sand, Collected GW136P from 12.0 to 15.0 ft bgs
	16	SP					<1	Very pale orange (10YR8/2) coarse SAND, some fine Gravel; saturated.	
	18	SP-SM					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little Silt; saturated.	Sand
	20	SP					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Collected GW136AAP from 20.0 to 23.0 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	22		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
			SP				<1	Dark yellowish orange (10YR6/6) to moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt, trace fine Gravel; saturated.	
	26		SP-SM				<1	Dusky yellow (5Y6/4) to moderate red (5R4/6) medium to fine SAND, little Silt; saturated.	
	28								
	30								Collected GW136AU from 30.0 to 33.0 ft bgs
	32		SP				<1	Moderate reddish brown (10R4/6) coarse to medium SAND, trace fine Gravel; saturated.	
			SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, some Silt; saturated.	Silty Sand
			SP				<1	Dark yellowish orange (10YR6/6) to light brown (5YR5/6)	Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW136

Page 6 of 7

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	60								Collected GW136DP from 60.0 to 63.0 ft bgs
	62								
	64								
	66								
	68								
	70								Collected GW136EU from 70.0 to 73.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW136

Page 7 of 7

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 7

BORING NO.: GW137

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/7/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/7/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	371978.13
Total Depth (ft):	73.00	Total Depth (ft):	N/A	EASTING:	428505.64
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	12	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Dusky yellow (5Y6/4) to dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; dry.	Sand
	2								
	4		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; moist.	
	6								
	8		SP-SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) medium to	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10							fine SAND, little Silt; moist.	
	12	SP					<1	Yellowish gray (5Y7/2) to light brown (5YR5/6) coarse SAND, and medium to fine Gravel; saturated.	Water Level at 12 ft bgs Gravelly Sand, Collected GW137P from 12.0 to 15.0 ft bgs
	14								
	16	SP					<1	Very pale orange (10YR8/2) coarse SAND, some fine Gravel; saturated.	
	18	SP-SM					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, little Silt; saturated.	Sand
	20	SP					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	Collected GW137AAP from 20.0 to 23.0 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	22		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	24		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
			SP				<1	Dark yellowish orange (10YR6/6) to moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt, trace fine Gravel; saturated.	
	26		SP-SM				<1	Dusky yellow (5Y6/4) to moderate red (5R4/6) medium to fine SAND, little Silt; saturated.	
	28								
	30								Collected GW137AP from 30.0 to 33.0 ft bgs
	32		SP				<1	Moderate reddish brown (10R4/6) coarse to medium SAND, trace fine Gravel; saturated.	
			SM				<1	Dusky yellow (5Y6/4) medium to fine SAND, some Silt; saturated.	Silty Sand
			SP				<1	Dark yellowish orange (10YR6/6) to light brown (5YR5/6)	Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW137

Page 6 of 7

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	60								Collected GW137DP from 60.0 to 63.0 ft bgs
	62								
	64								
	66								
	68								
	70								Collected GW137EU from 70.0 to 73.0 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW137

Page 7 of 7

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: GW138

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/7/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/7/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372676.22
Total Depth (ft):	63.00	Total Depth (ft):	N/A	EASTING:	428495.76
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	11	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP-SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand
	6								
	8		SP-SM				<1	Light olive gray (5Y5/2) to light olive brown (5Y5/6) medium to fine SAND, little Silt; moist.	
	10		SP				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, some medium to fine Gravel; moist.	Gravelly Sand Water Level at 11 ft bgs
	12		SP-SM				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, little Silt; wet.	Sand
	12		SP				<1	Light olive brown (5Y5/6) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.	Collected GW138P from 12.0 to 15.0 ft bgs
	14		SP				<1	Light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW138

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40								Collected GW138BP from 40.0 to 43.0 ft bgs
	42								
	44								
	46								
	48								
	50								Collected GW138CU and GW138DUPP from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60								Collected GW138DU from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: GW139

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/8/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/8/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING: 373173.51	
Total Depth (ft):	63.00	Total Depth (ft):	N/A	EASTING: 428344.61	
Sampler: Acetate Sleeve/Split Spoon		Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Water (ft):	11	Depth to Water (ft):	N/A	TOC ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP-SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand
	6								
	8		SP-SM				<1	Light olive gray (5Y5/2) to light olive brown (5Y5/6) medium to fine SAND, little Silt; moist.	
	10		SP				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, some medium to fine Gravel; moist.	Gravelly Sand Water Level at 11 ft bgs
	12		SP-SM				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, little Silt; wet.	Sand
	14		SP				<1	Light olive brown (5Y5/6) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.	Collected GW139P from 12.0 to 15.0 ft bgs
			SP				<1	Light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW139

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		NA						Collected GW139BP from 40.0 to 43.0 ft bgs
	42								
	44								
	46								
	48								
	50		NA						Collected GW139CP from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60		NA						Collected GW139DU from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 6

BORING NO.: GW143

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/1/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/1/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	INSPECTOR: P. Lamont	
Total Depth (ft):	73.00	Total Depth (ft):	N/A	NORTHING: 371811.86	
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	EASTING: 429079.76	
Depth to Water (ft):	9	Depth to Water (ft):	N/A	GROUND ELEVATION (ft): N/A	
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION (ft): N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt, trace fine Gravel; dry.	Silty Sand
	2								
	4		SP-SM SP				<1 <1	Light brown (5YR5/6) coarse to medium SAND, little Silt; dry. Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt, trace medium Gravel; moist.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand Water Level at 9



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
			SP				<1	Moderate olive brown (5Y4/4) to moderate reddish brown (10R4/6) coarse to medium SAND; saturated.	
			SM				<1	Dark yellowish orange (10YR6/6) to moderate yellow (5Y7/6) fine SAND, and Silt; saturated.	Silty Sand
			SP-SM				<1		Sand
	38		SM SM				<1 <1	Medium light gray (N6) coarse to medium SAND, little Silt; saturated. Moderate yellow (5Y7/6) to medium light gray fine SAND, and Silt; saturated. Dusky yellow (5Y6/4) medium to fine SAND, and Silt; saturated.	Silty Sand
	40		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, and Silt, trace fine Gravel; saturated.	Collected GW143BU from 40.0 to 43.0 ft bgs
	42								
	44		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, and Silt; saturated.	
	46								
	48		SP				<1	Light brown (5YR5/6) to moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt; saturated.	Sand
			SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; saturated.	Silty Sand



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW143

Page 6 of 6

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	64								
	66								
	68								
	70								Collected GW143EP from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: GW144

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 9/3/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/3/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	371397.74
Total Depth (ft):	63.00	Total Depth (ft):	N/A	EASTING:	429310.88
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	9	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt, trace fine Gravel; dry.	Silty Sand
	2								
	4		SP-SM SP				<1 <1	Light brown (5YR5/6) coarse to medium SAND, little Silt; dry. Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt, trace medium Gravel; moist.	Sand
	6								
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand Water Level at 9



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PTD	Description	Remarks
			SP				<1	Moderate olive brown (5Y4/4) to moderate reddish brown (10R4/6) coarse to medium SAND; saturated.	
			SM				<1	Dark yellowish orange (10YR6/6) to moderate yellow	Silty Sand
			SP-SM				<1	(5Y7/6) fine SAND, and Silt; saturated.	Sand
	38		SM SM				<1 <1	Medium light gray (N6) coarse to medium SAND, little Silt; saturated. Moderate yellow (5Y7/6) to medium light gray fine SAND, and Silt; saturated. Dusky yellow (5Y6/4) medium to fine SAND, and Silt; saturated.	Silty Sand
	40		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, and Silt, trace fine Gravel; saturated.	Collected GW144BP from 40.0 to 43.0 ft bgs
	42								
	44		SM				<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, and Silt; saturated.	
	46								
	48		SP				<1	Light brown (5YR5/6) to moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt; saturated.	Sand
			SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; saturated.	Silty Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW144

Page 5 of 5

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	50								
	52		SM				<1	Yellowish gray (5Y7/2) to moderate yellow (5Y7/6) medium to fine SAND, some Silt; saturated.	Collected GW144CU from 50.0 to 53.0 ft bgs
	54		NA						
	56								
	58								
	60								Collected GW144DP from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; saturated.	
	18		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse SAND; saturated.	
	20		SP				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, little medium to fine Gravel; saturated.	Collected GW145AA from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP-SM				<1	Dusky yellow (5Y6/4) to moderate yellowish brown (10YR5/4) coarse to medium SAND, little Silt; saturated.	Collected GW145A from 30.0 to 33.0 ft bgs
	30								
	32		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, some Silt; saturated.	Silty Sand
	34								
	36		SM				<1	Dark yellowish orange (10YR6/6) fine SAND, some Silt; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	38		SP				<1	Moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt; saturated.	Sand
	40		SP				<1	Moderate yellowish brown (10YR5/4) to moderate reddish brown (10R4/6) coarse to medium SAND; saturated.	
	42		SP				<1	Moderate yellow (5Y7/6) medium to fine SAND; saturated.	
	44		SP				<1	Dusky yellow (5Y6/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
	46								
	48		SP-SM				<1	Moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	50		NA						Collected GW145C from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60								



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW145

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		NA						Collected GW145D and GW145DUP from 60.0 to 63.0 ft bgs
	64								
	66								
	68								
	70		NA						Collected GW145E from 70.0 to 73.0 ft bgs
	72								End of Boring at 73 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; saturated.	
	18		SP				<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse SAND; saturated.	
	20		SP				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, little medium to fine Gravel; saturated.	Collected GW146AAP from 20.0 to 23.0 ft bgs
	22								
	24		SP				<1	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	
	26								
	28		SP-SM				<1	Dusky yellow (5Y6/4) to moderate yellowish brown (10YR5/4) coarse to medium SAND, little Silt; saturated.	Collected GW146AP from 30.0 to 33.0 ft bgs
	30								
	32		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, some Silt; saturated.	Silty Sand
	34								
	36		SM				<1	Dark yellowish orange (10YR6/6) fine SAND, some Silt; saturated.	
	38		SP				<1	Moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt; saturated.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW146

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP				<1	Moderate yellowish brown (10YR5/4) to moderate reddish brown (10R4/6) coarse to medium SAND; saturated.	Collected GW146BP from 40.0 to 43.0 ft bgs
	42		SP				<1	Moderate yellow (5Y7/6) medium to fine SAND; saturated.	
	44		SP				<1	Dusky yellow (5Y6/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
	48		SP-SM				<1	Moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	50		NA						Collected GW146CP from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60		NA						Collected GW146DU from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: GW147

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/4/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 9/23/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372520.27
Total Depth (ft):	63.00	Total Depth (ft):	N/A	EASTING:	429515.03
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	9.8	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML				<1	Dark yellowish orange (10YR6/6) SILT, trace fine Sand; dry.	Silt
	2		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	Sand
	4		SP				<1	Grayish orange (10YR7/4) coarse to medium SAND, trace Silt; moist.	
	8		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND; wet.	
	10		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, little medium Gravel; saturated.	Water Level at 9.8 ft bgs
	12		SP				<1	Grayish orange (10YR7/4) coarse to medium SAND, little medium Gravel; saturated.	Collected GW147U from 9.0 to 12.0 ft bgs
	14		SP				<1	Dark yellowish orange (10YR6/6) coarse SAND; saturated.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW147

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		NA						Collected GW147BP from 40.0 to 43.0 ft bgs
	42								
	44								
	46								
	48								
	50		NA						Collected GW147CP from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60		NA						Collected GW147DU from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: GW148

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/4/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 8/4/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	374247.68
Total Depth (ft):	63.00	Total Depth (ft):	N/A	EASTING:	428956.56
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	6	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; dry.	Sand
	2								
	4		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	Water Level at 6 ft bgs ∇
	6		SM				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, some Silt; saturated.	Silty Sand
	8		SP-SM				<1	Light brown (5YR6/4) medium to fine SAND, little Silt; saturated.	Sand, Collected GW148 from 8.0 to 11.0 ft bgs
	10		SP				<1	Light brown (5YR6/4) coarse to medium SAND, trace Silt; saturated.	
	12		SM				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, and Silt; saturated.	Silty Sand
	14		SP				<1	Grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	Sand



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	20		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; saturated.	Collected GW148AA from 20.0 to 30.0 ft bgs
	22		SP-SM				<1	Moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	24		SP-SM				<1	Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	
	26								
	28		SP				<1	Grayish orange pink (5YR7/2) medium to fine SAND, trace Silt; saturated.	Collected GW148A from 30.0 to 33.0 ft bgs
	30								
	32		SP-SM				<1	Dusky yellow (5Y6/4) to light gray (N6) coarse to fine SAND, little Silt; saturated.	
	34								
	36		SP				<1	Grayish orange (10YR7/4) coarse to fine SAND; saturated.	
	38		SP				<1	Dusky yellow (5Y6/4) fine SAND; saturated.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW148

Page 3 of 3

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP-SM				<1	Dusky yellow (5Y6/4) fine SAND; saturated.	Collected GW148B and GW148DUP from 40.0 to 43.0 ft bgs,
	42		NA						
	44								
	46								
	48								
	50								Collected GW148C from 50.0 to 53.0 ft bgs
	52								
	54								
	56								
	58								
	60		NA						Collected GW148D from 60.0 to 63.0 ft bgs
	62								End of Boring at 63 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW149

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/5/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.




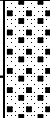





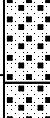


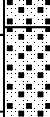


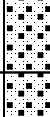
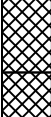
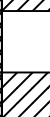
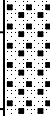


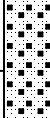


DATE FINISHED: 8/6/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373295.07
Total Depth (ft):	67.00	Total Depth (ft):	N/A	EASTING:	429685.21
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.6	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) ASPHALT	Asphalt
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	4		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; dry.	
	6		SP-SM				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, little Silt; moist.	
	8		SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14		SP				<1		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, and fine Gravel; wet.	Gravelly Sand, Collected GW149 from 16.0 to 19.0 ft bgs ∇ Water Level at 17.6 ft bgs
	18		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, and fine Gravel; saturated.	
	20		SP				N/A	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt, little coarse to medium Gravel; saturated.	Sand
	22								
	24		SP				N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	26		SP				N/A	Very light gray (N7) to grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	
	28		SP				N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	Collected GW149A from 30.0 to 33.0 ft bgs
	30		SP				N/A	Moderate yellowish brown (5/4) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	32		SM				N/A	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, some Silt; saturated.	Silty Sand
	34		SM				N/A	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt; saturated.	
	36		SP				N/A	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW149

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		SP-SM				<1	Grayish orange (10YR7/4) fine SAND, little Silt; saturated.	Collected GW149D from 60.0 to 63.0 ft bgs
	64		SP-SM				<1	Pale yellowish brown (10YR6/2) to light brown (5YR6/4) fine SAND, little Silt; saturated.	
	66								End of Boring at 67 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW150

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/2/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.




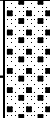





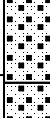


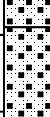


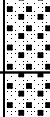
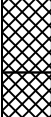
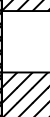
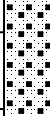


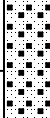


DATE FINISHED: 8/2/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	371919.05
Total Depth (ft):	70.00	Total Depth (ft):	N/A	EASTING:	430436.90
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.6	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) ASPHALT; dry.	Asphalt
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	4		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; dry.	
	6		SP-SM				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, little Silt; moist.	
	8		SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14		SP				<1		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16	SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND, and fine Gravel; wet.	Gravelly Sand, Collected GW150 from 16.0 to 19.0 ft bgs Water Level at 17.6 ft bgs
	18	SP					<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, and fine Gravel; saturated.	
	20	SP					N/A	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt, little coarse to medium Gravel; saturated.	Sand
	22								
	24	SP					N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	26	SP					N/A	Very light gray (N7) to grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	
	28	SP					N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	30	SP					N/A	Moderate yellowish brown (5/4) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	32	SM					N/A	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, some Silt; saturated.	Silty Sand, Collected GW150A from 30.0 to 33.0 ft bgs
	34	SM					N/A	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt; saturated.	
	36	SP					N/A	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW150

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		SP-SM				<1	Grayish orange (10YR7/4) fine SAND, little Silt; saturated.	Collected GW150D from 60.0 to 63.0 ft bgs
	64		SP-SM				<1	Pale yellowish brown (10YR6/2) to light brown (5YR6/4) fine SAND, little Silt; saturated.	Collected GW150E from 67.0 to 70.0 ft bgs
	66		NA						
	68								
	70								End of Boring at 70 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW151

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 8/6/2010

DRILLING CONTRACTOR: Summit Drilling Co., Inc.




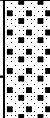





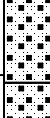


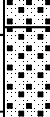


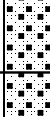
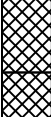
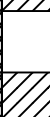
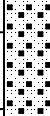


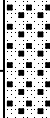


DATE FINISHED: 8/6/2010

DRILLING METHOD: Direct Push

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372780.59
Total Depth (ft):	67.00	Total Depth (ft):	N/A	EASTING:	429862.53
Sampler:	Acetate Sleeve/Split Spoon	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.6	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) ASPHALT; dry.	Asphalt
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	4		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; dry.	
	6		SP-SM				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, little Silt; moist.	
	8		SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14								



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16	SP					<1	Dusky yellow (5Y6/4) coarse to medium SAND, and fine Gravel; wet.	Gravelly Sand, Collected GW151 from 16.0 to 19.0 ft bgs \sphericalangle Water Level at 17.6 ft bgs
	18	SP					<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, and fine Gravel; saturated.	
	20	SP					N/A	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt, little coarse to medium Gravel; saturated.	Sand
	22								
	24	SP					N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	26	SP					N/A	Very light gray (N7) to grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	
	28	SP					N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	30	SP					N/A	Moderate yellowish brown (5/4) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	32	SM					N/A	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, some Silt; saturated.	Silty Sand, Collected GW151A from 30.0 to 33.0 ft bgs
	34	SM					N/A	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt; saturated.	
	36	SP					N/A	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: GW151

Page 4 of 4

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	62		SP-SM				<1	Grayish orange (10YR7/4) fine SAND, little Silt; saturated.	
	64		SP-SM				<1	Pale yellowish brown (10YR6/2) to light brown (5YR6/4) fine SAND, little Silt; saturated.	
	66								End of Boring at 67 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	76		SP-SM			10	<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) fine SAND, little Silt; saturated.	Collected GW201F from 80.0 to 81.6 ft bgs
	78					15			
	80					13			
	82					15			
	84		SP-SM				<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) fine SAND, little Silt; saturated.	Collected GW201H from 100.0 to 102.0 ft bgs
	86								
	88								
	90								
	92								
	94								
	96		SM			12	<1	Dark gray (N3) fine SAND, and Clayey Silt; saturated.	Silty Sand End of Boring at 102 ft bgs
	98					15			
	100					19			
	102					16			



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 6

BORING NO.: GW202

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 6/22/2011

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/24/2011

DRILLING METHOD: Mud Rotary

DRILLER: J. Logel

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373151.86
Total Depth (ft):	150.00	Total Depth (ft):	N/A	EASTING:	428387.99
Sampler:	Split Spoon/Drill Cuttings	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	11	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; dry.	Silty Sand
	2								
	4		SP-SM				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand
	6								
	8		SP-SM				<1	Light olive gray (5Y5/2) to light olive brown (5Y5/6) medium to fine SAND, little Silt; moist.	
	10		SP				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, some medium to fine Gravel; moist.	Gravelly Sand Water Level at 11 ft bgs ∇
	12		SP-SM				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) coarse to meduim SAND, little Silt; wet.	Sand
	14		SP				<1	Light olive brown (5Y5/6) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.	
	16		SP				<1	Light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	
			SP				<1	Light olive brown (5Y5/6) coarse SAND, trace Silt; saturated.	
			SP				<1	Light olive brown (5Y5/6) coarse to fine SAND; saturated.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: GW202

Page 6 of 6

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	128		SP-SM			13	0	Moderate yellowish brown (10YR5/4) to olive gray (5Y4/1) medium to fine SAND, little Silt; saturated.	Sand, Collected GW202F from 128.0 to 129.1 ft bgs
						19			
	130					15			
						24			
	132								
	134								
	136								
	138		OL			20	0	Olive black (5Y2/1) Organic SILT (non plastic); saturated.	Organic Silt, Collected GW202G from 138.0 to 139.5 ft bgs
						22			
	140					24			
						29			
	142								Collected GW202H from 148.0 to 148.5 ft bgs
	144								Collected GW202I from 148.5 to 150.0 ft bgs
	146								
	148		SM			20	0	Olive black (5Y2/1) medium to fine SAND, and Silt; saturated	Silty Sand
		OL				29	0		
						34			Organic Silt
	150					52		Olive black (5Y2/1) Organic SILT (low plasticity); saturated.	End of Boring at 150 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 7

BORING NO.: GW203

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 6/15/2011

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/21/2011

DRILLING METHOD: Mud Rotary

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	373636.69
Total Depth (ft):	150.00	Total Depth (ft):	N/A	EASTING:	429503.42
Sampler:	Split Spoon/Drill Cuttings	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	5	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES: Lithology from 0 to 70 ft bgs based on log for MW06
Lithology from 78 to 150 ft bgs based on log for GW206

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM			1	<1	Dark yellowish brown (10YR4/2) to dusky yellowish brown (10YR2/2) fine SAND, and Silt; moist.	Silty Sand
	2								
	2								
	2								
	4								Water Level at 5 ft bgs ▽
	6		SP			4	N/A	Moderate yellowish brown (10YR5/4) medium to fine SAND, and coarse Gravel; saturated.	Gravelly Sand
	7								
	10								
	12								
	10		SP			5	N/A	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt, trace coarse to fine Gravel; saturated.	Sand
	3								
	5								
	9								
	12								
	14								
						3	N/A		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	40		SP			4	N/A	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) fine SAND; saturated.	
	42		SP			12	N/A	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) fine SAND; saturated.	
	46		SP			4	N/A	Pale yellowish brown (10YR6/2) coarse to medium SAND; wet.	
	46		SP			8	N/A	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) fine SAND; wet.	Collected GW203C from 46.0 to 50.0 ft bgs
	50		SP			5	<1	Pale yellowish brown (10YR6/2) medium to fine SAND; saturated.	
	52					18			
	56		SP			10	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND; wet.	Collected GW203D from 56.0 to 60.0 ft bgs, and from 59.0 to 63.0 ft bgs
	58					18			
	60		SP			3	<1	Pale yellowish brown (10YR6/2) medium to fine SAND; wet.	
	62		SP-SM			16	<1	Light brown (5YR5/6) to pale yellowish brown (10YR6/2) fine SAND, little Silt; wet.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: GW203

Page 6 of 7

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	110		ML			10 20 22 28	<1	Olive black (5Y2/1) Clayey SILT, trace fine Sand; moist.	
	112								
	114								
	116								
	118								
	120								
	122								
	124								
	126								
	128								
	130								
	132								
	134								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: GW204

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 6/30/2011

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/30/2011

DRILLING METHOD: Mud Rotary

DRILLER: J. Logel

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	372482.05
Total Depth (ft):	79.00	Total Depth (ft):	N/A	EASTING:	431076.40
Sampler:	Split Spoon/Drill Cuttings	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	17.6	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) Asphalt; dry.	Asphalt
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	4		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; dry.	
	8		SP				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, little Silt; moist.	
	10		SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14		SP				<1		
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, and fine Gravel; wet.	Gravelly Sand
	18		SP				<1	Pale yellowish brown (10YR6/2) coarse to medium SAND, and fine Gravel; saturated.	Water Level at 17.6 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	20		SP				N/A	Grayish orange pink (5YR7/2) coarse to fine SAND, trace Silt, little coarse to medium Gravel; saturated.	Sand
	22								
	24		SP				N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	26		SP				N/A	Very light gray (N7) to grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	
	28		SP				N/A	Very light gray (N7) coarse to medium SAND, trace Silt; saturated.	
	30		SP				N/A	Moderate yellowish brown (5/4) to dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	32		SM				N/A	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) coarse to medium SAND, some Silt; saturated.	Silty Sand
	34		SM				N/A	Dark yellowish orange (10YR6/6) medium to fine SAND, some Silt; saturated.	
	36		SP				N/A	Dark yellowish orange (10YR6/6) to light olive brown (5Y5/6) coarse to medium SAND, trace Silt; saturated.	Sand
	38								
	40		SP-SM				<1	Light olive brown (5Y5/6) to dark yellowish orange (10YR6/6) fine SAND, little Silt; saturated.	
	42		SP-SM				<1	Very light gray (N7) fine SAND, little Silt; saturated.	
	44		SP-SM				<1	Dark yellowish orange (10YR6/6) fine SAND, little Silt; saturated.	
	46								
	48		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND; saturated.	
			SP				<1		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	50							Dark yellowish orange (10YR6/6) coarse SAND; saturated.	
	52	SP					<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	
	54								
	56	SP					<1	Grayish orange (10YR7/4) coarse to fine SAND, trace Silt; saturated.	
	58								
	60	SP-SM					<1	Grayish orange (10YR7/4) fine SAND, little Silt; saturated.	
	62								
	64	SP-SM					<1	Pale yellowish brown (10YR6/2) to light brown (5YR6/4) fine SAND, little Silt; saturated.	
	66								
	68	SP				15 22 24 25	<1	Olive gray (5Y4/1) fine SAND, trace Silt; moist.	Collected GW204R from 67.0 to 68.1 ft bgs
	70								
	72								
	74								
	76								Collected GW204S from 77.0 to 78.35 ft bgs
	78	SM				11 15 18 32	<1	Olive gray (5Y4/1) fine SAND, some Clayey Silt; moist.	Silty Sand End of Boring at 79 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: GW205

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 6/14/2011

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/15/2011

DRILLING METHOD: Mud Rotary

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	371592.33
Total Depth (ft):	80.00	Total Depth (ft):	N/A	EASTING:	430770.92
Sampler:	Split Spoon/Drill Cuttings	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	15	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES: Lithology from 0 to 67 ft bgs based on log for MW09.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML			2	<1	Dark yellowish brown (10YR4/2) SILT, little fine Sand; moist.	Silt
	2		SP			3	<1	Dark yellowish orange (10YR6/6) medium to fine SAND; moist.	Sand
	6		SP-SM			3	<1	Moderate yellowish brown (10YR5/4) to grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	
	10		SP			7	<1	Yellowish gray (5Y7/2) medium to fine SAND, trace Silt; moist.	
	16		SP			12	<1	Pale yellowish brown (10YR6/2) to yellowish gray (5Y7/2) coarse to fine SAND, little fine Gravel, trace Silt; wet.	Water Level at 15 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	18					20			
	20		SP			5	<1	Pale yellowish brown (10YR6/2) to yellowish gray (5Y7/2) coarse to fine SAND, and coarse to fine Gravel; wet.	Gravelly Sand
					8				
					15				
	22				17				
	24								
	26		GP			3	<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) fine GRAVEL, and coarse to fine Sand; wet.	Sandy Gravel
					4				
					4				
	28				6				
	30		SP			20	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, and fine Gravel; wet.	Gravelly Sand
					24				
	32		GP			26	<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) coarse to fine GRAVEL, some fine Sand; saturated.	Sandy Gravel
					29				
	34								
	36		SP			3	<1	Pale yellowish brown (10YR6/2) to moderate yellowish brown (10YR5/4) coarse to fine SAND, and fine Gravel; wet.	Gravelly Sand
					3				
					4				
			SP			9	<1	Pale yellowish brown (10YR6/2) to light gray (N7) medium to fine SAND; wet.	Sand, Collected GW205B from 37.5 to 40.0 ft bgs
	38								
	40		SP			12	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, some fine Gravel; wet.	Gravelly Sand
					16				
					25				
	42		SP-SM			39	<1	Dark yellowish orange (10YR6/6) to light brown (5YR5/6)	Sand



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	44							coarse SAND, little Silt; saturated.	
	46		SP			8	<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, some fine Gravel; saturated.	Gravelly Sand
	46		SP-SM			7	<1	Light gray (N7) coarse to fine SAND, little Clayey Silt; saturated.	Sand, Collected GW205C from 47.5 to 50.0 ft bgs
	48					8			
	50		SP			2	<1	Pale yellowish brown (10YR6/2) to light gray (N7) fine SAND, trace Silt, trace coarse to fine Gravel; saturated.	
	50					2			
	50					3			
	50					4			
	52								
	54								
	56		SP			3	<1	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, trace fine Gravel; saturated.	Collected GW205D from 57.5 to 60.0 ft bgs
	56					4			
	56					7			
	56					8			
	58								
	60		SP			2	<1	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND; saturated.	
	60					3			
	60					5			
	60					7			
	62								
	64								
	66		SP			8	<1	Pale yellowish brown (10YR6/2) to medium light gray (N6) coarse to fine SAND, trace Silt; saturated.	
	66					4			
	66					8			
	66					12			



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 6

BORING NO.: GW206

WELL NO.: N/A

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K0

PROJECT: Joan's Cleaners

DATE STARTED: 6/27/2011

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 6/29/2011

DRILLING METHOD: Mud Rotary

DRILLER: J. Logel

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	N/A	NORTHING:	374072.13
Total Depth (ft):	150.00	Total Depth (ft):	N/A	EASTING:	430351.72
Sampler:	Split Spoon/Drill Cuttings	Screen Length (ft) /Slot (in):	N/A	GROUND ELEVATION (ft):	N/A
Depth to Water (ft):	38	Depth to Water (ft):	N/A	TOC ELEVATION (ft):	N/A
Depth to Rock (ft):	N/A	Permit No.:	N/A		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT				<1	Dark gray (N3) ASPHALT	Asphalt
	2		SP-SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	4		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; dry.	
	8		SP				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, little Silt; moist.	
	10		SP				<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	12		SP				<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt; wet.	
	14		SP				<1		
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, and fine Gravel; wet.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	46		SP-SM				0	Moderate yellowish brown (10YR5/4) to light brown (5YR5/6) coarse to fine SAND, little Silt; saturated.	Collected GW206B from 58.0 to 59.5.0 ft bgs
	48								
	50								
	52								
	54		SM			6 12 13 14	0	Olive gray (5Y4/1) fine SAND, and Silt; saturated.	Silty Sand,
	56								
	58								
	60								
	62		CL			4 5 7 10	0	Olive gray (5Y4/1) Silty CLAY, some fine Sand; saturated.	Sandy Silty Clay, Collected GW206C from 68.0 to 70.0 ft bgs
	64								
	66								
	68								
	70								
	72								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K0

BORING NO.: GW206

Page 5 of 6

WELL NO.: N/A

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks	
	100	ML				28		Olive gray (5Y4/1) Clayey SILT, little fine Sand; saturated.	Clayey Silt, Collected GW206G from 108.0 to 109.4 ft bgs	
	102									
	104									
	106									
	108									
	108						19			0
	108						30			
	108						42			
	108						57			
	110									
	112	ML						Olive black (5Y2/1) Clayey SILT, trace fine Sand; moist.	Collected GW206H from 118.0 to 120 ft bgs	
	114									
	116									
	118									
	118						10			0
	118						20			
	118						22			
	118						28			
	120									
	122									
	124									
	126									

APPENDIX E
Monitoring Well Installation Documents

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200152 Owner's Well Number: MW-01

Well Completion Date: <u>1/10/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.38</u>
Total Depth of Well to the nearest 1/2 foot:	<u>28.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>18.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>14.70</u>
Yield (gallons per minute):	<u>2</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>28 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection

Name of Facility: Joan's Cleaners

Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey

Case Number(s): SPR #289711 UST# (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200152
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW01

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°44'05.9"W Latitude: North 39°51'11.3"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 371505.7 East 426163.4

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 113.48

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)


On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER

(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200153 Owner's Well Number: MW-02

Well Completion Date: <u>1/10/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.33</u>
Total Depth of Well to the nearest 1/2 foot:	<u>25.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>15.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>16.10</u>
Yield (gallons per minute):	<u>2.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>40 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR #289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200153
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW02

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°44'01.3"W Latitude: North 39°51'12.5"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 371624.6 East 426519.1

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.11

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200155 Owner's Well Number: MW-03

Well Completion Date: <u>1/11/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.46</u>
Total Depth of Well to the nearest 1/2 foot:	<u>68.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>58.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>16.95</u>
Yield (gallons per minute):	<u>2.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>30 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection

Name of Facility: Joan's Cleaners

Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey

Case Number(s): SPR #289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200155
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW03

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'56.1"W Latitude: North 39°51'26.5"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373039.9 East 426929.5

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 112.31

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL


PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12
DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200179 Owner's Well Number: MW-04

Well Completion Date: <u>2/1/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.43</u>
Total Depth of Well to the nearest 1/2 foot:	<u>67.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>57.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>7.05</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>35 minutes</u>


Authentication

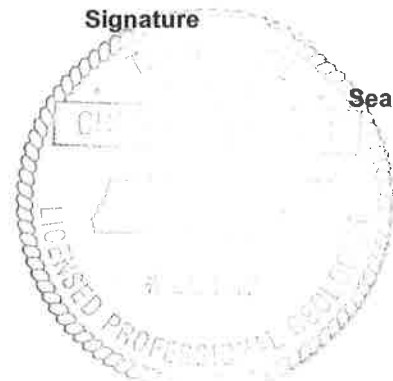
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature


Seal

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200179
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW04

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'40.5"W Latitude: North 39°51'32.0"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373602.7 East 428149.4

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 100.49

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



3/28/12

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200180 Owner's Well Number: MW-05

Well Completion Date: <u>1/31/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.39</u>
Total Depth of Well to the nearest 1/2 foot:	<u>68.5</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>58.5</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>5.25</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>33 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200180
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW05

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'29.8"W Latitude: North 39°51'39.7"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 374371.4 East 428979.3

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 93.30

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200162 Owner's Well Number: MW-06

Well Completion Date: <u>1/23/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.22</u>
Total Depth of Well to the nearest 1/2 foot:	<u>68.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>58.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>3.50</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>30 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection

Name of Facility: Joan's Cleaners

Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey

Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200162
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW06

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'22.0"W Latitude: North 39°51'31.9"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373579.4 East 429586.98

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 91.77

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

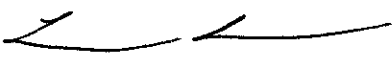
On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



3/28/12

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200163 Owner's Well Number: MW-07

Well Completion Date: <u>1/19/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.27</u>
Total Depth of Well to the nearest 1/2 foot:	<u>139.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>129.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>4.70</u>
Yield (gallons per minute):	<u>2.0</u>
Development Technique (specify):	<u>Air Lift</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>33 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.

C. Watt
Signature



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200163
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW07

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'14.3"W Latitude: North 39°51'26.9"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373076.5 East 430185.2

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 94.16

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200167 Owner's Well Number: MW-08

Well Completion Date: <u>1/16/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.22</u>
Total Depth of Well to the nearest 1/2 foot:	<u>68.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>58.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>6.70</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>40 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)


Signature

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection

Name of Facility: Joan's Cleaners

Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey

Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200167

(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW08

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'03.4"W Latitude: North 39°51'20.9"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 372466.5 East 431036.5

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 92.76

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200168 Owner's Well Number: MW-09

Well Completion Date: <u>1/30/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.37</u>
Total Depth of Well to the nearest 1/2 foot:	<u>64.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>54.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>13.14</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>26 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)


Signature

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200168
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW09

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'06.8"W Latitude: North 39°51'12.4"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 371603.7 East 430767.3

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 101.24

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200172 Owner's Well Number: MW-10

Well Completion Date: <u>1/12/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.43</u>
Total Depth of Well to the nearest 1/2 foot:	<u>48.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>38.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (Inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>8.8</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>33 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature



MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200174 Owner's Well Number: MW-11

Well Completion Date: <u>1/13/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.20</u>
Total Depth of Well to the nearest 1/2 foot:	<u>34.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>24.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>10.95</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>30 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.


Signature



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200174
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW11

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'53.2"W Latitude: North 39°51'12.9"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 371676.1 East 427153.3

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 108.04

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

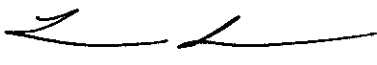
On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



3/28/12

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200181 Owner's Well Number: MW-12

Well Completion Date: <u>1/27/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.41</u>
Total Depth of Well to the nearest 1/2 foot:	<u>43.5</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>33.5</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>4.0</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>40 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200181
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW12

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'48.3"W Latitude: North 39°51'18.7"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 372256.3 East 427536.6

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 106.45

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

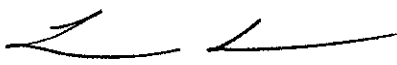
On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12
DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200182 Owner's Well Number: MW-13

Well Completion Date: <u>1/24/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.42</u>
Total Depth of Well to the nearest 1/2 foot:	<u>98.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>88.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>4.10</u>
Yield (gallons per minute):	<u>4.0</u>
Development Technique (specify):	<u>Air Lift</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>20 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)
05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200182
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW13

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'39.1"W Latitude: North 39°51'26.1"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373004.2 East 428257.5

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 100.37

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200183 Owner's Well Number: MW-14

Well Completion Date: <u>1/13/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.38</u>
Total Depth of Well to the nearest 1/2 foot:	<u>69.0</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>59.0</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>6.65</u>
Yield (gallons per minute):	<u>5.50</u>
Development Technique (specify):	<u>Air Lift</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>10 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200183
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW14

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'38.0"W Latitude: North 39°51'27.5"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 373140.1 East 428340.1

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 100.94

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

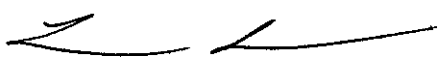
On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



3/28/12

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200194 Owner's Well Number: MW-15

Well Completion Date: <u>2/2/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.29</u>
Total Depth of Well to the nearest 1/2 foot:	<u>61.50</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>51.50</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>6.00</u>
Yield (gallons per minute):	<u>1.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>40 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners
Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey
Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200194
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW15

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'22.5"W Latitude: North 39°51'20.1"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 372390.9 East 429547.1

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 95.23

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection
Name of Facility: Joan's Cleaners.
Location: Tabernacle, New Jersey
UST Registration No.: NA BUST case No.: NA

CERTIFICATION

Well Permit Number: E201200198 Owner's Well Number: MW-16

Well Completion Date: <u>1/26/2012</u>	Lithologic Log: <u>Attached</u>
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	<u>0.43</u>
Total Depth of Well to the nearest 1/2 foot:	<u>53.50</u>
Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot):	<u>43.50</u>
Screen Length (or length of open hole) in feet:	<u>10</u>
Screen or Slot Size:	<u>.010</u>
Screen or Slot Material:	<u>Sch. 40 PVC</u>
Casing Material: (PVC, Steel or Other-Specify)	<u>Sch. 40 PVC</u>
Casing Diameter (inches):	<u>2</u>
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	<u>4.80</u>
Yield (gallons per minute):	<u>2.0</u>
Development Technique (specify):	<u>Submersible Pump</u>
Length of Time Well is Developed/Pumped or Bailed:	<u>15 minutes</u>

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Christopher Watt
Name (Type or Print)


Signature

05197
Certification or License No.



MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: New Jersey Department of Environmental Protection

Name of Facility: Joan's Cleaners

Location: 1529 Route 206, Tabernacle Township, Burlington County, New Jersey

Case Number(s): SPR # 289711 UST# _____ (UST #, ISRA #, Incident #, or EPA #)

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: E201200198
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW16

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 74°43'28.5"W Latitude: North 39°51'14.3"N

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 371804.6 East 429079.7

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 98.28

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

O On N.G.S. Benchmark BC-08 (PID AB8727), NAVD 88 ELEV. 99.56 Feet (from OPUS using local CORS Stations)

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

3/28/12

DATE

MICHAEL F. BURNS, PLS NJ LAND SURVEYOR LICENSE # 34841
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

MASER CONSULTING P.A., 100 AMERICAN METRO BOULEVARD, SUITE 152, HAMILTON, NJ, 08619, 609-587-8200
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 1529 Route 206

County: Burlington Municipality: Tabernacle Twp Lot: 5 Block: 320

Easting (X): 426513 Northing (Y): 371661
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW01

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 30

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

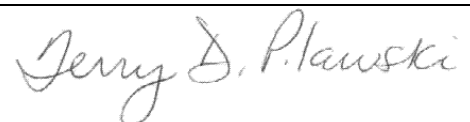
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton

State: New Jersey

Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 1529 Route 206

County: Burlington

Municipality: Tabernacle Twp

Lot: 5

Block: 320

Easting (X): 426162 Northing (Y): 371570

Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW02

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 30

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

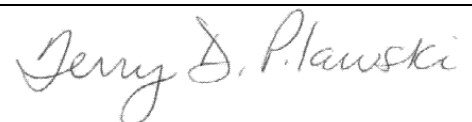
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 1556 Route 206

County: Burlington Municipality: Tabernacle Twp Lot: 10 Block: 323

Easting (X): 426816 Northing (Y): 373025
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW03

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 70

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

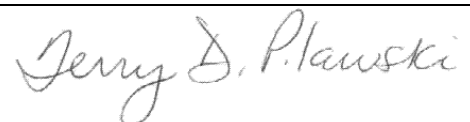
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: STUART & DELORES RUBIN

Organization: Stuart & Delores Rubin

Address: 97 Hawkin Rd

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 95 Hawkin Rd

County: Burlington Municipality: Tabernacle Twp Lot: 3 Block: 327

Easting (X): 428171 Northing (Y): 373601
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW04

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/ Tabernacle

Depth (ft.): 70

Case ID Number: NJDEP, Edward Putnam

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

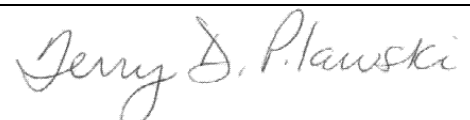
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 11, 2012

Expiration Date: January 10, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: N/A THE ESS GROUP, INC

Organization: The ESS Group, Inc

Address: 78 Carranza Road

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 78 Carranza Rd

County: Burlington Municipality: Tabernacle Twp Lot: 11 Block: 401

Easting (X): 428962 Northing (Y): 374386
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW05

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 70

Case ID Number: NJDEP, Edward Putnam

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

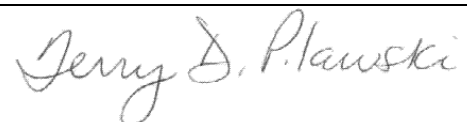
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 17, 2012

Expiration Date: January 16, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton

State: New Jersey

Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 86 Carranza Rd.

County: Burlington

Municipality: Tabernacle Twp

Lot: 12.05

Block: 401

Easting (X): 429624 Northing (Y): 373621

Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW06

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 70

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

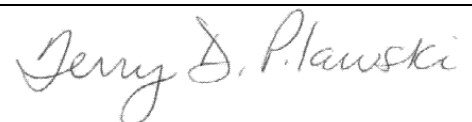
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS

A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton

State: New Jersey

Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 86 Carranza Rd.

County: Burlington

Municipality: Tabernacle Twp

Lot: 12.05

Block: 401

Easting (X): 430190 Northing (Y): 373070

Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW07

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 70

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

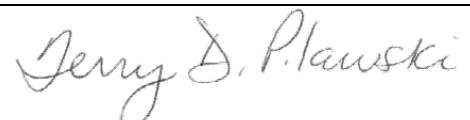
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 86 Carranza Rd

County: Burlington Municipality: Tabernacle Twp Lot: 12.01 Block: 401

Easting (X): 431049 Northing (Y): 372442
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW08

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 70

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

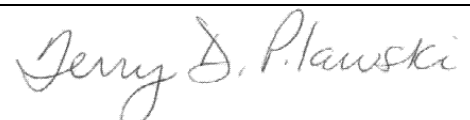
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS

A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: Carranza Rd

County: Burlington Municipality: Tabernacle Twp Lot: 6 Block: 403

Easting (X): 430761 Northing (Y): 371640
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW09

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 65

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

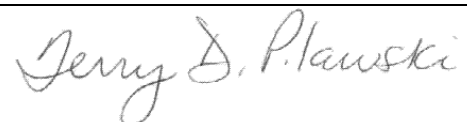
Attachments: _____

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:
Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 30 Wynn Rd

County: Burlington Municipality: Tabernacle Twp Lot: 4 Block: 332

Easting (X): 428413 Northing (Y): 371214
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW10

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 50

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

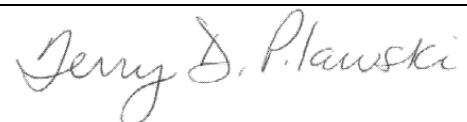
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: EDWARD PUTNAM NJDEP

Organization: NJDEP

Address: 401 East State Street

City: Trenton State: New Jersey Zip Code: 08625

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 25 Cramer Rd

County: Burlington Municipality: Tabernacle Twp Lot: 17 Block: 324

Easting (X): 427184 Northing (Y): 371665
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW11

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 35

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

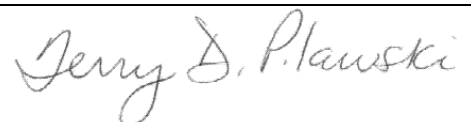
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 5, 2012

Expiration Date: January 4, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: N/A TOWNSHIP OF TABERNACLE

Organization: Township of Tabernacle

Address: 163 Carranza Rd

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaner

Address: Richter Rd

County: Burlington Municipality: Tabernacle Twp Lot: ROW Block: ROW

Easting (X): 427475 Northing (Y): 372294
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW12

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 45

Case ID Number: NJDEP, Edward Putnam

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

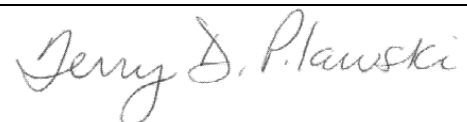
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 18, 2012

Expiration Date: January 17, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: TOWNSHIP OF TABERNACLE

Organization: TOWNSHIP OF TABERNACLE

Address: 163 CARRANZA ROAD

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: 99 Hawkin Rd

County: Burlington Municipality: Tabernacle Twp Lot: ROW Block: ROW

Easting (X): 428351 Northing (Y): 373180
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW14

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 100

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

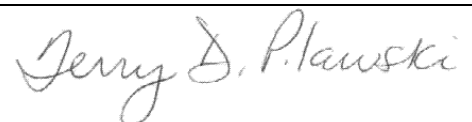
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 20, 2012

Expiration Date: January 19, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: N/A TOWNSHIP OF TABERNACLE

Organization: Township of Tabernacle

Address: 163 Carranza Road

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: Riedel Rd

County: Burlington Municipality: Tabernacle Twp Lot: ROW Block: ROW

Easting (X): 429496 Northing (Y): 372439
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW15

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 65

Case ID Number: NJDEP, Edward Putnam

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

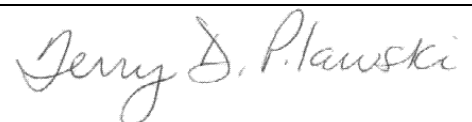
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 18, 2012

Expiration Date: January 17, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: RON BARBER, MASTER LICENSE # 0001595

Permit Issued to: SUMMIT DRILLING CO INC

Company Address: CENTRAL JERSEY INDUSTRIAL PARK 9W CHIMNEY ROCK RD BOUND BROOK, NJ 08805

PROPERTY OWNER

Name: N/A TOWNSHIP OF TABERNACLE

Organization: Township of Tabernacle

Address: 163 Carranza Road

City: Tabernacle State: New Jersey Zip Code: 08088

PROPOSED WELL LOCATION

Facility Name: Joan's Cleaners

Address: Worrell Rd

County: Burlington Municipality: Tabernacle Twp Lot: ROW Block: ROW

Easting (X): 429043 Northing (Y): 371844
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW16

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Louis Berger/Tabernacle

Depth (ft.): 55

Case ID Number: NJDEP, Edward Putnam

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

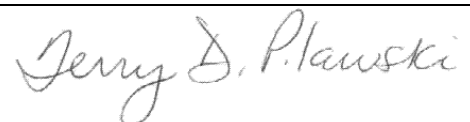
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: January 18, 2012

Expiration Date: January 17, 2013

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a)1i)]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: MW01

WELL NO.: MW01

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/10/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/10/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	371505.73
Total Depth (ft):	28.00	Total Depth (ft):	28	EASTING:	426163.37
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	113.78
Depth to Water (ft):	12	Depth to Water (ft):	14.7	TOC ELEVATION (ft):	113.48
Depth to Rock (ft):	N/A	Permit No.:	E201200152		

NOTES: Lithology based on log for SB-10.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM				<1	Moderate yellowish brown (10YR5/4) fine SAND, some Silt; dry.	Sand
	2								
	4		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	Silty Sand
	6								
	8		SM				<1	Grayish orange pink (5YR7/2) to dark yellowish orange (10YR6/6) fine SAND, and Silt; moist.	Sand
	10		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	∇ Water Level at 12 ft bgs
	14								
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Light brown (5YR6/4) coarse to medium SAND, trace Silt; saturated.	
	22								
	24		SP				<1	Moderate yellowish brown (10YR5/4) coarse to medium SAND; saturated.	
	26		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; saturated.	
	28								End of Boring at 28 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 2

BORING NO.: MW02

WELL NO.: MW02

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/10/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/10/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	371624.62
Total Depth (ft):	25.00	Total Depth (ft):	25	EASTING:	426519.09
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	114.44
Depth to Water (ft):	16	Depth to Water (ft):	16.17	TOC ELEVATION (ft):	114.11
Depth to Rock (ft):	N/A	Permit No.:	E201200153		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand
	2								
	4								
	4		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	6								
	8								
	8		SP-SM				<1	Light brown (5YR5/6) to moderate yellow (5Y7/6) medium to fine SAND, little Silt; moist.	Sand
	10								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW02

Page 2 of 2

WELL NO.: MW02

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; moist.	
	14								
	16		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; wet.	Water Level at 16 ft bgs
	18								
	20		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	
	22								
	24								End of Boring at 25 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: MW03

WELL NO.: MW03

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/11/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/11/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	373039.94
Total Depth (ft):	72.00	Total Depth (ft):	68	EASTING:	426929.48
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	112.77
Depth to Water (ft):	25	Depth to Water (ft):	17	TOC ELEVATION (ft):	112.31
Depth to Rock (ft):	N/A	Permit No.:	E201200155		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
Well Construction	0	Lithology	SP	Sample Interval	Sample Recovery	2	<1	Moderate brown (10YR4/2) to dark yellowish brown (10YR4/2) medium to fine SAND; dry.	Sand
	3								
	4								
	3								
	2								
	4								
	6					<1	Dark yellowish orange (10YR6/6) coarse to fine SAND; dry.		
	4					4.4			
	4						Dark yellowish brown (10YR4/2) medium to fine SAND, little Silt; dry.		
	5								
	8								
	10					<1	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt; moist.		
7	<1								
7		Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) coarse to fine SAND; moist.							
12									
14									



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	16		SP			4 7 8 13	<1	Dark yellowish brown (10YR4/2) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; moist.	
	18								
	20		SP			5 12 18 20	<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; moist.	
	22								
	24								
	26		SP			7 12	<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; wet.	Water Level at 25 ft bgs
	28		SP			18 18	<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	30								
	32		SP			10 12 20 24	<1	Dark yellowish orange (10YR6/6) to moderate yellowish brown (10YR5/4) medium to fine SAND; wet.	
	34								
	36		ML			15 20	<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) SILT, and medium to fine Sand; saturated.	Sandy Silt
			SP			22 27	<1	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace fine Gravel; wet.	Sand



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW03

Page 4 of 4

WELL NO.: MW03

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks						
Well	62	Lith.	SP	Interval	Rec.	3	<1	Dark yellowish brown (10YR4/2) to very pale orange (10YR8/2) coarse to fine SAND, trace Clayey Silt; wet.							
	4														
	6														
	10														
	64														
	66														
	66					SP				Interval	Rec.	3	<1	Dark yellowish brown (10YR4/2) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Clayey Silt; moist.	
	6														
	13														
	20														
68	SP	Interval	Rec.	5	1.5	Moderate yellowish brown (10YR5/4) to grayish orange (10YR7/4) coarse to fine SAND, trace Silt; wet.									
10															
13															
13															
8															
72								End of Boring at 72 ft bgs							



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: MW04

WELL NO.: MW04

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 2/1/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/1/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA

Diameter (in): 6

Total Depth (ft): 72.00

Sampler: Split Spoon

Depth to Water (ft): 10

Depth to Rock (ft): N/A

WELL DATA

Completion: 2" PVC Flushmount

Total Depth (ft): 67

Screen Length (ft) /Slot (in): 10 ft/0.010

Depth to Water (ft): 8.4

Permit No.: E201200179

INSPECTOR: M. Cameron

NORTHING: 373602.7

EASTING: 428149.35

GROUND ELEVATION (ft): 100.92

TOC ELEVATION (ft): 100.49

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML			1	NA	Dark yellowish brown (10YR4/2) to moderate yellowish brown (10YR5/4) SILT, and fine Sand; moist.	Sandy Silt
	1		SP			1	NA	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	Sand
	2		SP			1	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
	6					2			
10		SP			2	NA	Light brown (5YR5/6) coarse to fine SAND, trace Silt; saturated.	 Water Level at 10 ft bgs	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	3					3			
	8					8			
	12					12			
	14								
	15		SP-SM			5	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; wet.	
	16					8			
	16					6			
	17					8			
	18								
	20		SP			5	NA	Grayish orange (10YR7/4) to pale yellowish orange (10YR8/6) coarse to fine SAND, trace fine Gravel; wet.	
	20					8			
	21					12			
	22					18			
	24								
	25		SP			8	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
	26					9			
	26					13			
	27					12			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	28								
	30		SP			3	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND; wet.	
						4			
						5			
	32		SP-SM			7	NA	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) fine SAND, little Silt; wet.	
	34								
	36		SP-SM			3	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, little Clayey Silt, and fine Gravel; saturated.	Gravelly Sand
						4			
						7			
	38								
	40		SP			3	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt; saturated.	Sand
						4			
						6			
	42					7			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
L B	60	SP		[Cross-hatched]	[Diagonal lines]		NA	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt; saturated.	
	62								
	64	SP		[Cross-hatched]	[Diagonal lines]	5	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND; saturated.	
	66					9			
			SP		[Cross-hatched]	[Diagonal lines]	17	NA	
						18			
	68	SP		[Cross-hatched]	[Diagonal lines]		NA	Dark yellowish orange (10YR6/6) to pale yellowish brown (10YR6/2) fine SAND, trace Silt; saturated.	
	70								
									3
									4
						4			End of Boring at 72 ft bgs
	72	ML		[Cross-hatched]	[Diagonal lines]	8	NA	Light brown (5YR5/6) to dark yellowish orange (10YR6/6) Clayey SILT; wet.	



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: MW05

WELL NO.: MW05

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/31/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/31/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	374371.36
Total Depth (ft):	72.00	Total Depth (ft):	68.5	EASTING:	428979.26
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	93.69
Depth to Water (ft):	6	Depth to Water (ft):	6.8	TOC ELEVATION (ft):	93.3
Depth to Rock (ft):	N/A	Permit No.:	E201200180		

NOTES: Lithology from 0 to 44 ft bgs based on log for GW-148.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; dry.	Sand
	2								
	4		SP-SM				<1	Grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.	Water Level at 6 ft bgs
	6		SM				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, some Silt; saturated.	Silty Sand
	8		SP-SM				<1	Light brown (5YR6/4) medium to fine SAND, little Silt; saturated.	Sand
10		SP				<1	Light brown (5YR6/4) coarse to medium SAND, trace Silt; saturated.		



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SM				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, and Silt; saturated.	Silty Sand
	14		SP				<1	Grayish orange (10YR7/4) coarse to medium SAND, trace Silt; saturated.	Sand
	16		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
	18		SP-SM				<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	20		SP-SM				<1	Dark yellowish orange (10YR6/6) coarse to fine SAND, little Silt; saturated.	
	22		SP-SM				<1	Moderate yellow (5Y7/6) medium to fine SAND, little Silt; saturated.	
	24		SP-SM				<1	Dusky yellow (5Y6/4) coarse to fine SAND, little Silt; saturated.	
	26								
	28		SP				<1	Grayish orange pink (5YR7/2) medium to fine SAND, trace Silt; saturated.	
	30								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW05

Page 5 of 5

WELL NO.: MW05

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68					7			
	70		SP			4		Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) medium to fine SAND; saturated.	End of Boring at 72 ft bgs
						3			
						3			
	72					4			



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: MW06

WELL NO.: MW06

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/23/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/23/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	373579.43
Total Depth (ft):	72.00	Total Depth (ft):	68	EASTING:	429586.98
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	91.99
Depth to Water (ft):	5	Depth to Water (ft):	3.5	TOC ELEVATION (ft):	91.77
Depth to Rock (ft):	N/A	Permit No.:	E201200162		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks							
	0		SM			1	<1	Dark yellowish brown (10YR4/2) to dusky yellowish brown (10YR2/2) fine SAND, and Silt; moist.	Silty Sand							
	2															
	2															
	2															
	2		SP			4	NA	Moderate yellowish brown (10YR5/4) medium to fine SAND, and coarse Gravel; saturated.	Gravelly Sand							
	7															
	10															
	12															
	10									SP			5	NA	Pale yellowish orange (10YR8/6) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt, trace coarse to fine Gravel; saturated.	Sand
	3															
	5															
	9															



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW06

Page 5 of 5

WELL NO.: MW06

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68		ML			9	<1	Medium dark gray (N4) Clayey SILT, trace fine Sand; moist.	Clayey Silt
	70		SP			3		Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) medium to fine SAND; saturated.	Sand
	72					4			End of Boring at 72 ft bgs
						4			
						5			



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 9

BORING NO.: MW07

WELL NO.: MW07

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/17/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/19/2012

DRILLING METHOD: Mud Rotary

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	373076.52
Total Depth (ft):	147.00	Total Depth (ft):	139	EASTING:	430185.16
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	94.43
Depth to Water (ft):	10	Depth to Water (ft):	11.2	TOC ELEVATION (ft):	94.16
Depth to Rock (ft):	N/A	Permit No.:	E201200163		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SM			3	<1	Dark yellowish brown (10YR4/2) fine SAND, and Silt; moist.	Silty Sand
	6					8			
	2		SP			12	<1	Dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	Sand
	4								
	6								
	6		SP-SM			3	<1	Dark yellowish brown (10YR4/2) to moderate yellowish brown (10YR5/4) fine SAND, and Silt; moist.	Silty Sand
	4					6			
	6					6			
	10		SP			3	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	Water Level at 10 ft bgs
	3					4			
4									



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12					6			
	14								
	15		SP			5	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, and coarse to fine Gravel; saturated.	Gravelly Sand
	16				5				
	17				13				
	18				18				
	20		SP			13	NA	Grayish orange (10YR7/4) coarse to fine SAND, little medium Gravel; saturated.	Sand
	21					12			
	22		SP			13	NA	Dark yellowish orange (10YR6/6) to light brown (5YR5/6) medium to fine SAND; saturated.	
	23					14			
	24								
	25		SP			6	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, and coarse to fine Gravel; saturated.	Gravelly Sand
	26				8				
	27		SP			10	NA	Dark yellowish orange (10YR6/6) to light brown (5YR5/6) fine SAND; saturated.	Sand
	28				11				



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	30	SP				3	NA	Pale yellowish brown (10YR6/2) coarse to fine SAND, little medium Gravel; saturated.	
						3			
		SP				3	NA	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	
	32					3			
	34								
		SP				3	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) medium to fine SAND, trace fine Gravel; saturated.	
	36					4			
						4			
		SP				6	NA	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	38								
	40	SP				3	NA	Dark yellowish orange (10YR6/6) coarse to medium SAND, little fine Gravel; saturated.	
		SM				4	NA		Silty Sand
						6		Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) medium to fine SAND, and Silt; saturated.	
	42					10			
	44								
		SM				6	NA	Dark yellowish orange (10YR6/6) to grayish orange (10YR7/4) fine SAND, and Silt, trace coarse to fine Gravel;	
						8			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	46					11		saturated.	
						17			
	48								
	50		SP			8	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt, trace medium to fine Gravel; saturated.	Sand
						10			
						20			
						24			
	52								
	54								
	56		SM			6	NA	Light brown (5YR5/6) to pale yellowish brown (10YR6/2) fine SAND, and Silt, trace medium to fine Gravel; saturated.	Silty Sand
						8			
						12			
						18			
	58								
	60		SP			6	NA	Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to medium SAND, some medium to fine Gravel; saturated.	Gravelly Sand
						8			
						18			
			SM				NA	Light brown (5YR5/6) fine SAND, and Silt; saturated.	Silty Sand
						22			
	62		CL				NA	Brownish black (5YR2/1) to dark gray (N3) CLAY; wet.	Clay



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	64								
	66		SM			8 8 9 15	NA	Medium dark gray (N4) fine SAND, and Silt; saturated.	Silty Sand
	70		SM			3 6 20 25	NA	Medium dark gray (N4) fine SAND, and Silt; saturated.	
	76		SM			20 18 22 20	<1	Dark gray (N3) fine SAND, and Silt; saturated.	
	80					10	<1		Clayey Silt



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	82		ML			12 25 35			
	86		CL			10	<1	Dark gray (N3) Silty CLAY; saturated.	Silty Clay
	86		SM			19 30 30	<1	Dark gray (N3) fine SAND, some Silt; saturated.	Silty Sand
	90		ML			15 19 23 30	<1	Brownish black (5YR2/1) to dark gray (N3) SILT, little fine Sand; saturated.	Silt
	96		SP			9 10 13 19	<1	Brownish black (5YR2/1) to medium dark gray (N4) fine SAND, trace Silt; saturated.	Sand



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
Well	134	[Pattern]	ML	[Pattern]	[Pattern]	25	<1	Dark gray (N3) to greenish black (5GY2/1) Clayey SILT; dry.	Clayey Silt
	40								
	50/4								
136									
138									
140	[Pattern]	ML		[Pattern]	[Pattern]	27	<1	Dark gray (N3) to greenish black (5GY2/1) Clayey SILT; dry.	
140						32			
140						38			
140						45			
142									
144									
146		CL		[Pattern]	[Pattern]	6	<1	Dark greenish gray (5GY4/1) to medium dark gray (N4) CLAY, trace Silt; dry.	Clay
146						18			
146						28			
146						32			End of Boring at 147 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: MW08

WELL NO.: MW08

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/16/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/16/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	372466.48
Total Depth (ft):	72.00	Total Depth (ft):	68	EASTING:	431036.51
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	92.98
Depth to Water (ft):	10	Depth to Water (ft):	6.7	TOC ELEVATION (ft):	92.76
Depth to Rock (ft):	N/A	Permit No.:	E201200167		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ASPHALT			3	<1	Dark gray (N3) Asphalt; dry.	Asphalt
	4					4			
	2		SP-SM			6		Moderate yellowish brown (10YR5/4) fine SAND, little Silt; dry.	Sand
	3					3			
	4		SP					Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; dry.	
	6		SP			6	<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace fine Gravel; moist.	
	8					8			
	8					8			
	10					6			
	10		SP			8	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, trace fine Gravel; saturated.	Water Level at 10 ft bgs
	9					9			
9					9				
11					11				



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	50		SP-SM			25	<1	Pale yellowish orange (10YR8/6) fine SAND, little Silt; saturated.	
						50/2			
	52								
	54								
	55		SP			15	<1	Pale yellowish orange (10YR8/6) fine SAND; saturated.	
	56		SP			29	<1	Olive gray (5Y4/1) fine SAND; saturated.	
						50/1			
	58								
	60		SP			15	<1	Olive gray (5Y4/1) fine SAND; saturated.	
						20			
						20			
						22			
	62								
	64								
	65		SP			9	<1	Olive gray (5Y4/1) fine SAND, trace Silt; saturated.	
						13			
	66					14			



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW08

Page 5 of 5

WELL NO.: MW08

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68					13			
	70		SP-SM			8	<1	Olive gray (5Y4/1) fine SAND, little Silt; saturated.	
						12			
						14			
	72					12			End of Boring at 72 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: MW09

WELL NO.: MW09

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/30/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/30/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA

Diameter (in): 6

Total Depth (ft): 67.00

Sampler: Split Spoon

Depth to Water (ft): 15

Depth to Rock (ft): N/A

WELL DATA

Completion: 2" PVC Flushmount

Total Depth (ft): 64

Screen Length (ft) /Slot (in): 10 ft/0.010

Depth to Water (ft): 14

Permit No.: E201200168

INSPECTOR: M. Cameron

NORTHING: 371603.71

EASTING: 430767.25

GROUND ELEVATION (ft): 101.61

TOC ELEVATION (ft): 101.24

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		ML			2	<1	Dark yellowish brown (10YR4/2) SILT, little fine Sand; moist.	Silt
	3								
	2		SP			3	<1	Dark yellowish orange (10YR6/6) medium to fine SAND; moist.	Sand
	3								
6		SP-SM			3	<1	Moderate yellowish brown (10YR5/4) to grayish orange (10YR7/4) medium to fine SAND, little Silt; moist.		
5									
6									
11									
10		SP			7	<1	Yellowish gray (5Y7/2) medium to fine SAND, trace Silt; moist.		
8									
16									
24									



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	14								
	16		SP			12	<1	Pale yellowish brown (10YR6/2) to yellowish gray (5Y7/2) coarse to fine SAND, trace Silt, little fine Gravel; wet.	Water Level at 15 ft bgs
						16			
						18			
						20			
	18								
	20		SP			5	<1	Pale yellowish brown (10YR6/2) to yellowish gray (5Y7/2) coarse to fine SAND, and coarse to fine Gravel; wet.	Gravelly Sand
						8			
						15			
	22					17			
	24								
	26		GP			3	<1	Pale yellowish brown (10YR6/2) to dark yellowish orange (10YR6/6) fine GRAVEL, and coarse to fine Sand; wet.	Sandy Gravel
						4			
						4			
	28					6			
	30		SP			20	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, and fine Gravel; wet.	Gravelly Sand
						24			
			GP			26	<1	Pale yellowish brown (10YR6/2) to dark yellowish orange	Sandy Gravel



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32					29		(10YR6/6) coarse to fine GRAVEL, some fine Sand; saturated.	
	34								
	36		SP			3	<1	Pale yellowish brown (10YR6/2) to moderate yellowish brown (10YR5/4) coarse to fine SAND, and fine Gravel; wet.	Gravelly Sand
	36					3			
	36					4			
	38		SP			9	<1	Pale yellowish brown (10YR6/2) to light gray (N7) medium to fine SAND; wet.	Sand
	38								
	40		SP			12	<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, some fine Gravel; wet.	Gravelly Sand
	40					16			
	42		SP-SM			25	<1	Dark yellowish orange (10YR6/6) to light brown (5YR5/6) coarse SAND, little Silt; saturated.	Sand
	42					39			
	44								
	46		SP			8	<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, some fine Gravel; saturated.	Gravelly Sand
	46					8			
	46		SP-SM			7	<1	Light gray (N7) coarse to fine SAND, little Clayey Silt; saturated.	Sand
	46					8			
	48								
	50		SP			2	<1	Pale yellowish brown (10YR6/2) to light gray (N7) fine	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW09

Page 4 of 4

WELL NO.: MW09

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
						2		SAND, trace Silt, trace coarse to fine Gravel; saturated.	
						3			
						4			
	52								
								Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, trace fine Gravel; saturated.	
			SP			3	<1		
						4			
	54					7			
						8			
								Grayish orange (10YR7/4) to pale yellowish brown (10YR6/2) coarse to fine SAND; saturated.	
			SP			2	<1		
						3			
	56					5			
						7			
								Pale yellowish brown (10YR6/2) to medium light gray (N6) coarse to fine SAND, trace Silt; saturated.	
			SP			8	<1		
						4			
	58					8			
						12			
	60								
	62								
	64								
	66								
									End of Boring at 67 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: MW10

WELL NO.: MW10

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/12/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/12/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	371231.19
Total Depth (ft):	52.00	Total Depth (ft):	48	EASTING:	428421.3
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	103.41
Depth to Water (ft):	10	Depth to Water (ft):	8.2	TOC ELEVATION (ft):	102.98
Depth to Rock (ft):	N/A	Permit No.:	E201200172		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
Well Construction	0	[Pattern]	ML	[Cross-hatch]	[Diagonal]	2	NA	Dark yellowish brown (10YR4/2) SILT, some fine Sand;	Sandy Silt
			SM	[Cross-hatch]	[Diagonal]	1	NA	moist.	Silty Sand
	2	[Pattern]				1		Moderate brown (5YR4/4) medium to fine SAND, some Silt; moist.	
						1			
Well Construction	6	[Pattern]	ML	[Cross-hatch]	[Diagonal]	1	NA	Dark yellowish brown (10YR4/2) to pale yellowish brown (10YR6/2) SILT, and fine Sand; moist.	Sandy Silt
						2			
						7			
						9			
Well Construction	10	[Pattern]	SP	[Cross-hatch]	[Diagonal]	2	NA	Dark yellowish brown (10YR4/2) medium to fine SAND, little medium Gravel, trace Silt; saturated.	Sand
									Water Level at 10 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8					8			
	12					12			
	16					16			
	12								
	14								
	16	SP				2	NA	Pale yellowish brown (10YR6/2) to grayish orange (10YR7/4) medium to fine SAND, trace Silt, trace coarse Gravel; moist.	
	16					8			
	16					12			
	16					15			
	18								
	20	SP				5	NA	Pale yellowish brown (10YR6/2) medium to fine SAND; moist.	
	20					8			
	20	SM				12	NA	Dark yellowish brown (10YR4/2) medium to fine SAND, some Silt, trace fine Gravel; moist.	Silty Sand
	22	SP					NA	Light brown (5YR5/6) coarse SAND, little coarse to fine Gravel; moist.	Sand
	22								
	24								
	26	SP				18	NA	Pale yellowish brown (10YR6/2) to dark yellowish brown (10YR4/2) fine SAND, trace Silt; wet.	
	26					15			
	26	SP				15	NA	Light brown (5YR5/6) to pale yellowish orange (10YR8/6) coarse to fine SAND, little medium Gravel; wet.	
	26					15			



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW10

Page 4 of 4

WELL NO.: MW10

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	44								
			SP			23	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; moist.	
						20			
	46					16			
						20			
	48								
			SP			10	NA	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace medium Gravel; moist.	
						7			
	50					8			
						8			
	52								End of Boring at 52 ft bgs



The Louis Berger Group, Inc.
 412 Mt Kemble Ave
 Morristown, NJ 07960

Drilling Log

Page 1 of 3

BORING NO.: MW11

WELL NO.: MW11

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/13/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/13/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	371676.09
Total Depth (ft):	35.00	Total Depth (ft):	34	EASTING:	427153.29
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	108.24
Depth to Water (ft):	12	Depth to Water (ft):	10.9	TOC ELEVATION (ft):	108.04
Depth to Rock (ft):	N/A	Permit No.:	E201200174		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks				
	0		SP				<1	Light brown (5YR5/6) medium to fine SAND, trace Silt; dry.	Sand				
	2		SM								<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand
	4											Light brown (5YR5/6) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; moist.	Sand
	6		SP				<1						
	8												
	10					<1							
	▼												



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW11

Page 2 of 3

WELL NO.: MW11

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; wet.	Water Level at 12 ft bgs
	14								
	16		SP				<1	Dusky yellow (5Y6/4) medium to fine SAND, trace Silt; wet.	
	18								
	20		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) medium to fine SAND, trace Silt; saturated.	
	22								
	24		SP				<1	Dusky yellow (5Y6/4) to yellowish gray (5Y7/2) coarse to fine SAND, trace Silt; saturated.	
	26								
	28		SP				<1	Moderate yellow (5Y7/6) coarse to fine SAND, trace Silt; saturated.	
	30								



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW11

Page 3 of 3

WELL NO.: MW11

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32		SP				<1	Dusky yellow (5Y6/4) to moderate yellow (5Y7/6) coarse to medium SAND, trace Silt; saturated.	
	34								End of Boring at 35 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	12		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; wet.	∇ Water Level at 12 ft bgs
	14								
	16		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, trace Silt; saturated.	
	18								
	20		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt, trace fine Gravel; saturated.	
	22								
	24		SP				<1	Dusky yellow (5Y6/4) coarse to medium SAND, little fine Gravel; saturated.	
	26		SP				<1	Dark yellowish orange (10YR6/6) coarse to medium SAND; saturated.	
	28		SP				<1	Yellowish gray (5Y7/2) coarse to medium SAND, little fine	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
								Gravel; saturated.	
	30	SP					<1	Pale yellowish brown (10YR6/2) coarse to medium SAND; saturated.	
		SP-SM					<1	Grayish orange pink (5YR7/2) coarse to medium SAND, little Silt; saturated.	
	32	SP					<1	Light brown (5YR6/4) medium to fine SAND, trace Silt; saturated.	
		SP					<1	Light brown (5YR6/4) coarse to medium SAND; saturated.	
	34	SP-SM					<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; saturated.	
	36	SP					<1	Dark yellowish orange (10YR6/6) coarse SAND, and fine	Gravelly Sand
		SP					<1	Gravel; saturated.	
								Pale yellowish brown (10YR6/2) to light brown (5Y6/4) medium to fine SAND, trace Silt; saturated.	Sand
	38								
	40	SP					<1	Grayish red (10R4/2) coarse SAND; saturated.	
		SP					<1	Light olive brown (5Y5/6) medium to fine SAND; saturated.	
	42	SM					<1	Light gray (N7) to dark yellowish orange (10YR6/6) fine SAND, some Silt; saturated.	Silty Sand
	44	SM					<1	Dark yellowish orange (10YR6/6) to light gray (N7) fine SAND, some Silt; saturated.	End of Boring at 45 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 6

BORING NO.: MW13

WELL NO.: MW13

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/24/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/24/2012

DRILLING METHOD: Mud Rotary

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	373004.17
Total Depth (ft):	100.00	Total Depth (ft):	98	EASTING:	428257.51
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	100.79
Depth to Water (ft):	5	Depth to Water (ft):	7.2	TOC ELEVATION (ft):	100.37
Depth to Rock (ft):	N/A	Permit No.:	E201200182		

NOTES: Lithology from 78 to 80 ft bgs and 88 to 90 ft bgs based on

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP				<1	Pale yellowish brown (10YR6/2) SAND, and coarse Gravel; saturated	Gravelly Sand
	2								
	4								Water Level at 5 ft bgs
	6		SP			2	<1	Light brown (5YR5/6) medium to fine SAND; saturated.	Sand
						3			
						4			
						4			
	8								
	10		SP			8	1.2	Dark yellowish brown (10YR6/6) medium to fine SAND, trace fine Gravel; saturated.	
						12			
						14			
						16			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	50	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	18	<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt, trace coarse to fine Gravel; saturated.	
			17						
			18						
			21						
	52								
	54								
	56	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	12	<1	Light brown (5YR6/4) to pale yellowish brown (10YR6/2) fine SAND, trace Silt; moist.	
			20						
			25						
			27						
	58								
	60	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	11	<1	Light brown (5YR6/4) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	
			12						
			15						
			16						
	62								
	64								
	66	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	7	<1	Grayish orange pink (5YR7/2) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	
			12						
			18						



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68					24			
	70		SP			10	4.5	Light brown (5YR5/6) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; saturated.	
						18			
						20			
	72					22			
	74								
	76		ML			6	2.2	Light brown (5YR5/6) SILT; saturated.	Silt
						8			
			ML			10	<1	Dark gray (N3) Clayey SILT; wet.	Clayey Silt
						12			
	78		ML			18	<1	Olive gray (5Y4/1) to dark gray (N3) Clayey SILT, and fine Sand; saturated.	Sandy Clayey Silt
						24			
						33			
	80					43			
	82								
			ML			5	5.8	Dark gray (N3) SILT; saturated.	Silt
						11			
	84		ML			16	5.2	Dark gray (N3) Clayey SILT; saturated.	Clayey Silt



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW13

Page 6 of 6

WELL NO.: MW13

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	86					21			
	88		SM			10	<1	Olive gray (5Y4/1) coarse to fine SAND, some Clayey Silt; saturated.	Silty Sand
						13			
						15			
	90					19			
	92								
			SP-SM			9	9	Brownish black (5YR2/1) to dark gray (N3) fine SAND, little Silt; saturated.	Sand
	94					17			
						22			
						25			
	96								
	98								
	100								End of Boring at 100 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 5

BORING NO.: MW14

WELL NO.: MW14

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 1/25/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 1/25/2012

DRILLING METHOD: Mud Rotary

DRILLER: K. Barber

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	373140.12
Total Depth (ft):	75.00	Total Depth (ft):	69	EASTING:	428340.06
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	101.32
Depth to Water (ft):	5	Depth to Water (ft):	7.25	TOC ELEVATION (ft):	100.94
Depth to Rock (ft):	N/A	Permit No.:	E201200183		

NOTES: Lithology based on log for MW-13.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0								
	2								
	4								
	5		SP			2	<1	Light brown (5YR5/6) medium to fine SAND; saturated.	Water Level at 4 ft bgs Sand
	6					3			
	7					4			
	8					4			
	10		SP			8	1.2	Dark yellowish brown (10YR6/6) medium to fine SAND, trace fine Gravel; saturated.	
	12					12			
	14					14			
	16					16			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks						
	12		SP												
	14														
	15.9									8	13	13	24	15.9	Grayish orange (10YR7/4) coarse to fine SAND, trace fine Gravel; saturated.
	16														
	18														
	20									7	11	18	24	8.4	Grayish orange (10YR7/4) coarse to medium SAND, trace coarse Gravel; saturated.
	22														
	24														
	26									6	6	9	12	4	Dark yellowish brown (10YR6/6) coarse to fine SAND, trace Clayey Silt, trace coarse to fine Gravel; saturated.
	28														
	30														



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	50	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	18	<1	Grayish orange (10YR7/4) to dark yellowish orange (10YR6/6) coarse to fine SAND, trace Silt, trace coarse to fine Gravel; saturated.	
	17								
	18								
	21								
	52	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	12	<1	Light brown (5YR6/4) to pale yellowish brown (10YR6/2) fine SAND, trace Silt; moist.	
	20								
	25								
	27								
	54	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	11	<1	Light brown (5YR6/4) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.	
	12								
	15								
	16								
56	SP		[Cross-hatched pattern]	[Diagonal lines pattern]	7	<1	Grayish orange pink (5YR7/2) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; moist.		
12									
18									
18									



The Louis Berger Group, Inc.
412 Mt Kemble Ave.
Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW14

Page 5 of 5

WELL NO.: MW14

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	68					24			
	70		SP			10	4.5	Light brown (5YR5/6) to dark yellowish orange (10YR6/6) fine SAND, trace Silt; saturated.	
						18			
						20			
	72					22			
	74								End of Boring at 75 ft bgs



The Louis Berger Group, Inc.
412 Mt Kemble Ave
Morristown, NJ 07960

Drilling Log

Page 1 of 4

BORING NO.: MW15

WELL NO.: MW15

CLIENT: New Jersey Department of Environmental Protection

PROJECT NO.: CKT-324K1

PROJECT: Joan's Cleaners

DATE STARTED: 2/2/2012

DRILLING CONTRACTOR: Summit Drilling Co., Inc.

DATE FINISHED: 2/2/2012

DRILLING METHOD: Hollow Stem Auger

DRILLER: B. Kinley

BOREHOLE DATA		WELL DATA		INSPECTOR:	
Diameter (in):	6	Completion:	2" PVC Flushmount	NORTHING:	372390.88
Total Depth (ft):	67.00	Total Depth (ft):	61.5	EASTING:	429547.14
Sampler:	Split Spoon	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION (ft):	95.52
Depth to Water (ft):	5	Depth to Water (ft):	6.65	TOC ELEVATION (ft):	95.23
Depth to Rock (ft):	N/A	Permit No.:	E201200194		

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		SP			1	<1	Dusky yellowish brown (10YR2/2) medium to fine SAND, trace Silt; moist.	Sand <div style="text-align: center;"> Water Level at 5 ft bgs </div>
			SP			1	<1		
						1		Moderate brown (5YR4/4) to moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt, trace coarse Gravel; moist.	
	2					1			
	4								
			SP-SM			1	<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; wet.	
	6		SP			4	<1		
			SP-SM			6	<1	Dark yellowish brown (10YR4/2) medium to fine SAND; wet.	
						1		Light olive gray (5Y5/2) medium to fine SAND, little Silt; wet.	
	8								
			SP			4	<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; wet.	
	10					7			
			SP			7	<1	Grayish orange (10YR7/4) coarse to fine SAND, trace medium Gravel; wet.	
	12					6			



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32					19			
	34								
	36		SP			8	<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace Silt, trace medium to fine Gravel; wet.	
	36					6			
	36					6			
	36		SP-SM			6	<1	Dark yellowish orange (10YR6/6) medium to fine SAND, little Silt; wet.	
	38								
	40		SP			8	<1	Grayish orange (10YR7/4) coarse to fine SAND, trace medium to fine Gravel; wet.	
	40					6			
	40					7			
	40					7			
	42								
	44								
	46		SP			4	<1	Grayish orange (10YR7/4) medium to fine SAND, trace medium to fine Gravel; wet.	
	46					5			
	46		SP			8	<1	Grayish orange (10YR7/4) medium to fine SAND, trace Silt, trace medium to fine Gravel; wet.	
	46					9			
	48								
	50		SP			7	<1	Grayish orange (10YR7/4) medium to fine SAND, trace fine	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW15

Page 4 of 4

WELL NO.: MW15

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks	
Well	52	SP		7-11	7-11	7-11		Gravel; wet.		
				11-12	11-12	11-12				
	54									
	56	SP		8-9	8-9	8-9	<1	Grayish orange (10YR7/4) medium to fine SAND, trace fine Gravel; wet.		
				9-20	9-20	9-20				
				20-24	20-24	20-24				
	58									
	60	SP		4-10	4-10	4-10	<1	Grayish orange (10YR7/4) medium to fine SAND, trace fine Gravel; wet.		
				10-7	10-7	10-7				
				7-12	7-12	7-12				
	62									
	64									
	66	SP		10-12	10-12	10-12	<1	Grayish orange (10YR7/4) medium to fine SAND, trace fine Gravel; wet.		
				12-17	12-17	12-17				
				17-20	17-20	17-20				

End of Boring at 67 ft bgs



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8		SM				<1	Light brown (5YR5/6) medium to fine SAND, some Silt; moist.	Silty Sand Water Level at 9 ft bgs ▽
			SP-SM				<1	Light brown (5YR6/4) coarse to medium SAND, little fine Gravel; wet.	Sand
	10		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt.	
			SP				<1	Light brown (5YR6/4) coarse to medium SAND, some fine Gravel; wet.	Gravelly Sand
	12		SP				<1	Light brown (5YR6/4) medium to fine SAND, trace Silt; saturated.	Sand
			SP-SM				<1	Grayish orange (10YR7/4) coarse SAND, little Silt, and Gravel; saturated.	Gravelly Sand
	14								
	16		SP				<1	Yellowish gray (5Y7/2) to grayish orange (10YR7/4) coarse SAND, trace Silt, and medium fine Gravel; saturated.	



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	28	SP					<1	Dark yellowish orange (10YR6/6) coarse to medium SAND, trace Silt; saturated.	
		SP					<1	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	
	30	SM					<1	Light olive brown (5Y5/6) fine SAND, and Silt; saturated.	Silty Sand
	32	SP-SM					<1	Moderate olive brown (5Y4/4) medium to fine SAND, little Silt; saturated.	Sand
	34	SP					<1	Moderate olive brown (5Y4/4) coarse to medium SAND, trace Silt, trace fine Gravel, with moderate reddish brown (10R4/6) Silt seam from 1.9 to 2.1 ft bgs; saturated.	
	36	SP					<1	Moderate olive brown (5Y4/4) to moderate reddish brown (10R4/6) coarse to medium SAND; saturated.	



The Louis Berger Group, Inc.
 412 Mt Kemble Ave.
 Morristown, NJ 07960

PROJECT NO.: CKT-324K1

BORING NO.: MW16

Page 6 of 6

WELL NO.: MW16

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	48		SP				<1	Light brown (5YR5/6) to moderate reddish brown (10R4/6) coarse to medium SAND, trace Silt; saturated.	Sand
	50		SM				<1	Dusky yellow (5Y6/4) fine SAND, and Silt; saturated.	Silty Sand
	52		SM				<1	yellowish gray (5Y7/2) to moderate yellow (5Y7/6) medium to fine SAND, some Silt; saturated.	
	54								End of Boring at 55 ft bgs

APPENDIX F
Field Sampling Purge Logs

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>Melissa Cameron, Brad Hewitt</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: HPIMW4A	WELL DEPTH: <u>27.05</u>	SCREENED/OPEN INTERVAL: <u>17.05-27.05</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: Horriba U-52-TXUO4VKV

PID BACKGROUND : <1 PUMP INTAKE DEPTH: 19.00 ft below TOC

PID BENEATH OUTER CAP: <1

PID BENEATH INNER CAP: <1 DEPTH TO WATER BEFORE PUMP INSTALLATION: 16.24 ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
930	5.35	NA	0.178	NA	244	NA	10.18	NA	75.8	NA	9.83	NA	150	16.25
935	5.28	0.07	0.171	0.007	295	-51	9.64	0.54	56	19.8	10.82	-0.99	150	16.25
940	5.26	0.02	0.184	-0.013	310	-15	9.41	0.23	65	-9	11.17	-0.35	150	16.25
945	5.40	-0.14	0.298	-0.114	305	5	8.96	0.45	80.6	-15.6	11.45	-0.28	150	16.25
950	5.65	-0.25	0.621	-0.323	288	17	8.66	0.3	59.1	21.5	11.66	-0.21	150	16.25
955	5.75	-0.1	0.803	-0.182	280	8	8.19	0.47	40.2	18.9	11.87	-0.21	150	16.25
1000	5.85	-0.1	0.972	-0.169	276	4	8.80	-0.61	30.1	10.1	12.23	-0.36	150	16.25
1005	5.88	-0.03	1.040	-0.068	271	5	8.26	0.54	26.2	3.9	12.40	-0.17	150	16.25
1010	5.89	-0.01	1.060	-0.02	270	1	8.10	0.16	25.9	0.3	12.59	-0.19	150	16.25
1015	5.90	-0.01	1.070	-0.01	270	0	7.89	0.21	23.5	2.4	12.75	-0.16	150	16.25

COMMENTS: **Sample @ 1020**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/7/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	<u>HPIMW4B</u>	WELL DEPTH:	<u>27.05</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>17.05-27.05</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>24.50</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>16.24</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1035	6.02	NA	1.400	NA	230	NA	8.32	NA	170	NA	13.23	NA	100	16.20
1040	6.09	-0.07	1.450	-0.05	244	-14	7.58	0.74	171	-1	13.52	-0.29	100	16.20
1045	6.11	-0.02	1.500	-0.05	246	-2	7.21	0.37	174	-3	13.74	-0.22	100	16.20
1050	6.11	0	1.510	-0.01	246	0	6.94	0.27	184	-10	13.82	-0.08	100	16.20
1055	6.12	-0.01	1.510	0	245	1	7.10	-0.16	182	2	13.99	-0.17	100	16.20
1100	6.13	-0.01	1.550	-0.04	244	1	6.52	0.58	177	5	14.16	-0.17	100	16.20
1105	6.14	-0.01	1.550	0	237	7	6.95	-0.43	138	39	14.25	-0.09	100	16.20
1110	6.13	0.01	1.530	0.02	241	-4	6.59	0.36	111	27	14.40	-0.15	100	16.20
1115	6.13	0	1.520	0.01	242	-1	6.99	-0.40	100	11	14.49	-0.09	100	16.20
1120	6.13	0	1.510	0.01	242	0	6.34	0.65	83.1	16.9	14.58	-0.09	100	16.20
1125	6.13	0	1.500	0.01	242	0	6.35	-0.01	68.9	14.2	14.77	-0.19	100	16.20
1130	6.12	0.01	1.490	0.01	243	-1	6.54	-0.19	62.5	6.4	14.87	-0.1	100	16.20
1135	6.12	0	1.480	0.01	244	-1	6.69	-0.15	55.6	6.9	14.99	-0.12	100	16.20
1140	6.12	0	1.470	0.01	245	-1	6.10	0.59	51.6	4	15.13	-0.14	100	16.20
1145	6.13	-0.01	1.450	0.02	246	-1	6.08	0.02	52.3	-0.7	15.26	-0.77	100	16.20

COMMENTS: **Sample @ 1150**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>Melissa Cameron, Brad Hewitt</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: HPIMW2	WELL DEPTH: <u>20.56</u>	
WELL PERMIT #:	WELL DIAMETER: <u>4"</u>	SCREENED/OPEN INTERVAL: _____

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52-TXUO4VKV</u>	
PID BACKGROUND: <u><1</u>	PUMP INTAKE DEPTH: <u>18.00</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>14.47</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1232	6.09	NA	0.268	NA	-6	NA	1.99	NA	202	NA	15.27	NA	150	14.60
1237	6.08	0.01	0.247	0.021	-10	4	1.94	0.05	166	36	15.02	0.25	150	14.85
1242	6.07	0.01	0.243	0.004	-16	6	1.35	0.59	154	12	14.81	0.21	150	14.90
1247	6.09	-0.02	0.252	-0.009	-20	4	1.11	0.24	136	18	14.77	0.04	150	14.90
1252	6.10	-0.01	0.260	-0.008	-25	5	0.93	0.18	105	31	14.80	-0.03	150	14.90
1257	6.12	-0.02	0.266	-0.006	-28	3	0.81	0.12	92.5	12.5	14.84	-0.04	150	14.90
1302	6.14	-0.02	0.273	-0.007	-30	2	0.72	0.09	82.3	10.2	14.80	0.04	150	14.90
1307	6.13	0.01	0.282	-0.009	-33	3	2.31	-1.59	82	0.3	14.92	-0.12	150	14.90
1312	6.17	-0.04	0.289	-0.007	-35	2	0.89	1.42	766.8	-684.8	14.89	0.03	150	14.90
1317	6.18	-0.01	0.298	-0.009	-36	1	0.57	0.32	68.4	698.4	14.78	0.11	150	14.90
1322	6.19	-0.01	0.306	-0.008	-37	1	0.52	0.05	62.7	5.7	14.74	0.04	150	14.90
1327	6.20	-0.01	0.313	-0.007	-38	1	0.51	0.01	63	-0.3	14.69	0.05	150	14.90
1332	6.21	-0.01	0.320	-0.007	-38	0	0.53	-0.02	58.1	4.9	14.72	-0.03	150	14.90
1337	6.21	0	0.332	-0.012	-38	0	0.55	-0.02	56.1	2	14.51	0.21	150	14.90
1342	6.21	0	0.343	-0.011	-37	-1	0.51	0.04	51.3	4.8	14.39	0.12	150	14.90
1347	6.23	-0.02	0.349	-0.006	-36	-1	0.55	-0.04	51.6	-0.3	14.35	0.04	150	14.90
1352	6.23	0	0.360	-0.011	-34	-2	0.48	0.07	46	5.6	14.36	-0.01	150	14.90
1357	6.23	0	0.367	-0.007	-33	-1	0.45	0.03	45.5	0.5	14.30	0.06	150	14.90
1402	6.24	-0.01	0.378	-0.011	-30	-3	0.46	-0.01	43.2	2.3	14.37	-0.07	150	14.90
1407	6.24	0	0.390	-0.012	-26	-4	0.42	0.04	39.6	3.6	14.49	-0.12	150	14.90
1412	6.25	-0.01	0.395	-0.005	-23	-3	0.40	0.02	38.5	1.1	14.55	-0.06	150	14.90
1417	6.25	0	0.400	-0.005	-18	-5	0.41	-0.01	36.6	1.9	14.55	0	150	14.90

COMMENTS: **Sample @ 1420**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/9/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Partly Sunny</u>		

MONITOR WELL #: MW01A	WELL DEPTH:	<u>27.77</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>17.77-27.77</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>20.27 ft below TOC</u>
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>14.64 ft below TOC</u>

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
822	5.19	NA	0.053	NA	301	NA	14.33	NA	1000	NA	10.72	NA	150	14.70
827	4.96	0.23	0.045	0.008	332	-31	12.57	1.76	1000	0	10.30	0.42	150	14.70
832	4.92	0.04	0.420	-0.375	348	-16	12.21	0.36	534	466	10.22	0.08	150	14.70
837	4.93	-0.01	0.041	0.379	355	-7	11.98	0.23	326	208	10.26	-0.04	150	14.70
842	4.92	0.01	0.041	0	360	-5	11.92	0.06	221	105	10.26	0	150	14.70
847	4.92	0	0.041	0	364	-4	11.84	0.08	173	48	10.32	-0.06	150	14.70
852	4.92	0	0.041	0	366	-2	11.83	0.01	137	36	10.36	-0.04	150	14.70
857	4.92	0	0.042	-0.001	368	-2	11.55	0.28	113	24	10.30	0.06	150	14.70
902	4.92	0	0.041	0.001	370	-2	11.50	0.05	91.1	21.9	10.24	0.06	150	14.70
907	4.93	-0.01	0.041	0	371	-1	11.87	-0.37	82.5	8.6	10.31	-0.07	150	14.70
912	4.93	0	0.041	0	372	-1	11.24	0.63	68	14.5	10.35	-0.04	150	14.70
917	4.93	0	0.041	0	372	0	11.27	-0.03	5.1	62.9	10.36	-0.01	150	14.70
922	4.94	-0.01	0.041	0	373	-1	11.29	-0.02	50.7	-45.6	10.37	-0.01	150	14.70
927	4.94	0	0.042	-0.001	373	0	11.05	0.24	43.3	7.4	10.42	-0.05	150	14.70
932	4.95	-0.01	0.042	0	373	0	11.13	-0.08	39.9	3.4	10.51	-0.09	150	14.70
937	4.96	-0.01	0.042	-0.001	374	-1	11.11	0.02	40.7	-0.8	10.56	-0.05	150	14.70

COMMENTS: **Sample @ 0940**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/9/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Partly Sunny</u>		

MONITOR WELL #: MW01B	WELL DEPTH:	<u>27.77</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>17.77-27.77</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>25.27</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>14.64</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
950	5.01	NA	0.041	NA	356	NA	14.33	NA	241	NA	10.37	NA	150	14.70
955	5.02	-0.01	0.043	-0.002	358	-2	12.57	1.76	350	-109	10.62	-0.25	150	14.70
1000	5.03	-0.01	0.044	-0.001	356	2	12.21	0.36	366	-16	10.69	-0.07	150	14.70
1005	5.12	-0.09	0.042	0.002	314	42	11.98	0.23	306	60	10.65	0.04	150	14.70
1010	5.08	0.04	0.042	0	340	-26	11.92	0.06	278	28	10.83	-0.18	150	14.70
1015	5.04	0.04	0.042	0	352	-12	11.84	0.08	228	50	10.87	-0.04	150	14.70
1020	5.04	0	0.044	-0.002	355	-3	11.83	0.01	188	40	10.87	0	150	14.70
1025	5.02	0.02	0.043	0.001	359	-4	11.55	0.28	140	48	10.85	0.02	150	14.70
1030	4.98	0.04	0.042	0.001	360	-1	11.50	0.05	96.2	43.8	10.93	-0.08	150	14.70
1035	4.97	0.01	0.042	0	364	-4	11.87	-0.37	65	31.2	10.98	-0.05	150	14.70
1040	4.98	-0.01	0.042	0	351	13	11.24	0.63	49.4	15.6	11.12	-0.14	150	14.70
1045	4.98	0	0.041	0.001	360	-9	11.27	-0.03	39.7	9.7	11.19	-0.07	150	14.70
1050	4.98	0	0.041	0	362	-2	11.29	-0.02	36.3	3.4	11.16	0.03	150	14.70
1055	4.94	0.04	0.042	-0.001	365	-3	11.05	0.24	35.8	0.5	11.06	0.1	150	14.70

COMMENTS: **Sample @ 1100**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/9/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Partly Sunny</u>		

MONITOR WELL #: MW02	WELL DEPTH:	<u>24.77</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>14.77-24.77</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>20.07 ft below TOC</u>
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>16.07 ft below TOC</u>

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1138	5.87	NA	0.427	NA	264	NA	9.83	NA	1000	NA	12.73	NA	100	16.07
1143	6.03	-0.16	0.431	-0.004	247	17	9.14	0.69	1000	0	12.94	-0.21	100	16.07
1148	6.05	-0.02	0.426	0.005	242	5	8.64	0.50	1000	0	13.07	-0.13	100	16.07
1153	6.06	-0.01	0.422	0.004	239	3	8.47	0.17	1000	0	13.08	-0.01	100	16.07
1158	6.07	-0.01	0.417	0.005	237	2	8.72	-0.25	758	242	13.06	0.02	100	16.07
1203	6.08	-0.01	0.412	0.005	237	0	8.44	0.28	670	88	13.16	-0.1	100	16.07
1208	6.08	0	0.408	0.004	236	1	8.20	0.24	615	55	13.19	-0.03	100	16.07
1213	6.08	0	0.404	0.004	236	0	7.73	0.47	524	91	13.25	-0.06	100	16.07
1218	6.08	0	0.402	0.002	237	-1	7.23	0.50	428	96	13.26	-0.01	100	16.07
1223	6.08	0	0.399	0.003	238	-1	8.24	-1.01	351	77	13.29	-0.03	100	16.07
1228	6.08	0	0.401	-0.002	241	-3	8.02	0.22	284	67	13.22	0.07	100	16.07
1233	6.07	0.01	0.402	-0.001	242	-1	7.73	0.29	235	49	13.32	-0.1	100	16.07
1238	6.06	0.01	0.401	0.001	243	-1	7.92	-0.19	196	39	13.36	-0.04	100	16.07
1243	6.06	0	0.404	-0.003	245	-2	8.20	-0.28	178	18	13.29	0.07	100	16.07
1248	6.06	0	0.404	0	245	0	8.31	-0.11	157	21	13.31	-0.02	100	16.07
1253	6.06	0	0.401	0.003	247	-2	7.80	0.51	123	34	13.39	-0.08	100	16.07
1258	6.06	0	0.398	0.003	248	-1	7.76	0.04	103	20	13.45	-0.06	100	16.07
1303	6.06	0	0.397	0.001	249	-1	7.64	0.12	89.6	13.4	13.50	-0.05	100	16.07
1308	6.06	0	0.396	0.001	250	-1	7.49	0.15	82.4	7.2	13.55	-0.05	100	16.07
1313	6.06	0	0.395	0.001	251	-1	7.93	-0.44	75.5	6.9	13.51	0.04	100	16.07
1318	6.06	0	0.393	0.002	252	-1	8.24	-0.31	66.1	9.4	13.41	0.1	100	16.07
1323	6.06	0	0.387	0.006	252	0	7.92	0.32	63.3	2.8	13.46	-0.05	100	16.07
1328	6.06	0	0.383	0.004	252	0	7.69	0.23	59.7	3.6	13.52	-0.06	100	16.07

COMMENTS: **Sample @ 1330**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/6/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW03A	WELL DEPTH: <u>67.65</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>57.65-67.65</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>60.15</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>16.71</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1110	7.10	NA	0.417	NA	171	NA	7.04	NA	314	NA	10.81	NA	150	16.85
1115	6.69	0.41	0.448	-0.031	173	-2	6.12	0.92	523	-209	11.14	-0.33	150	16.85
1120	6.27	0.42	0.477	-0.029	181	-8	5.12	1	567	-44	11.72	-0.58	150	16.85
1125	5.99	0.28	0.499	-0.022	190	-9	4.50	0.62	476	91	12.03	-0.31	150	16.85
1130	5.87	0.12	0.510	-0.011	196	-6	4.39	0.11	429	47	12.34	-0.31	150	16.85
1135	5.79	0.08	0.513	-0.003	202	-6	4.33	0.06	409	20	12.34	0	150	16.85
1140	5.81	-0.02	0.512	0.001	204	-2	4.43	-0.1	422	-13	12.48	-0.14	150	16.85
1145	5.81	0	0.508	0.004	206	-2	4.52	-0.09	406	16	12.51	-0.03	150	16.85

COMMENTS: **Sample @ 1150**
 ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/6/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW03B	WELL DEPTH: <u>67.65</u>	SCREENED/OPEN INTERVAL: <u>57.65-67.65</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>65.15</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>16.71</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1200	5.89	NA	0.487	NA	207	NA	5.01	NA	800	NA	12.70	NA	150	16.85
1205	6.02	-0.13	0.455	0.032	204	3	4.78	0.23	800	0	12.86	-0.16	150	16.85
1210	6.01	0.01	0.445	0.01	205	-1	5.03	-0.25	727	73	12.89	-0.03	150	16.85
1215	6.00	0.01	0.441	0.004	206	-1	5.08	-0.05	672	55	12.90	-0.01	150	16.85
1220	6.01	-0.01	0.439	0.002	208	-2	5.00	0.08	615	57	12.98	-0.08	150	16.85
1225	5.98	0.03	0.441	-0.002	209	-1	4.96	0.04	534	81	12.98	0	150	16.85
1230	5.98	0	0.440	0.001	210	-1	4.81	0.15	491	43	12.84	0.14	150	16.85
1235	5.97	0.01	0.440	0	211	-1	4.74	0.07	485	6	12.87	-0.03	150	16.85

COMMENTS: **Sample @ 1240**
 ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	Joan's Cleaners/NJDEP	CONSULTING FIRM:	The Louis Berger Group, Inc.											
DATE:	3/6/2012	FIELD PERSONNEL:	B. Hewitt, M. Cameron											
WEATHER:	30-40°F, Sunny, Clear													
MONITOR WELL #:	MW04A	WELL DEPTH:	66.75											
WELL PERMIT #:		WELL DIAMETER:	2"											
		SCREENED/OPEN INTERVAL:	56.75-66.75											
WATER QUALITY METER & SERIAL No.:	Horiba U-52 VH8E7DU4													
PID BACKGROUND :	<1	PUMP INTAKE DEPTH:	59.25 ft below TOC											
PID BENEATH OUTER CAP:	<1													
PID BENEATH INNER CAP:	<1	DEPTH TO WATER BEFORE PUMP INSTALLATION:	7.50 ft below TOC											
TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1330	6.13	NA	0.161	NA	187	NA	10.33	NA	118	NA	11.97	NA	200	8.02
1335	6.02	0.11	0.155	0.006	196	-9	7.63	2.7	800	-682	11.82	0.15	200	8.02
1340	5.90	0.12	0.147	0.008	207	-11	7.31	0.32	800	0	11.90	-0.08	200	8.02
1345	5.86	0.04	0.144	0.003	214	-7	7.19	0.12	800	0	12.01	-0.11	200	8.02
1350	5.76	0.1	0.141	0.003	221	-7	7.23	-0.04	800	0	11.97	0.04	200	8.02
1355	5.75	0.01	0.139	0.002	226	-5	6.91	0.32	800	0	11.93	0.04	200	8.02
1400	5.72	0.03	0.138	0.001	231	-5	6.74	0.17	800	0	11.89	0.04	200	8.02
1405	5.67	0.05	0.137	0.001	237	-6	6.69	0.05	800	0	11.88	0.01	200	8.02
1410	5.66	0.01	0.136	0.001	239	-2	6.69	0	800	0	11.88	0	200	8.02

COMMENTS: **Sample @ 1415**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/6/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW04B	WELL DEPTH: <u>66.75</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>56.75-66.75</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>64.25</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>7.50</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1425	5.66	NA	0.138	NA	242	NA	6.80	NA	800	NA	11.78	NA	200	8.02
1430	5.70	-0.04	0.139	-0.001	246	-4	6.37	0.43	800	0	11.73	0.05	200	8.02
1435	5.64	0.06	0.138	0.001	251	-5	6.42	-0.05	800	0	11.70	0.03	200	8.02
1440	5.59	0.05	0.136	0.002	256	-5	6.40	0.02	800	0	11.66	0.04	200	8.02
1445	5.55	0.04	0.134	0.002	262	-6	6.32	0.08	800	0	11.76	-0.1	200	8.02
1450	5.55	0	0.132	0.002	268	-6	6.54	-0.22	800	0	11.71	0.05	200	8.02
1455	5.53	0.02	0.134	-0.002	268	0	6.40	0.14	800	0	11.77	-0.06	200	8.02
1500	5.52	0.01	0.133	0.001	268	0	6.38	0.02	800	0	11.74	0.03	200	8.02

COMMENTS: **Sample @ 1505**
ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW05A	WELL DEPTH: <u>68.25</u>	SCREENED/OPEN INTERVAL: <u>58.25-68.25</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>60.75</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>6.11</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1125	5.60	NA	0.181	NA	176	NA	4.66	NA	81.0	NA	13.29	NA	100	6.70
1130	5.18	0.42	0.196	-0.015	220	-44	3.20	1.46	297	-216	13.35	-0.06	100	6.70
1135	4.65	0.53	0.209	-0.013	261	-41	1.97	1.23	443	-146	13.45	-0.1	100	6.70
1140	4.56	0.09	0.208	0.001	266	-5	1.68	0.29	420	23	13.51	-0.06	100	6.70
1145	4.50	0.06	0.198	0.01	267	-1	1.43	0.25	349	71	13.56	-0.05	100	6.70
1150	4.47	0.03	0.186	0.012	268	-1	1.30	0.13	264	85	13.62	-0.06	100	6.70
1155	4.48	-0.01	0.178	0.008	267	1	1.13	0.17	199	65	13.72	-0.1	100	6.70
1200	4.48	0	0.175	0.003	269	-2	1.11	0.02	175	24	13.74	-0.02	100	6.70
1205	4.48	0	0.172	0.003	268	1	1.05	0.06	151	24	13.76	-0.02	100	6.70
1210	4.46	0.02	0.169	0.003	268	0	0.99	0.06	133	18	13.82	-0.06	100	6.70
1215	4.47	-0.01	0.166	0.003	267	1	0.95	0.04	116	17	13.84	-0.02	100	6.70
1220	4.45	0.02	0.165	0.001	269	-2	0.97	-0.02	111	5	13.86	-0.02	100	6.70
1225	4.47	-0.02	0.165	0	268	1	0.89	0.08	106	5	13.85	0.01	100	6.70

COMMENTS: **Sample @ 1230**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW05B	WELL DEPTH: <u>68.25</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>58.25-68.25</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>65.75</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>6.11</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1240	4.48	NA	0.163	NA	268	NA	1.47	NA	713	NA	13.40	NA	100	6.70
1245	4.49	-0.01	0.163	0	268	0	1.04	0.43	692	21	13.24	0.16	100	6.70
1250	4.64	-0.15	0.202	-0.039	263	5	0.89	0.15	800	-108	13.21	0.03	100	6.70
1255	4.70	-0.06	0.213	-0.011	267	-4	0.83	0.06	800	0	13.28	-0.07	100	6.70
1300	4.72	-0.02	0.214	-0.001	267	0	0.80	0.03	800	0	13.33	-0.05	100	6.70
1305	4.72	0	0.213	0.001	265	2	0.77	0.03	800	0	13.39	-0.06	100	6.70
1310	4.71	0.01	0.211	0.002	265	0	0.78	-0.01	800	0	13.47	-0.08	100	6.70
1315	4.71	0	0.210	0.001	265	0	0.74	0.04	800	0	13.47	0	100	6.70

COMMENTS: **Sample @ 1320**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW06A	WELL DEPTH: <u>68.20</u>	SCREENED/OPEN INTERVAL: <u>58.20-68.20</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>60.7</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>2.72</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
910	5.86	NA	0.159	NA	215	NA	3.85	NA	800	NA	10.02	NA	100	3.65
915	5.84	0.02	0.154	0.005	209	6	3.45	0.4	800	0	9.86	0.16	100	3.67
920	5.80	0.04	0.150	0.004	208	1	3.23	0.22	800	0	9.94	-0.08	100	3.69
925	5.75	0.05	0.146	0.004	209	-1	2.82	0.41	800	0	10.05	-0.11	100	3.71
930	5.70	0.05	0.143	0.003	207	2	2.60	0.22	800	0	10.16	-0.11	100	3.72
935	5.69	0.01	0.141	0.002	199	8	2.36	0.24	800	0	10.25	-0.09	100	3.72
940	5.66	0.03	0.140	0.001	195	4	2.19	0.17	800	0	10.37	-0.12	100	3.72
945	5.64	0.02	0.139	0.001	191	4	2.00	0.19	800	0	10.53	-0.16	100	3.72
950	5.60	0.04	0.137	0.002	184	7	1.76	0.24	800	0	10.62	-0.09	100	3.72
955	5.59	0.01	0.136	0.001	179	5	1.73	0.03	800	0	10.70	-0.08	100	3.72
1000	5.57	0.02	0.136	0	178	1	1.65	0.08	800	0	10.73	-0.03	100	3.72

COMMENTS: **Sample @ 1005**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW06B	WELL DEPTH: <u>68.20</u>	SCREENED/OPEN INTERVAL: <u>58.20-68.20</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>65.7</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>2.72</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1015	5.49	NA	0.132	NA	173	NA	2.24	NA	800	NA	10.98	NA	100	3.72
1020	5.45	0.04	0.135	-0.003	166	7	1.41	0.83	800	0	10.95	0.03	100	3.72
1025	5.45	0	0.135	0	162	4	1.20	0.21	800	0	10.99	-0.04	100	3.72
1030	5.45	0	0.135	0	162	0	1.13	0.07	800	0	11.17	-0.18	100	3.72
1035	5.40	0.05	0.135	0	163	-1	1.08	0.05	800	0	11.17	0	100	3.72
1040	5.37	0.03	0.134	0.001	163	0	1.03	0.05	800	0	11.21	-0.04	100	3.72
1045	5.36	0.01	0.134	0	163	0	1.01	0.02	800	0	11.31	-0.1	100	3.72
1050	5.36	0	0.134	0	164	-1	1.02	-0.01	800	0	11.28	0.03	100	3.72

COMMENTS: **Sample @ 1055; Collect DUP01**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/5/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Partly Sunny</u>	

MONITOR WELL #: MW07A	WELL DEPTH: <u>138.71</u>	SCREENED/OPEN INTERVAL: <u>130-140'</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>132.5</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u>1.2</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>5.95</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1120	7.10	NA	0.422	NA	208	NA	6.13	NA	133	NA	9.85	NA	100	6.11
1125	7.32	-0.22	0.385	0.037	172	36	4.13	2	158	-25	10.02	-0.17	100	6.20
1130	7.45	-0.13	0.378	0.007	130	42	3.08	1.05	154	4	10.12	-0.1	100	6.22
1135	7.48	-0.03	0.377	0.001	115	15	2.77	0.31	148	6	9.79	0.33	100	6.25
1140	7.51	-0.03	0.374	0.003	104	11	2.28	0.49	147	1	9.99	-0.2	100	6.27
1145	7.55	-0.04	0.370	0.004	96	8	2.17	0.11	175	-28	10.25	-0.26	100	6.29
1150	7.55	0	0.369	0.001	91	5	1.91	0.26	220	-45	10.65	-0.4	100	6.29
1155	7.57	-0.02	0.367	0.002	87	4	1.83	0.08	230	-10	10.75	-0.1	100	6.29
1200	7.58	-0.01	0.367	0	83	4	1.72	0.11	239	-9	10.81	-0.06	100	6.29

COMMENTS: **Sample @ 1205**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/5/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Partly Sunny</u>	

MONITOR WELL #: MW07B	WELL DEPTH: <u>138.71</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>128.71-138.71</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>136.5</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u>1.2</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>5.95</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1210	7.58	NA	0.359	NA	105	NA	2.59	NA	800	NA	10.62	NA	100	6.29
1215	7.60	-0.02	0.341	0.018	93	12	1.70	0.89	800	0	10.96	-0.34	100	6.29
1220	7.66	-0.06	0.321	0.02	86	7	1.41	0.29	800	0	11.10	-0.14	100	6.29
1225	7.76	-0.1	0.315	0.006	76	10	1.31	0.1	800	0	11.03	0.07	100	6.29
1230	7.78	-0.02	0.312	0.003	72	4	1.25	0.06	800	0	11.01	0.02	100	6.29
1235	7.78	0	0.309	0.003	69	3	1.22	0.03	800	0	11.00	0.01	100	6.29
1240	7.81	-0.03	0.307	0.002	67	2	1.21	0.01	800	0	10.98	0.02	100	6.29
1245	7.82	-0.01	0.303	0.004	66	1	1.21	0	800	0	11.01	-0.03	100	6.29

COMMENTS: **Sample @ 1250**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/5/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Partly Sunny</u>		

MONITOR WELL #:	MW08A	WELL DEPTH:	<u>67.80</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>52.50-62.50</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>62.50</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>5.96</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1125	6.78	NA	0.418	NA	102	NA	4.69	NA	1000	NA	12.54	NA	175	6.10
1130	7.08	-0.3	0.288	0.13	84	18	3.58	1.11	1000	0	12.83	-0.29	175	6.10
1135	7.10	-0.02	0.205	0.083	58	26	2.75	0.83	1000	0	12.82	0.01	175	6.10
1140	6.98	0.12	0.182	0.023	47	11	2.01	0.74	1000	0	12.80	0.02	175	6.10
1145	6.82	0.16	0.199	-0.017	40	7	3.36	-1.35	1000	0	12.80	0	175	6.10
1150	6.85	-0.03	0.222	-0.023	37	3	2.60	0.76	1000	0	12.80	0	175	6.10
1155	6.94	-0.09	0.161	0.061	41	-4	1.85	0.75	1000	0	12.77	0.03	175	6.10
1200	6.75	0.19	0.083	0.078	72	-31	3.55	-1.7	1000	0	12.74	0.03	175	6.10
1205	6.81	-0.06	0.102	-0.019	60	12	1.75	1.8	1000	0	12.66	0.08	175	6.10
1210	6.85	-0.04	0.068	0.034	53	7	1.84	-0.09	1000	0	12.61	0.05	175	6.10
1215	6.75	0.1	0.078	-0.01	72	-19	1.89	-0.05	1000	0	12.58	0.03	175	6.10
1220	6.45	0.3	0.074	0.004	81	-9	1.41	0.48	1000	0	12.57	0.01	175	6.10
1225	6.55	-0.1	0.078	-0.004	91	-10	1.37	0.04	1000	0	12.54	0.03	175	6.10
1230	6.50	0.05	0.071	0.007	90	1	1.45	-0.08	1000	0	12.51	0.03	175	6.10

COMMENTS: **Sample @ 1235**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>3/5/2012</u>	FIELD PERSONNEL: <u>Melissa Cameron, Brad Hewitt</u>
WEATHER: <u>30-40°F, Partly Sunny</u>	

MONITOR WELL #: MW08B	WELL DEPTH: <u>67.80</u>	SCREENED/OPEN INTERVAL: _____
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: Horriba U-52-TXUO4VKV

PID BACKGROUND : <1 PUMP INTAKE DEPTH: 65.50 ft below TOC

PID BENEATH OUTER CAP: <1

PID BENEATH INNER CAP: <1 DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.96 ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1248	6.75	NA	0.103	NA	75	NA	1.92	NA	1000	NA	12.45	NA	175	6.00
1253	6.63	0.12	0.096	0.007	78	-3	1.32	0.6	1000	0	12.64	-0.19	175	6.10
1258	6.54	0.09	0.094	0.002	80	-2	1.19	0.13	1000	0	12.59	0.05	175	6.10
1303	6.52	0.02	0.091	0.003	82	-2	1.13	0.06	1000	0	12.68	-0.09	175	6.10
1308	6.48	0.04	0.090	0.001	84	-2	1.04	0.09	1000	0	12.79	-0.11	175	6.10
1313	6.45	0.03	0.088	0.002	84	0	1.03	0.01	1000	0	12.76	0.03	175	6.10
1318	6.42	0.03	0.090	-0.002	83	1	2.60	-1.57	915	85	12.81	-0.05	175	6.10
1323	6.41	0.01	0.089	0.001	80	3	1.13	1.47	1000	-85	12.85	-0.04	175	6.10
1328	6.39	0.02	0.089	0	80	0	0.58	0.55	1000	0	12.82	0.03	175	6.10
1333	6.38	0.01	0.087	0.002	80	0	0.54	0.04	1000	0	12.64	0.18	175	6.10
1338	6.37	0.01	0.088	-0.001	80	0	0.56	-0.02	1000	0	12.71	-0.07	175	6.10

COMMENTS: **Sample @ 1340**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW09A	WELL DEPTH: <u>64.16</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>54.16-64.16</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>56.66</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>13.99</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1405	5.80	NA	0.110	NA	196	NA	3.20	NA	410	NA	14.22	NA	200	14.15
1410	5.76	0.04	0.108	0.002	191	5	2.17	1.03	800	-390	13.94	0.28	200	14.15
1415	5.72	0.04	0.108	0	187	4	1.62	0.55	800	0	13.71	0.23	200	14.15
1420	5.73	-0.01	0.104	0.004	180	7	1.30	0.32	800	0	13.52	0.19	200	14.15
1425	5.68	0.05	0.101	0.003	177	3	1.07	0.23	800	0	13.49	0.03	200	14.15
1430	5.63	0.05	0.099	0.002	177	0	0.97	0.1	800	0	13.57	-0.08	200	14.15
1435	5.59	0.04	0.096	0.003	177	0	0.83	0.14	800	0	13.43	0.14	200	14.15
1440	5.58	0.01	0.096	0	178	-1	0.82	0.01	800	0	13.35	0.08	200	14.15
1445	5.55	0.03	0.095	0.001	178	0	0.78	0.04	800	0	13.41	-0.06	200	14.15

COMMENTS: **Sample @ 1450**
ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/7/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>30-40°F, Sunny, Clear</u>	

MONITOR WELL #: MW09B	WELL DEPTH: <u>64.16</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>54.16-64.16</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>61.66</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>13.99</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1500	5.60	NA	0.088	NA	174	NA	0.83	NA	800	NA	12.93	NA	200	14.15
1505	5.61	-0.01	0.086	0.002	177	-3	0.65	0.18	800	0	12.91	0.02	200	14.15
1510	5.58	0.03	0.085	0.001	179	-2	0.61	0.04	800	0	12.83	0.08	200	14.15
1515	5.57	0.01	0.084	0.001	178	1	0.65	-0.04	800	0	12.86	-0.03	200	14.15
1520	5.55	0.02	0.082	0.002	180	-2	0.58	0.07	800	0	12.82	0.04	200	14.15
1525	5.53	0.02	0.081	0.001	179	1	0.60	-0.02	800	0	12.79	0.03	200	14.15
1530	5.51	0.02	0.080	0.001	180	-1	0.58	0.02	800	0	12.82	-0.03	200	14.15
1535	5.49	0.02	0.080	0	180	0	0.58	0	800	0	12.78	0.04	200	14.15

COMMENTS: **Sample @ 1540**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/6/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	MW10A	WELL DEPTH:	<u>47.72</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>37.72-47.72</u>

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52-TXUO4VKV</u>			
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>40.22</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>9.32</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1125	6.06	NA	0.190	NA	197	NA	8.93	NA	1000	NA	7.93	NA	125	9.40
1130	5.63	0.43	0.173	0.017	247	-50	8.27	0.66	1000	0	9.07	-1.14	125	9.40
1135	5.73	-0.1	0.172	0.001	250	-3	8.03	0.24	1000	0	9.29	-0.22	125	9.40
1140	5.66	0.07	0.166	0.006	261	-11	7.66	0.37	1000	0	9.56	-0.27	125	9.40
1145	5.60	0.06	0.161	0.005	275	-14	7.44	0.22	730	270	9.97	-0.41	125	9.40
1150	5.59	0.01	0.161	0	275	0	7.30	0.14	591	139	10.12	-0.15	125	9.40
1155	5.56	0.03	0.159	0.002	282	-7	7.31	-0.01	410	181	10.27	-0.15	125	9.40
1200	5.54	0.02	0.159	0	287	-5	7.00	0.31	369	41	10.03	0.24	125	9.40
1205	5.52	0.02	0.159	0	289	-2	7.15	-0.15	327	42	9.98	0.05	125	9.40
1210	5.51	0.01	0.159	0	291	-2	7.11	0.04	295	32	10.03	-0.05	125	9.40
1215	5.51	0	0.160	-0.001	291	0	7.15	-0.04	278	17	9.70	0.33	125	9.40
1220	5.50	0.01	0.160	0	289	2	7.01	0.14	251	27	10.09	-0.39	125	9.40
1225	5.50	0	0.159	0.001	286	3	7.40	-0.39	245	6	10.38	-0.29	125	9.40
1230	5.50	0	0.160	-0.001	289	-3	7.36	0.04	225	20	10.47	-0.09	125	9.40
1235	5.50	0	0.159	0.001	289	0	6.95	0.41	188	37	10.55	-0.08	125	9.40
1240	5.50	0	0.159	0	291	-2	6.92	0.03	194	-6	10.55	0	125	9.40
1245	6.37	-0.87	0.160	-0.001	295	-4	6.81	0.11	189	5	10.75	-0.2	125	9.40

COMMENTS: **Sample @ 1250**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/6/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	MW10B	WELL DEPTH:	<u>47.72</u>	SCREENED/OPEN INTERVAL:	<u>37.72-47.72</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>		

WATER QUALITY METER & SERIAL No.:		<u>Horriba U-52-TXUO4VKV</u>	
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>45.22</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>9.32</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1302	5.55	NA	0.157	NA	274	NA	8.54	NA	410	NA	11.27	NA	200	9.40
1307	5.58	-0.03	0.156	0.001	286	-12	6.83	1.71	531	-121	11.54	-0.27	200	9.40
1312	5.58	0	0.155	0.001	291	-5	6.75	0.08	643	-112	11.57	-0.03	200	9.40
1317	5.56	0.02	0.153	0.002	299	-8	6.89	-0.14	588	55	11.60	-0.03	200	9.40
1322	5.54	0.02	0.153	0	304	-5	6.91	-0.02	459	129	11.66	-0.06	200	9.40
1327	5.53	0.01	0.155	-0.002	307	-3	6.93	-0.02	439	20	11.66	0	200	9.40
1332	5.51	0.02	0.156	-0.001	309	-2	6.87	0.06	367	72	11.68	-0.02	200	9.40
1337	5.51	0	0.156	0	311	-2	6.88	-0.01	341	26	11.72	-0.04	200	9.40
1342	5.50	0.01	0.157	-0.001	313	-2	6.83	0.05	335	6	11.70	0.02	200	9.40

COMMENTS: **Sample @ 1345**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/6/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	MW11A	WELL DEPTH:	<u>34.00</u>	SCREENED/OPEN INTERVAL:	<u>24.00-34.00</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>		

WATER QUALITY METER & SERIAL No.:		<u>Horriba U-52-TXUO4VKV</u>	
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>26.50</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>11.14</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1425	5.49	NA	0.266	NA	269	NA	13.33	NA	85.5	NA	11.38	NA	225	11.20
1430	5.45	0.04	0.317	-0.051	297	-28	8.30	5.03	57.5	28	11.29	0.09	225	11.20
1435	5.45	0	0.332	-0.015	301	-4	8.03	0.27	55.2	2.3	11.34	-0.05	225	11.20
1440	5.45	0	0.348	-0.016	305	-4	7.71	0.32	51.9	3.3	11.38	-0.04	225	11.20
1445	5.45	0	0.369	-0.021	308	-3	7.61	0.1	49.1	2.8	11.39	-0.01	225	11.20
1450	5.44	0.01	0.382	-0.013	307	1	7.47	0.14	45.6	3.5	11.37	0.02	225	11.20
1455	5.42	0.02	0.410	-0.028	311	-4	7.29	0.18	43.1	2.5	11.40	-0.03	225	11.20
1500	5.41	0.01	0.428	-0.018	314	-3	7.24	0.05	47.5	-4.4	11.50	-0.1	225	11.20
1505	5.41	0	0.434	-0.006	314	0	7.16	0.08	45.4	2.1	11.58	-0.08	225	11.20
1510	5.41	0	0.444	-0.01	314	0	7.22	-0.06	41	4.4	11.63	-0.05	225	11.20
1515	5.40	0.01	0.452	-0.008	314	0	7.11	0.11	41.2	-0.2	11.53	0.1	225	11.20
1520	5.39	0.01	0.457	-0.005	315	-1	7.06	0.05	42.1	-0.9	11.50	0.03	225	11.20

COMMENTS: **Sample @ 1525**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/6/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	MW11B	WELL DEPTH:	<u>34.00</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>24.00-34.00</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>31.50</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>11.14</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1532	5.37	NA	0.521	NA	299	NA	8.69	NA	290	NA	11.50	NA	225	11.20
1537	5.29	0.08	0.632	-0.111	324	-25	7.28	1.41	338	-48	11.83	-0.33	225	11.20
1542	5.29	0	0.667	-0.035	327	-3	7.14	0.14	288	50	11.86	-0.03	225	11.20
1547	5.31	-0.02	0.654	0.013	322	5	6.94	0.2	227	61	11.89	-0.03	225	11.20
1552	5.33	-0.02	0.632	0.022	318	4	6.91	0.03	190	37	11.83	0.06	225	11.20
1557	5.33	0	0.608	0.024	317	1	6.84	0.07	170	20	11.82	0.01	225	11.20
1602	5.34	-0.01	0.582	0.026	315	2	7.50	-0.66	140	30	11.81	0.01	225	11.20
1607	5.34	0	0.565	0.017	317	-2	7.14	0.36	130	10	11.82	-0.01	225	11.20
1612	5.35	-0.01	0.549	0.016	318	-1	7.07	0.07	112	18	11.80	0.02	225	11.20
1617	5.35	0	0.535	0.014	318	0	7.05	0.02	104	8	11.77	0.03	225	11.20
1622	5.35	0	0.528	0.007	319	-1	6.93	0.12	96.1	7.9	11.78	-0.01	225	11.20
1627	5.35	0	0.523	0.005	319	0	6.94	-0.01	84.3	11.8	11.79	-0.01	225	11.20
1632	5.35	0	0.520	0.003	319	0	6.78	0.16	81.1	3.2	11.78	0.01	225	11.20
1637	5.36	-0.01	0.515	0.005	319	0	6.77	0.01	75.7	5.4	11.75	0.03	225	11.20

COMMENTS: **Sample @ 1640**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	Joan's Cleaners	CONSULTING FIRM:	The Louis Berger Group
DATE:	3/8/2012	FIELD PERSONNEL:	Melissa Cameron, Brad Hewitt
WEATHER:	50-60°F, Sunny		

MONITOR WELL #: MW12A	WELL DEPTH:	43.57
WELL PERMIT #:	WELL DIAMETER:	2"
	SCREENED/OPEN INTERVAL:	33.57-43.57

WATER QUALITY METER & SERIAL No.:	Horriba U-52-TXUO4VKV		
PID BACKGROUND :	<1	PUMP INTAKE DEPTH:	36.07 ft below TOC
PID BENEATH OUTER CAP:	<1		
PID BENEATH INNER CAP:	<1	DEPTH TO WATER BEFORE PUMP INSTALLATION:	10.73 ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
918	5.71	NA	0.507	NA	233	NA	8.62	NA	1000	NA	13.35	NA	125	10.70
923	5.36	0.35	0.520	-0.013	290	-57	7.00	1.62	1000	0	13.09	0.26	125	10.70
928	5.30	0.06	0.525	-0.005	304	-14	6.24	0.76	1000	0	12.18	0.91	125	10.70
933	5.26	0.04	0.523	0.002	311	-7	5.79	0.45	669	331	13.01	-0.83	125	10.70
938	5.24	0.02	0.518	0.005	317	-6	5.91	-0.12	388	281	13.28	-0.27	125	10.70
943	5.23	0.01	0.517	0.001	321	-4	5.80	0.11	281	107	13.49	-0.21	125	10.70
948	5.22	0.01	0.517	0	323	-2	5.69	0.11	241	40	13.54	-0.05	125	10.70
953	5.21	0.01	0.518	-0.001	325	-2	4.92	0.77	186	55	13.79	-0.25	125	10.70
958	5.21	0	0.521	-0.003	326	-1	5.75	-0.83	160	26	14.02	-0.23	125	10.70
1003	5.21	0	0.527	-0.006	326	0	5.63	0.12	140	20	14.34	-0.32	125	10.70
1008	5.22	-0.01	0.531	-0.004	326	0	5.80	-0.17	118	22	14.63	-0.29	125	10.70
1013	5.23	-0.01	0.535	-0.004	326	0	5.49	0.31	97.6	20.4	14.78	-0.15	125	10.70
1018	5.26	-0.03	0.538	-0.003	326	0	5.47	0.02	83.8	13.8	14.57	0.21	125	10.70
1023	5.27	-0.01	0.538	0	326	0	5.03	0.44	80	3.8	14.48	0.09	125	10.70
1028	5.28	-0.01	0.541	-0.003	326	0	5.39	-0.36	76.2	3.8	14.47	0.01	125	10.70

COMMENTS: **Sample @ 1030**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/8/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>50-60°F, Sunny</u>		

MONITOR WELL #: MW12B	WELL DEPTH:	<u>43.57</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>33.57-43.57</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>41.07 ft below TOC</u>
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>10.73 ft below TOC</u>

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1042	5.34	NA	0.564	NA	301	NA	9.66	NA	587	NA	13.78	NA	175	10.75
1047	5.36	-0.02	0.000	0.564	260	41	13.43	-3.77	210	377	14.52	-0.74	175	10.75
1052	5.38	-0.02	0.600	-0.6	306	-46	6.58	6.85	565	-355	13.22	1.3	175	10.75
1057	5.37	0.01	0.606	-0.006	314	-8	6.49	0.09	425	140	13.13	0.09	175	10.75
1102	5.35	0.02	0.606	0	320	-6	6.28	0.21	295	130	13.24	-0.11	175	10.75
1107	5.33	0.02	0.601	0.005	324	-4	6.01	0.27	232	63	13.25	-0.01	175	10.75
1112	5.32	0.01	0.601	0	326	-2	6.17	-0.16	162	70	13.32	-0.07	175	10.75
1117	5.30	0.02	0.599	0.002	330	-4	6.43	-0.26	134	28	13.40	-0.08	175	10.75
1122	5.28	0.02	0.596	0.003	330	0	6.28	0.15	110	24	13.46	-0.06	175	10.75
1127	5.28	0	0.593	0.003	334	-4	6.02	0.26	95.3	14.7	13.45	0.01	175	10.75
132	5.28	0	0.591	0.002	336	-2	6.03	-0.01	90.9	4.4	13.47	-0.02	175	10.75
1137	5.29	-0.01	0.593	-0.002	336	0	6.17	-0.14	79.6	11.3	13.55	-0.08	175	10.75
1142	5.30	-0.01	0.593	0	336	0	6.14	0.03	81	-1.4	13.50	0.05	175	10.75
1147	5.30	0	0.591	0.002	337	-1	6.02	0.12	73	8	13.57	-0.07	175	10.75

COMMENTS: **Sample @ 1150**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	Joan's Cleaners/NJDEP	CONSULTING FIRM:	The Louis Berger Group, Inc.											
DATE:	3/8/2012	FIELD PERSONNEL:	B. Hewitt, M. Cameron											
WEATHER:	50-60°F, Sunny													
MONITOR WELL #:	MW13A	WELL DEPTH:	97.96											
WELL PERMIT #:		WELL DIAMETER:	2"											
		SCREENED/OPEN INTERVAL:	87.96-97.96											
WATER QUALITY METER & SERIAL No.:	Horiba U-52 VH8E7DU4													
PID BACKGROUND :	<1	PUMP INTAKE DEPTH:	90.46 ft below TOC											
PID BENEATH OUTER CAP:	<1													
PID BENEATH INNER CAP:	1.0	DEPTH TO WATER BEFORE PUMP INSTALLATION:	6.94 ft below TOC											
TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
835	6.21	NA	0.182	NA	172	NA	7.12	NA	800	NA	13.91	NA	100	6.90
840	6.19	0.02	0.175	0.007	145	27	4.62	2.5	800	0	13.93	-0.02	100	6.90
845	6.13	0.06	0.169	0.006	147	-2	3.56	1.06	800	0	14.08	-0.15	100	6.90
850	6.09	0.04	0.162	0.007	151	-4	3.05	0.51	800	0	14.19	-0.11	100	6.90
855	6.05	0.04	0.155	0.007	154	-3	2.70	0.35	800	0	14.38	-0.19	100	6.90
900	6.05	0	0.147	0.008	156	-2	2.45	0.25	800	0	14.53	-0.15	100	6.90
905	6.02	0.03	0.139	0.008	157	-1	2.07	0.38	800	0	14.54	-0.01	100	6.90
910	6.00	0.02	0.131	0.008	156	1	1.99	0.08	800	0	14.61	-0.07	100	6.90
915	5.99	0.01	0.125	0.006	156	0	1.72	0.27	800	0	14.81	-0.2	100	6.90
920	5.97	0.02	0.123	0.002	157	-1	1.67	0.05	800	0	14.95	-0.14	100	6.90
925	5.95	0.02	0.122	0.001	158	-1	1.62	0.05	800	0	14.87	0.08	100	6.90

COMMENTS: **Sample @ 930**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>		CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>												
DATE: <u>3/8/2012</u>		FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>												
WEATHER: <u>50-60°F, Sunny</u>														
MONITOR WELL #: MW13B		WELL DEPTH: <u>97.96</u>												
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>87.96-97.96</u>												
WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>														
PID BACKGROUND : <u><1</u>		PUMP INTAKE DEPTH: <u>95.46</u> ft below TOC												
PID BENEATH OUTER CAP: <u><1</u>														
PID BENEATH INNER CAP: <u>1.0</u>		DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>6.94</u> ft below TOC												
TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
940	5.94	NA	0.128	NA	160	NA	1.99	NA	800	NA	14.87	NA	100	6.90
945	6.04	-0.1	0.154	-0.026	152	8	1.54	0.45	800	0	15.03	-0.16	100	6.90
950	6.05	-0.01	0.154	0	151	1	1.43	0.11	800	0	15.23	-0.2	100	6.90
955	6.04	0.01	0.150	0.004	152	-1	1.43	0	800	0	15.32	-0.09	100	6.90
1000	6.01	0.03	0.146	0.004	154	-2	1.41	0.02	800	0	15.34	-0.02	100	6.90
1005	5.99	0.02	0.142	0.004	156	-2	1.29	0.12	800	0	15.38	-0.04	100	6.90
1010	5.96	0.03	0.138	0.004	157	-1	1.23	0.06	800	0	15.40	-0.02	100	6.90
1015	5.95	0.01	0.136	0.002	158	-1	1.19	0.04	800	0	15.38	0.02	100	6.90
1020	5.97	-0.02	0.134	0.002	159	-1	1.17	0.02	800	0	15.36	0.02	100	6.90

COMMENTS: **Sample @ 1025; Collect DUP02**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM:	<u>The Louis Berger Group, Inc.</u>
DATE:	<u>3/8/2012</u>	FIELD PERSONNEL:	<u>B. Hewitt, M. Cameron</u>
WEATHER:	<u>50-60°F, Sunny</u>		

MONITOR WELL #:	<u>MW14A</u>	WELL DEPTH:	<u>69.00</u>
WELL PERMIT #:	_____	WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>59.00-69.00</u>

WATER QUALITY METER & SERIAL No.:	<u>Horiba U-52 VH8E7DU4</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>61.5</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u>5.5</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>7.49</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1100	6.57	NA	0.340	NA	152	NA	6.05	NA	800	NA	14.30	NA	200	7.57
1105	6.55	0.02	0.329	0.011	159	-7	5.27	0.78	800	0	13.94	0.36	200	7.57
1110	6.47	0.08	0.311	0.018	171	-12	4.77	0.5	800	0	13.95	-0.01	200	7.57
1115	6.37	0.1	0.288	0.023	181	-10	4.50	0.27	800	0	14.03	-0.08	200	7.57
1120	6.31	0.06	0.273	0.015	189	-8	4.33	0.17	800	0	14.00	0.03	200	7.57
1125	6.26	0.05	0.263	0.01	193	-4	3.98	0.35	800	0	13.99	0.01	200	7.57
1130	6.22	0.04	0.253	0.01	198	-5	4.04	-0.06	800	0	14.06	-0.07	200	7.57
1135	6.18	0.04	0.243	0.01	203	-5	4.08	-0.04	800	0	14.13	-0.07	200	7.57
1140	6.14	0.04	0.234	0.009	207	-4	4.07	0.01	800	0	14.07	0.06	200	7.57
1145	6.11	0.03	0.228	0.006	211	-4	4.34	-0.27	800	0	14.18	-0.11	200	7.57
1150	6.10	0.01	0.222	0.006	214	-3	4.54	-0.2	800	0	14.15	0.03	200	7.57
1155	6.08	0.02	0.218	0.004	217	-3	4.52	0.02	800	0	14.05	0.1	200	7.57
1200	6.08	0	0.217	0.001	218	-1	4.55	-0.03	800	0	14.00	0.05	200	7.57

COMMENTS: **Sample @ 1205**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>3/8/2012</u>	FIELD PERSONNEL: <u>B. Hewitt, M. Cameron</u>
WEATHER: <u>50-60°F, Sunny</u>	

MONITOR WELL #: MW14B	WELL DEPTH: <u>69.00</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>59.00-69.00</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 VH8E7DU4</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>66.5</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u>5.5</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>7.49</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1215	6.22	NA	0.233	NA	219	NA	5.35	NA	800	NA	13.42	NA	200	7.57
1220	6.19	0.03	0.206	0.027	222	-3	5.47	-0.12	800	0	13.51	-0.09	200	7.57
1225	6.05	0.14	0.180	0.026	232	-10	5.82	-0.35	800	0	13.31	0.2	200	7.57
1230	5.99	0.06	0.178	0.002	236	-4	5.94	-0.12	800	0	13.27	0.04	200	7.57
1235	5.95	0.04	0.179	-0.001	239	-3	5.92	0.02	800	0	13.33	-0.06	200	7.57
1240	5.99	-0.04	0.184	-0.005	238	1	5.93	-0.01	800	0	13.53	-0.2	200	7.57
1245	5.97	0.02	0.185	-0.001	239	-1	5.93	0	800	0	13.31	0.22	200	7.57
1250	5.97	0	0.186	-0.001	238	1	5.90	0.03	800	0	13.35	-0.04	200	7.57

COMMENTS: **Sample @ 1255**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/8/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>50-60°F, Sunny</u>		

MONITOR WELL #:	MW15A	WELL DEPTH:	<u>61.55</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>51.55-61.55</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>54.00</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>4.19</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1244	6.35	NA	0.219	NA	201	NA	5.87	NA	194	NA	15.18	NA	200	4.80
1249	6.39	-0.04	0.189	0.03	177	24	3.50	2.37	627	-433	13.79	1.39	200	4.80
1254	6.20	0.19	0.171	0.018	173	4	2.62	0.88	1000	-373	13.53	0.26	200	4.80
1259	6.06	0.14	0.166	0.005	180	-7	2.18	0.44	1000	0	13.44	0.09	200	4.80
1304	6.02	0.04	0.165	0.001	184	-4	2.06	0.12	1000	0	13.54	-0.1	200	4.80
1309	6.00	0.02	0.164	0.001	186	-2	1.92	0.14	1000	0	13.49	0.05	200	4.80
1314	5.97	0.03	0.163	0.001	189	-3	1.85	0.07	1000	0	13.52	-0.03	200	4.80

COMMENTS: **Sample @ 1318**
ANALYSIS: **MTBE, TBA, TCL VOC+10**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	Joan's Cleaners	CONSULTING FIRM:	The Louis Berger Group
DATE:	3/8/2012	FIELD PERSONNEL:	Melissa Cameron, Brad Hewitt
WEATHER:	50-60°F, Sunny		

MONITOR WELL #: MW15B	WELL DEPTH:	61.55	SCREENED/OPEN INTERVAL:	51.55-61.55
WELL PERMIT #:	WELL DIAMETER:	2"		

WATER QUALITY METER & SERIAL No.:	Horriba U-52-TXUO4VKV			
PID BACKGROUND :	<1	PUMP INTAKE DEPTH:	59.00 ft below TOC	
PID BENEATH OUTER CAP:	<1			
PID BENEATH INNER CAP:	<1	DEPTH TO WATER BEFORE PUMP INSTALLATION:	4.19 ft below TOC	

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1332	6.15	NA	0.164	NA	180	NA	6.70	NA	1000	NA	13.62	NA	185	4.75
1337	6.35	-0.2	0.171	-0.007	197	-17	2.43	4.27	1000	0	13.16	0.46	185	4.75
1342	6.40	-0.05	0.170	0.001	202	-5	2.06	0.37	1000	0	13.13	0.03	185	4.75
1347	6.40	0	0.169	0.001	202	0	1.84	0.22	1000	0	13.14	-0.01	185	4.75
1352	6.36	0.04	0.166	0.003	194	8	1.71	0.13	1000	0	13.20	-0.06	175	4.65
1357	6.30	0.06	0.163	0.003	185	9	1.71	0.00	1000	0	13.29	-0.09	175	4.65
1402	6.15	0.15	0.158	0.005	185	0	1.60	0.11	1000	0	13.14	0.15	175	4.65
1407	6.07	0.08	0.155	0.003	188	-3	1.60	0.00	1000	0	13.14	0	175	4.65
1412	6.00	0.07	0.152	0.003	194	-6	1.65	-0.05	1000	0	13.16	-0.02	175	4.65
1417	5.95	0.05	0.151	0.001	197	-3	1.62	0.03	1000	0	13.13	0.03	175	4.65
1422	5.93	0.02	0.150	0.001	200	-3	1.60	0.02	1000	0	12.98	0.15	175	4.65

COMMENTS: **Sample @ 1425**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/7/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #: MW16A	WELL DEPTH:	<u>53.60</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>43.60-53.60</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>46.10</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>6.13</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1454	6.71	NA	0.233	NA	105	NA	9.25	NA	1000	NA	13.92	NA	250	6.45
1459	6.60	0.11	0.224	0.009	127	-22	6.35	2.90	1000	0	12.87	1.05	250	6.45
1504	6.56	0.04	0.221	0.003	137	-10	5.80	0.55	1000	0	12.67	0.2	250	6.45
1509	6.54	0.02	0.218	0.003	140	-3	5.48	0.32	1000	0	12.67	0	250	6.45
1514	6.51	0.03	0.215	0.003	145	-5	5.17	0.31	1000	0	12.76	-0.09	250	6.45
1519	6.48	0.03	0.210	0.005	152	-7	5.09	0.08	1000	0	12.76	0	250	6.45
1524	6.43	0.05	0.206	0.004	160	-8	4.87	0.22	1000	0	12.84	-0.08	250	6.45
1529	6.42	0.01	0.203	0.003	162	-2	4.88	-0.01	1000	0	12.86	-0.02	250	6.45

COMMENTS: **Sample @ 1535**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>3/7/2012</u>	FIELD PERSONNEL:	<u>Melissa Cameron, Brad Hewitt</u>
WEATHER:	<u>30-40°F, Sunny, Clear</u>		

MONITOR WELL #:	MW16B	WELL DEPTH:	<u>53.60</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>43.60-53.60</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52-TXUO4VKV</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>51.10</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>6.13</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1542	6.48	NA	0.201	NA	149	NA	5.70	NA	1000	NA	12.84	NA	200	6.45
1547	6.54	-0.06	0.213	-0.012	154	-5	4.97	0.73	1000	0	12.41	0.43	200	6.45
1552	6.55	-0.01	0.212	0.001	156	-2	4.97	0.00	1000	0	12.32	0.09	200	6.45
1557	5.52	1.03	0.209	0.003	163	-7	5.53	-0.56	1000	0	12.25	0.07	200	6.45
1602	6.50	-0.98	0.204	0.005	166	-3	5.17	0.36	1000	0	12.23	0.02	200	6.45
1607	6.46	0.04	0.200	0.004	169	-3	4.90	0.27	1000	0	12.19	0.04	200	6.45
1612	6.40	0.06	0.197	0.003	174	-5	4.71	0.19	1000	0	12.17	0.02	200	6.45

COMMENTS: **Sample @ 1615**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>5/3/2012</u>	FIELD PERSONNEL:	<u>R. Malaniak, M. Cameron</u>
WEATHER:	<u>50°F, Cloudy</u>		

MONITOR WELL #: HPIMW4B	WELL DEPTH:	<u>27.05</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>17.05-27.05</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52 X7RU5ER5</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>24.50</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>16.24</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1020	6.99	NA	1.38	NA	156	NA	7.40	NA	513	NA	15.10	NA	175	16.80
1025	5.97	1.02	1.39	-0.01	205	-49	6.43	0.97	522	-9	14.95	0.15	175	16.80
1030	5.94	0.03	1.36	0.03	221	-16	6.31	0.12	506	16	14.91	0.04	175	16.80
1035	5.93	0.01	1.32	0.04	231	-10	6.21	0.10	369	137	14.92	-0.01	175	16.80
1040	5.94	-0.01	1.32	0	233	-2	6.37	-0.16	292	77	14.93	-0.01	175	16.80
1045	5.96	-0.02	1.35	-0.03	235	-2	6.20	0.17	218	74	4.91	10.02	175	16.80
1050	5.95	0.01	1.32	0.03	239	-4	6.98	-0.78	166	52	14.89	-9.98	175	16.80
1055	5.92	0.03	1.26	0.06	240	-1	7.04	-0.06	144	22	14.91	-0.02	175	16.80
1100	6.00	-0.08	1.20	0.06	242	-2	6.42	0.62	116	28	14.94	-0.03	175	16.80
1105	5.89	0.11	1.17	0.03	244	-2	6.37	0.05	100	16	15.05	-0.11	150	16.80
1110	5.88	0.01	1.14	0.03	248	-4	6.35	0.02	88.5	11.5	14.94	0.11	150	16.80
1115	5.89	-0.01	1.13	0.01	250	-2	6.27	0.08	82.4	6.1	14.96	-0.02	150	16.80
1120	5.89	0	1.11	0.02	250	0	6.35	-0.08	65.3	17.1	15.01	-0.05	150	16.80
1125	5.88	0.01	1.10	0.01	249	1	6.41	-0.06	65.2	0.1	15.03	-0.02	150	16.80
1130	5.89	-0.01	1.09	0.01	251	-2	6.36	0.05	59.3	5.9	15.08	-0.14	150	16.80

COMMENTS: **Sample @ 1135**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/3/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Cloudy</u>	

MONITOR WELL #: HPIMW2	WELL DEPTH: <u>20.56</u>	SCREENED/OPEN INTERVAL: _____
WELL PERMIT #:	WELL DIAMETER: <u>4"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 X7RU5ER5)</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>18.00</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>15.25</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
745	5.78	NA	0.201	NA	49	NA	2.20	NA	71.1	NA	13.99	NA	150	15.25
750	5.85	-0.07	0.220	-0.019	38	11	1.42	0.78	57.8	13.3	14.16	-0.17	150	15.30
755	5.90	-0.05	0.233	-0.013	31	7	1.26	0.16	49.1	8.7	14.18	-0.02	150	15.32
800	5.95	-0.05	0.250	-0.017	25	6	1.25	0.01	45.2	3.9	14.21	-0.03	150	15.35
805	6.02	-0.07	0.287	-0.037	12	13	1.15	0.10	40.2	5	14.20	0.01	150	15.35
810	6.06	-0.04	0.321	-0.034	5	7	1.02	0.13	36.7	3.5	14.20	0	150	15.35
815	6.10	-0.04	0.350	-0.029	-1	6	1.00	0.02	31.3	5.4	14.23	-0.03	150	15.35
820	6.13	-0.03	0.386	-0.036	-7	6	0.95	0.05	29.5	1.8	14.25	-0.02	150	15.35
825	6.16	-0.03	0.425	-0.039	-12	5	0.96	-0.01	29.9	-0.4	14.26	-0.01	150	15.35
830	6.18	-0.02	0.472	-0.047	-18	6	0.92	0.04	27.2	2.7	14.27	-0.01	150	15.35
835	6.20	-0.02	0.503	-0.031	-21	3	0.90	0.02	26.8	0.4	14.28	-0.01	150	15.35
840	6.21	-0.01	0.517	-0.014	-22	1	0.92	-0.02	24.8	2	14.30	-0.02	150	15.35
850	6.23	-0.02	0.569	-0.052	-26	4	0.86	0.06	22.5	2.3	14.36	-0.06	150	15.35
855	6.25	-0.02	0.597	-0.028	-28	2	0.85	0.01	22.6	-0.1	14.41	-0.05	150	15.35
900	6.26	-0.01	0.614	-0.017	-29	1	0.86	-0.01	23.6	-1	14.42	-0.01	150	15.35
905	6.28	-0.02	0.635	-0.021	-30	1	0.85	0.01	22	1.6	14.42	0	150	15.35
910	6.28	0	0.653	-0.018	-31	1	0.83	0.02	21.3	0.7	14.43	-0.01	150	15.35
915	6.30	-0.02	0.664	-0.011	-32	1	8.10	-7.27	21.1	0.2	14.43	0	150	15.35
920	6.30	0	0.683	-0.019	-33	1	0.84	7.26	22.3	-1.2	14.43	0	150	15.35
925	6.31	-0.01	0.696	-0.013	-33	0	0.82	0.02	21.1	1.2	14.45	-0.02	150	15.35
930	6.31	0	0.703	-0.007	-33	0	0.81	0.01	20.5	0.6	14.46	-0.01	150	15.35

COMMENTS: **Sample @ 0932**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/2/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Raining</u>	

MONITOR WELL #: MW01A	WELL DEPTH: <u>27.77</u>	
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>17.77-27.77</u>

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 UYRU96K1</u>	
PID BACKGROUND :	<u><1</u> PUMP INTAKE DEPTH: <u>20.27</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>
PID BENEATH INNER CAP:	<u><1</u> DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>15.25</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
739	4.78	NA	0.040	NA	379	NA	15.38	NA	406	NA	12.15	NA	400	15.30
749	4.74	0.04	0.040	0	419	-40	13.46	1.92	117	289	11.82	0.33	400	15.30
754	4.74	0	0.040	0	420	-1	13.17	0.29	60	57	11.77	0.05	400	15.30
759	4.76	-0.02	0.041	-0.001	421	-1	12.95	0.22	47.1	12.9	11.75	0.02	400	15.30
804	4.76	0	0.041	0	421	0	12.75	0.20	26.9	20.2	11.75	0	400	15.30
814	4.75	0.01	0.041	0	422	-1	12.50	0.25	19.3	7.6	11.77	-0.02	400	15.30
819	4.70	0.05	0.040	0.001	423	-1	12.42	0.08	17.3	2	11.74	0.03	400	15.30
824	4.78	-0.08	0.040	0	423	0	12.35	0.07	14.9	2.4	12.34	-0.6	400	15.30
829	4.78	0	0.040	0	421	2	12.24	0.11	15.2	-0.3	12.33	0.01	400	15.30
834	4.78	0	0.041	-0.001	420	1	12.17	0.07	14	1.2	11.75	0.58	400	15.30

COMMENTS: **Sample @ 0840**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	Joan's Cleaners	CONSULTING FIRM:	The Louis Berger Group
DATE:	5/3/2012	FIELD PERSONNEL:	R. Malaniak, M. Cameron
WEATHER:	50°F, Cloudy		

MONITOR WELL #: MW02	WELL DEPTH: <u>24.77</u>	SCREENED/OPEN INTERVAL: <u>14.77-24.77</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.:	Horriba U-52 UYRU96K1		
PID BACKGROUND :	<1	PUMP INTAKE DEPTH:	<u>20.07</u> ft below TOC
PID BENEATH OUTER CAP:	<1		
PID BENEATH INNER CAP:	<1	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>16.66</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
925	5.94	NA	0.350	NA	317	NA	8.93	NA	609	NA	14.20	NA	450	16.79
930	5.97	-0.03	0.331	0.019	321	-4	8.20	0.73	999	-390	14.16	0.04	450	16.79
935	5.96	0.01	0.322	0.009	323	-2	8.21	-0.01	546	453	14.18	-0.02	450	16.79
940	5.95	0.01	0.320	0.002	255	68	8.17	0.04	272	274	14.18	0	450	16.79
945	5.95	0	0.309	0.011	327	-72	8.13	0.04	116	156	14.19	-0.01	450	16.79
950	5.95	0	0.313	-0.004	329	-2	8.12	0.01	66	50	14.21	-0.02	450	16.79
955	5.95	0	0.309	0.004	331	-2	8.07	0.05	38.1	27.9	14.26	-0.05	450	16.79
1000	5.95	0	0.303	0.006	333	-2	8.09	-0.02	26.4	11.7	14.26	0	450	16.79
1005	5.95	0	0.301	0.002	334	-1	8.08	0.01	20.4	6	14.27	-0.01	450	16.79
1010	5.96	-0.01	0.299	0.002	336	-2	8.07	0.01	16.9	3.5	14.29	-0.02	450	16.79
1015	5.96	0	0.302	-0.003	337	-1	8.08	-0.01	15.2	1.7	14.29	0	450	16.79
1020	5.96	0	0.300	0.002	338	-1	8.05	0.03	15.5	-0.3	14.29	0	450	16.79

COMMENTS: **Sample @ 1025**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>5/2/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Raining</u>	

MONITOR WELL #: MW03A	WELL DEPTH: <u>67.65</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>57.65-67.65</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 UYRU96K1</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>60.15</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>16.71</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1055	5.56	NA	0.507	NA	309	NA	12.83	NA	999	NA	13.42	NA	280	17.45
1100	5.40	0.16	0.520	-0.013	324	-15	11.77	1.06	999	0	13.50	-0.08	280	17.45
1105	5.39	0.01	0.521	-0.001	330	-6	11.15	0.62	999	0	13.48	0.02	280	17.45
1110	5.41	-0.02	0.511	0.01	332	-2	10.19	0.96	999	0	13.52	-0.04	280	17.45
1115	5.45	-0.04	0.497	0.014	317	15	10.18	0.01	700	299	13.51	0.01	280	17.45
1125	5.48	-0.03	0.496	0.001	321	-4	10.74	-0.56	597	103	13.54	-0.03	280	17.45
1130	5.50	-0.02	0.491	0.005	321	0	10.71	0.03	495	102	13.43	0.11	280	17.45
1135	5.52	-0.02	0.488	0.003	320	1	10.05	0.66	402	93	13.51	-0.08	280	17.45
1140	5.45	0.07	0.481	0.007	317	3	9.69	0.36	376	26	13.52	-0.01	280	17.45
1145	5.58	-0.13	0.474	0.007	310	7	9.00	0.69	307	69	13.49	0.03	280	17.45
1150	5.59	-0.01	0.472	0.002	314	-4	8.71	0.29	273	34	13.47	0.02	280	17.45
1155	5.61	-0.02	0.468	0.004	313	1	8.53	0.18	232	41	13.45	0.02	280	17.45
1200	5.62	-0.01	0.467	0.001	313	0	8.38	0.15	220	12	13.69	-0.24	280	17.45
1205	5.62	0	0.465	0.002	312	1	8.20	0.18	195	25	13.49	0.2	280	17.45
1210	5.62	0	0.462	0.003	312	0	8.07	0.13	198	-3	13.53	-0.04	280	17.45
1215	5.63	-0.01	0.508	-0.046	312	0	7.99	0.08	182	16	13.58	-0.05	280	17.45

COMMENTS: **Sample @ 1220**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>		CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>												
DATE: <u>5/2/2012</u>		FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>												
WEATHER: <u>50°F, Raining</u>														
MONITOR WELL #: MW04B		WELL DEPTH: <u>66.75</u>												
WELL PERMIT #:		WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>56.75-66.75</u>											
WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 X7RU5ER5</u>														
PID BACKGROUND :		<u><1</u>												
PID BENEATH OUTER CAP:		<u><1</u>												
PID BENEATH INNER CAP:		<u><1</u>												
		PUMP INTAKE DEPTH: <u>64.25</u> ft below TOC												
		DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>8.25</u> ft below TOC												
TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1230	6.00	NA	0.143	NA	271	NA	8.77	NA	999	NA	12.59	NA	200	8.65
1235	6.05	-0.05	0.142	0.001	263	8	5.44	3.33	999	0	12.44	0.15	200	8.65
1240	6.03	0.02	0.141	0.001	264	-1	5.21	0.23	999	0	12.43	0.01	200	8.70
1245	5.99	0.04	0.136	0.005	222	42	6.20	-0.99	999	0	12.44	-0.01	200	8.70
1250	5.93	0.06	0.136	0	253	-31	5.31	0.89	999	0	12.40	0.04	200	8.70
1255	5.89	0.04	0.134	0.0025	266	-13	5.12	0.19	999	0	12.39	0.01	200	8.70
1300	5.82	0.07	0.131	0.0025	279	-13	5.23	-0.11	999	0	12.45	-0.06	200	8.80
1305	5.78	0.04	0.130	0.001	286	-7	5.00	0.23	760	239	12.46	-0.01	200	8.80
1310	5.74	0.04	0.127	0.003	293	-7	5.26	-0.26	534	226	12.46	0	200	8.80
1315	5.73	0.01	0.126	0.001	297	-4	5.16	0.1	502	32	12.48	-0.02	200	8.80
1320	5.70	0.03	0.126	0	302	-5	5.27	-0.01	492	10	12.49	-0.01	200	8.80

COMMENTS: **Sample @ 1325**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>5/1/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50-60°F, Cloudy</u>	

MONITOR WELL #: MW05B	WELL DEPTH: <u>68.25</u>	SCREENED/OPEN INTERVAL: <u>58.25-68.25</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 UYRU96K1</u>	
PID BACKGROUND: <u><1</u>	PUMP INTAKE DEPTH: <u>65.75</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>6.46</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1508	4.68	NA	0.207	NA	323	NA	2.06	NA	230	NA	15.95	NA	190	8.35
1513	4.63	0.05	0.207	0	325	-2	1.59	0.47	999	-769	15.99	-0.04	190	8.35
1518	4.61	0.02	0.207	0	324	1	1.35	0.24	999	0	16.37	-0.38	190	8.35
1523	4.61	0	0.206	0.001	317	7	1.26	0.09	999	0	16.52	-0.15	190	8.35
1528	4.58	0.03	0.204	0.002	314	3	1.20	0.06	999	0	16.56	-0.04	190	8.35
1533	4.59	-0.01	0.195	0.009	310	4	1.20	0	643	356	17.30	-0.74	190	8.35
1538	4.56	0.03	0.194	0.001	306	4	1.20	0	639	4	16.64	0.66	190	8.35
1543	4.59	-0.03	0.201	-0.007	317	-11	1.00	0.2	999	-360	16.29	0.35	190	8.35
1548	4.57	0.02	0.189	0.012	309	8	0.89	0.11	999	0	16.19	0.1	190	8.35
1553	4.56	0.01	0.168	0.021	293	16	0.88	0.01	420	579	16.30	-0.11	190	8.35
1558	4.54	0.02	0.162	0.006	291	2	0.81	0.07	423	-3	16.46	-0.16	190	8.35
1603	4.54	0	0.160	0.002	289	2	0.78	0.03	345	78	16.21	0.25	190	8.35
1608	4.54	0	0.160	0	288	1	0.76	0.02	288	57	16.16	0.05	190	8.35
1613	4.54	0	0.158	0.002	287	1	0.71	0.05	307	-19	61.09	-44.93	190	8.35
1618	4.53	0.01	0.157	0.001	286	1	0.70	0.01	268	39	15.75	45.34	190	8.35
1623	4.53	0	0.156	0.001	286	0	0.70	0	242		15.69	0.06	190	8.35
1628	4.52	0.02	0.155	0.001	286	0	0.64	0.06	244	179	15.97	-0.28	100	8.35

COMMENTS: **Sample @ 1635**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>5/1/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50-60°F, Cloudy</u>	

MONITOR WELL #: MW06B	WELL DEPTH: <u>66.10</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>56.1 - 66.1</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 X7RU5ER5</u>	
PID BACKGROUND :	<u><1</u> PUMP INTAKE DEPTH: <u>65.3</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>
PID BENEATH INNER CAP:	<u><1</u> DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>3.92</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1518	7.51	NA	0.127	NA	60	NA	3.63	NA	999	NA	15.38	NA	250	4.50
1523	6.00	1.51	0.118	0.009	123	-63	0.88	2.75	999	0	14.17	1.21	250	5.00
1528	5.76	0.24	0.118	0	165	-42	0.84	0.04	999	0	14.74	-0.57	100	4.60
1533	5.67	0.09	0.117	0.001	179	-14	0.90	-0.06	999	0	14.94	-0.2	100	4.30
1538	5.64	0.03	0.118	-1E-03	183	-4	0.97	-0.07	999	0	14.82	0.12	100	4.30
1543	5.69	-0.05	0.115	0.003	173	10	1.63	-0.66	999	0	15.33	-0.51	100	4.30
1548	5.59	0.1	0.115	0	186	-13	1.32	0.31	999	0	14.99	0.34	100	4.30
1553	5.59	0	0.115	0	192	-6	0.95	0.37	999	0	14.79	0.2	100	4.30
1558	5.56	0.03	0.114	0.001	195	-3	0.85	0.1	999	0	14.92	-0.13	100	4.30
1603	5.54	0.02	0.114	0	197	-2	0.85	0	999	0	14.69	0.23	100	4.30

COMMENTS: **Sample @ 1605**
ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>5/1/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50-60°F, Cloudy</u>	

MONITOR WELL #: MW07A	WELL DEPTH: <u>138.71</u>	
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	SCREENED/OPEN INTERVAL: <u>128.71-138.71</u>

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 X7RU5ER5</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>131.21</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u>1.0</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>6.25</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1250	7.79	NA	0.377	NA	-2	NA	2.28	NA	987	NA	15.28	NA	100	6.95
1255	7.86	-0.07	0.346	0.031	29	-31	1.81	0.474	999	-12	14.30	0.98	100	7.00
1300	7.89	-0.03	0.326	0.02	32	-3	1.30	0.51	999	0	14.43	-0.13	100	7.00
1305	7.91	-0.02	0.318	0.008	27	5	1.09	0.21	999	0	14.53	-0.1	100	6.92
1310	7.93	-0.02	0.311	0.007	22	5	0.99	0.1	999	0	14.87	-0.34	100	6.90
1315	7.96	-0.03	0.308	0.003	19	3	0.96	0.03	999	0	14.61	0.26	100	6.90
1320	7.97	-0.01	0.304	0.004	16	3	0.93	0.03	999	0	14.32	0.29	100	6.90
1325	7.98	-0.01	0.298	0.006	13	3	0.88	0.05	999	0	14.23	0.09	100	6.95

COMMENTS: **Sample @ 1330**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/1/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50-60°F, Cloudy</u>	

MONITOR WELL #: MW08A	WELL DEPTH: <u>67.80</u>	SCREENED/OPEN INTERVAL: <u>57.8-67.80</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: Horiba U-52 UYRU96K1

PID BACKGROUND : <1 PUMP INTAKE DEPTH: 60.30 ft below TOC

PID BENEATH OUTER CAP: <1

PID BENEATH INNER CAP: <1 DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.9 ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1105	6.55	NA	0.123	NA	132	NA	8.21	NA	0	NA	15.74	NA	280	7.08
1110	6.42	0.13	0.104	0.019	104	28	7.14	1.07	999	0	15.82	-0.08	280	7.08
1115	6.35	0.07	0.098	0.006	95	9	6.59	0.55	999	0	15.80	0.02	280	7.08
1120	6.30	0.05	0.092	0.006	91	4	6.08	0.51	999	0	15.79	0.01	280	7.08
1125	6.27	0.03	0.089	0.003	89	2	5.64	0.44	999	0	15.75	0.04	280	7.08
1130	6.23	0.04	0.084	0.005	89	0	1.99	3.65	999	249	15.46	0.29	280	7.08
1135	6.23	0	0.083	0.001	87	2	1.07	0.92	750	-249	15.88	-0.42	280	7.08
1140	6.21	0.02	0.077	0.006	85	2	0.88	0.19	999	0	15.85	0.03	280	7.08
1145	6.18	0.03	0.073	0.004	85	0	0.81	0.07	999	0	15.81	0.04	280	7.08
1150	6.17	0.01	0.071	0.002	84	1	0.76	0.05	999	0	15.91	-0.1	280	7.08
1155	6.15	0.02	0.070	0.001	85	-1	0.74	0.02	999	0	16.07	-0.16	280	7.08
1200	6.14	0.01	0.070	0	85	0	0.68	0.06	999	285	16.04	0.03	280	7.08
1205	6.18	-0.04	0.070	0	85	0	0.65	0.03	714	99	16.15	-0.11	280	7.08
1210	6.13	0.05	0.068	0.002	79	6	0.62	0.03	615	145	16.20	-0.05	280	7.08
1215	6.11	0.02	0.067	0.001	90	-11	0.69	-0.07	470	56	16.14	0.06	280	7.08
1220	6.10	0.01	0.066	0.001	91	-1	0.67	0.02	414	57	16.13	0.01	280	7.08
1225	6.08	0.02	0.066	0	92	-1	0.66	0.01	357	52	16.32	-0.19	280	7.08
1230	6.08	0	0.066	0	94	-2	0.59	0.07	305	49	16.32	0	280	7.08
1235	6.08	0	0.065	0.001	95	-1	0.58	0.01	256	18	16.16	0.16	280	7.08
1240	6.08	0	0.064	0.001	97	-2	0.57	0.01	238	50	16.27	-0.11	280	7.08
1245	6.08	0	0.064	0	98	-1	0.57	0	188	10	16.39	-0.12	280	7.08
1250	6.08	0	0.063	0.001	98	0	0.57	0	178	8	16.48	-0.09	280	7.08
1255	6.02	0.06	0.062	0.001	102	-4	0.53	0.04	170	170	16.43	0.05	280	7.08

COMMENTS: **Sample @ 1300**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM: <u>The Louis Berger Group, Inc.</u>
DATE: <u>5/1/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50-60°F, Cloudy</u>	

MONITOR WELL #: MW09A	WELL DEPTH: <u>64.16</u>	SCREENED/OPEN INTERVAL: <u>54.16-64.16</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horiba U-52 UYRU96K1</u>	
PID BACKGROUND : <u><1</u>	PUMP INTAKE DEPTH: <u>56.66</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>14.60</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1343	5.60	NA	0.077	NA	217	NA	2.45	NA	999	NA	15.03	NA	250	14.80
1348	5.43	0.17	0.076	0.001	222	-5	1.65	0.8	999	0	14.57	0.46	250	14.80
1353	5.42	0.01	0.076	0	220	2	1.70	-0.05	999	0	14.45	0.12	250	14.80
1358	5.40	0.02	0.075	0.001	219	1	1.07	0.63	999	0	14.22	0.23	250	14.80
1403	5.41	-0.01	0.074	0.001	218	1	0.91	0.16	999	0	14.15	0.07	250	14.80
1408	5.41	0	0.073	0.001	216	2	0.83	0.08	999	0	14.22	-0.07	250	14.80
1413	5.42	-0.01	0.071	0.002	213	3	0.76	0.07	999	0	14.16	0.06	250	14.80
1418	5.43	-0.01	0.068	0.003	206	7	0.64	0.12	999	0	14.00	0.16	250	14.80
1423	5.44	-0.01	0.067	0.001	203	3	0.67	-0.03	999		14.05	-0.05	250	14.80
1428	5.44	0	0.066	0.002	202	1	0.60	0.04	999	0	14.03	-0.03	250	14.80

COMMENTS: **Sample @ 1435, DUP01 collected**

ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>5/2/2012</u>	FIELD PERSONNEL:	<u>R. Malaniak, M. Cameron</u>
WEATHER:	<u>50°F, Raining</u>		

MONITOR WELL #:	MW10A	WELL DEPTH:	<u>47.72</u>
WELL PERMIT #:		WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>37.72-47.72</u>

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 X7RU5ER5</u>			
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>40.22</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>9.95</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1048	5.57	NA	0.160	NA	272	NA	6.39	NA	92.2	NA	12.91	NA	225	10.10
1053	5.39	0.18	0.156	0.004	304	-32	6.12	0.27	60.3	31.9	12.87	0.04	225	10.10
1058	5.34	0.05	0.155	0.001	314	-10	6.20	-0.08	55	5.3	12.86	0.01	225	10.10
1103	5.34	0	0.155	0	321	-7	6.18	0.02	59.5	-4.5	12.85	0.01	225	10.10
1108	5.31	0.03	0.155	0	328	-7	5.97	0.21	49.9	9.6	12.84	0.01	225	10.10
1113	5.31	0	0.155	0	331	-3	6.16	-0.19	47.7	2.2	12.81	0.03	225	10.10
1118	5.29	0.02	0.156	-0.001	334	-3	6.27	-0.11	51.2	-3.5	12.80	0.01	225	10.10

COMMENTS: **Sample @ 1120**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/2/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Raining</u>	

MONITOR WELL #: MW11B	WELL DEPTH: <u>34.00</u>	SCREENED/OPEN INTERVAL: <u>24.00-34.00</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 X7RU5ER5</u>	
PID BACKGROUND: <u><1</u>	PUMP INTAKE DEPTH: <u>31.50</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>11.43</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
824	5.40	NA	0.408	NA	304	NA	7.26	NA	663	NA	13.43	NA	100	11.80
829	5.36	0.04	0.402	0.006	313	-9	6.86	0.4	613	50	13.09	0.34	100	11.80
834	5.34	0.02	0.391	0.011	318	-5	6.61	0.25	577	36	12.94	0.15	100	11.80
839	5.32	0.02	0.380	0.011	322	-4	5.53	1.08	528	49	12.89	0.05	100	11.80
844	5.30	0.02	0.389	-0.009	325	-3	6.45	-0.92	488	40	12.92	-0.03	100	11.80
849	5.29	0.01	0.402	-0.013	327	-2	6.34	0.11	410	78	12.89	0.03	100	11.80
854	5.28	0.01	0.419	-0.017	330	-3	6.26	0.08	344	66	12.89	0	100	11.80
859	5.25	0.03	0.455	-0.036	333	-3	6.28	-0.02	238	106	12.90	-0.01	100	11.80
904	5.25	0	0.474	-0.019	333	0	6.18	0.1	196	42	12.93	-0.03	100	11.80
909	5.23	0.02	0.510	-0.036	337	-4	6.05	0.13	147	49	12.97	-0.04	100	11.80
914	5.22	0.01	0.532	-0.022	338	-1	5.99	0.06	113	34	12.99	-0.02	100	11.80
919	5.22	0	0.548	-0.016	337	1	6.05	-0.06	94.5	18.5	13.02	-0.03	100	11.80
924	5.22	0	0.556	-0.008	337	0	5.89	0.16	83.6	10.9	13.04	-0.02	100	11.80
929	5.23	-0.01	0.558	-0.002	337	0	5.84	0.05	64.2	19.4	13.03	0.01	100	11.80
934	5.23	0	0.555	0.003	337	0	5.84	0	53.6	10.6	12.97	0.06	100	11.80
939	5.24	-0.01	0.549	0.006	337	0	5.87	-0.03	49.8	3.8	12.99	-0.02	100	11.80
944	5.24	0	0.546	0.003	337	0	5.85	0.02	42.8	7	13.00	-0.01	100	11.80
949	5.25	-0.01	0.544	0.002	338	-1	5.89	-0.04	43.6	-0.8	13.01	-0.01	100	11.80
954	5.25	0	0.540	0.016	338	0	5.86	0.03	39.7	43.9	13.04	-0.03	100	11.80

COMMENTS: **Sample @ 0955**

ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/2/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Raining</u>	

MONITOR WELL #: MW12A	WELL DEPTH: <u>43.57</u>	SCREENED/OPEN INTERVAL: <u>33.57-43.57</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 UYRU96K1</u>	
PID BACKGROUND :	<u><1</u> PUMP INTAKE DEPTH: <u>36.07</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>
PID BENEATH INNER CAP:	<u><1</u> DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>11.35</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
920	5.30	NA	0.441	NA	366	NA	6.70	NA	999	NA	12.99	NA	430	11.45
930	5.10	0.2	0.505	-0.064	361	5	6.40	0.30	77.1	921.9	13.03	-0.04	430	11.45
935	5.10	0	0.507	-0.002	362	-1	6.43	-0.03	73.8	3.3	13.02	0.01	430	11.45
940	5.10	0	0.508	-0.001	361	1	6.43	0.00	71.4	2.4	13.00	0.02	430	11.45
945	5.09	0.01	0.510	-0.002	365	-4	6.43	0.00	53.6	17.8	13.03	-0.03	430	11.45
950	5.08	0.01	0.510	0	366	-1	6.43	0.00	39.1	14.5	13.03	0	430	11.45
955	5.16	-0.08	0.517	-0.007	359	7	6.35	0.08	30.2	8.9	13.03	0	430	11.45
1000	5.20	-0.04	0.522	-0.005	353	6	6.44	-0.09	25.4	4.8	13.02	0.01	430	11.45
1055	5.24	-0.04	0.524	-0.002	350	3	6.35	0.09	22.8	2.6	13.07	-0.05	430	11.45
1010	5.23	0.01	0.523	0.001	348	2	6.48	-0.13	20.7	2.1	12.99	0.08	430	11.45
1015	5.22	0.01	0.533	-0.01	349	-1	6.48	0.00	20	0.7	13.07	-0.08	430	11.45
1020	5.22	0	0.538	-0.005	350	-1	6.56	-0.08	20.2	-0.2	12.99	0.08	430	11.45

COMMENTS: **Sample @ 1025**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM:	<u>The Louis Berger Group, Inc.</u>
DATE:	<u>5/2/2012</u>	FIELD PERSONNEL:	<u>R. Malaniak, M. Cameron</u>
WEATHER:	<u>50°F, Raining</u>		

MONITOR WELL #: MW13A	WELL DEPTH:	<u>97.96</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>87.96-97.96</u>

WATER QUALITY METER & SERIAL No.:	<u>Horiba U-52 X7RU5ER5</u>	
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH: <u>90.46</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>	
PID BENEATH INNER CAP:	<u>1.0</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>7.40</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1432	6.03	NA	0.116	NA	193	NA	2.28	NA	69	NA	14.10	NA	225	7.70
1437	5.98	0.05	0.109	0.007	190	3	1.45	0.83	53	15.2	14.07	0.03	225	7.75
1442	5.97	0.01	0.101	0.008	188	2	1.05	0.4	43	10.6	14.05	0.02	225	7.75
1447	5.95	0.02	0.096	0.005	186	2	0.94	0.11	42	0.7	14.04	0.01	225	7.75
1452	5.93	0.02	0.093	0.003	184	2	0.93	0.01	45	-3.3	14.03	0.01	225	7.75
1457	5.91	0.02	0.090	0.003	184	0	0.88	0.05	52	-6.5	14.04	-0.01	225	7.75
1502	5.89	0.02	0.088	0.002	183	1	0.86	0.02	78	-26.3	14.03	0.01	225	7.75
1507	5.90	-0.01	0.082	0.006	176	7	2.12	-1.26	123	-44.9	14.02	0.01	225	7.75
1512	5.84	0.06	0.081	0.001	182	-6	1.19	0.93	135	-12	14.02	0	225	7.75
1517	5.80	0.04	0.078	0.003	184	-2	0.84	0.35	145	-10	14.02	0	225	7.75
1522	5.78	0.02	0.076	0.002	185	-1	0.70	0.14	137	8	14.02	0	225	7.75
1527	5.77	0.01	0.075	0.001	186	-1	0.63	0.07	123	14	14.01	0.01	225	7.75
1532	5.76	0.01	0.074	0.001	187	-1	0.63	0	103	20	14.01	0	225	7.75
1537	5.77	-0.01	0.074	0	186	1	0.60	0.03	102	1	14.02	-0.01	225	7.75
1542	5.78	-0.01	0.075	-0.001	186	-2	0.58	0.02	97	48.4	14.02	0	225	7.75

COMMENTS: **Sample @ 1545**
ANALYSIS: **TCL VOC+10, MTBE, TBA**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SITE:	<u>Joan's Cleaners/NJDEP</u>	CONSULTING FIRM:	<u>The Louis Berger Group, Inc.</u>
DATE:	<u>5/3/2012</u>	FIELD PERSONNEL:	<u>R. Malaniak, M. Cameron</u>
WEATHER:	<u>50°F, Cloudy</u>		

MONITOR WELL #:	<u>MW14A</u>	WELL DEPTH:	<u>69.00</u>
WELL PERMIT #:	<u></u>	WELL DIAMETER:	<u>2"</u>
		SCREENED/OPEN INTERVAL:	<u>59.00-69.00</u>

WATER QUALITY METER & SERIAL No.:	<u>Horiba U-52 UYRU96K1</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>61.5</u> ft below TOC
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u>5.5</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>8.19</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
719	6.16	NA	0.200	NA	294	NA	5.34	NA	541	NA	12.73	NA	250	7.85
724	6.21	-0.05	0.246	-0.046	287	7	4.46	0.88	287	254	12.79	-0.06	250	7.85
729	6.15	0.06	0.235	0.011	282	5	4.00	0.46	373	-86	12.81	-0.02	250	7.85
734	6.13	0.02	0.228	0.007	277	5	3.75	0.25	359	14	12.81	0	250	7.85
739	6.09	0.04	0.213	0.015	277	0	3.36	0.39	600	-241	12.86	-0.05	250	7.85
744	6.02	0.07	0.204	0.009	283	-6	4.58	-1.22	746	-146	12.80	0.06	250	7.85
749	5.98	0.04	0.197	0.007	288	-5	4.79	-0.21	681	65	12.79	0.01	250	7.85
754	5.96	0.02	0.194	0.003	291	-3	4.95	-0.16	552	129	12.83	-0.04	250	7.85
759	5.95	0.01	0.191	0.003	294	-3	5.12	-0.17	426	126	12.82	0.01	250	7.85
804	5.94	0.01	0.189	0.002	297	-3	5.24	-0.12	325	101	12.79	0.03	250	7.85
809	5.92	0.02	0.187	0.002	300	-3	5.38	-0.14	264	61	12.82	-0.03	250	7.85
814	5.90	0.02	0.184	0.003	303	-3	5.45	-0.07	194	70	12.83	-0.01	250	7.85
819	5.90	0	0.182	0.002	305	-2	5.63	-0.18	158	36	12.83	0	250	7.85
824	5.87	0.03	0.179	0.003	306	-1	5.75	-0.12	126	32	12.86	-0.03	250	7.85
829	5.85	0.02	0.177	0.002	309	-3	5.81	-0.06	90	36	12.86	0	250	7.85
834	5.85	0	0.176	0.001	311	-2	5.84	-0.03	88	2	12.88	-0.02	250	7.85
839	5.84	0.01	0.175	0.001	312	-1	5.86	-0.02	85	3	12.88	0	250	7.85

COMMENTS: **Sample @ 0845**
ANALYSIS: **TCL VOC+10, MTBE, TBA**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE: <u>Joan's Cleaners</u>	CONSULTING FIRM: <u>The Louis Berger Group</u>
DATE: <u>5/2/2012</u>	FIELD PERSONNEL: <u>R. Malaniak, M. Cameron</u>
WEATHER: <u>50°F, Raining</u>	

MONITOR WELL #: MW15A	WELL DEPTH: <u>61.55</u>	SCREENED/OPEN INTERVAL: <u>51.55-61.55</u>
WELL PERMIT #:	WELL DIAMETER: <u>2"</u>	

WATER QUALITY METER & SERIAL No.: <u>Horriba U-52 UYRU96K1</u>	
PID BACKGROUND: <u><1</u>	PUMP INTAKE DEPTH: <u>54.00</u> ft below TOC
PID BENEATH OUTER CAP: <u><1</u>	
PID BENEATH INNER CAP: <u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>4.9</u> ft below TOC

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1323	6.00	NA	0.166	NA	269	NA	4.85	NA	15.4	NA	12.88	NA	250	5.60
1328	6.01	-0.01	0.164	0.002	264	5	3.11	1.74	64.7	-49.3	12.81	0.07	250	5.60
1333	5.31	0.7	0.158	0.006	266	-2	2.69	0.42	715	-650.3	12.83	-0.02	250	5.60
1338	5.76	-0.45	0.155	0.003	271	-5	2.71	-0.02	800	-85	12.81	0.02	250	5.60
1343	5.67	0.09	0.154	0.001	276	-5	2.26	0.45	687	113	12.82	-0.01	250	5.60
1348	5.61	0.06	0.153	0.001	278	-2	2.54	-0.28	498	189	12.80	0.02	250	5.60
1353	5.61	0	0.149	0.004	270	8	1.99	0.55	394	104	12.85	-0.05	250	5.60
1358	5.57	0.04	0.151	-0.002	280	-10	1.72	0.27	330	64	12.83	0.02	250	5.60
1403	5.55	0.02	0.150	0.001	284	-4	1.72	0.00	273	57	12.82	0.01	250	5.60
1408	5.54	0.01	0.150	0	286	-2	1.73	-0.01	247	26	12.82	0	250	5.60
1413	5.52	0.02	0.150	0	289	-3	1.73	0.00	221	26	12.82	0	250	5.60
1418	5.52	0	0.148	0.002	289	0	1.72	0.01	211	10	12.82	0	250	5.60
1423	5.52	0	0.146	0.002	292	-3	1.73	-0.01	202	9	12.82	0	250	5.60

COMMENTS: **Sample @ 1430**
ANALYSIS: **MTBE, TBA, TCL VOC+10**
***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

**LOW FLOW SAMPLING
DATA SHEET**

SHEET ___ OF ___

SITE:	<u>Joan's Cleaners</u>	CONSULTING FIRM:	<u>The Louis Berger Group</u>
DATE:	<u>5/2/2012</u>	FIELD PERSONNEL:	<u>R. Malaniak, M. Cameron</u>
WEATHER:	<u>50°F, Raining</u>		

MONITOR WELL #: MW16B	WELL DEPTH:	<u>53.60</u>
WELL PERMIT #:	WELL DIAMETER:	<u>2"</u>
	SCREENED/OPEN INTERVAL:	<u>43.60-53.60</u>

WATER QUALITY METER & SERIAL No.:	<u>Horriba U-52 UYRU96K1</u>		
PID BACKGROUND :	<u><1</u>	PUMP INTAKE DEPTH:	<u>51.10 ft below TOC</u>
PID BENEATH OUTER CAP:	<u><1</u>		
PID BENEATH INNER CAP:	<u><1</u>	DEPTH TO WATER BEFORE PUMP INSTALLATION:	<u>6.9 ft below TOC</u>

TIME	pH (pH units)		SPECIFIC CONDUCTIVITY (Ms/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*	reading	change*		
1500	5.54	NA	0.161	NA	299	NA	10.93	NA	999	NA	12.94	NA	310	7.30
1505	5.54	0	0.161	0	315	-16	9.97	0.96	999	0	12.89	0.05	310	7.30
1510	5.48	0.06	0.158	0.003	322	-7	9.42	0.55	999	0	12.88	0.01	310	7.30
1515	5.48	0	0.157	0.001	326	-4	9.00	0.42	999	0	12.89	-0.01	310	7.30
1520	5.49	-0.01	0.157	0	328	-2	8.53	0.47	999	0	12.88	0.01	310	7.30
1525	5.46	0.03	0.157	0	351	-23	8.17	0.36	999	0	12.89	-0.01	310	7.30
1530	5.31	0.15	0.154	0.003	324	27	4.58	3.59	725	274	12.93	-0.04	310	7.30
1535	5.47	-0.16	0.157	-0.003	329	-5	4.41	0.17	551	174	12.89	0.04	310	7.30
1540	5.48	-0.01	0.157	0	330	-1	4.46	-0.05	502	49	12.92	-0.03	310	7.30
1545	5.48	0	0.157	0	339	-9	4.44	0.02	457	45	12.92	0	310	7.30
1550	5.48	0	0.156	0.001	333	6	4.43	0.01	359	98	12.90	0.02	310	7.30
1555	5.47	0.01	0.156	0	333	0	4.42	0.01	315	44	12.97	-0.07	310	7.30
1600	5.47	0	0.156	0	334	-1	4.48	-0.06	304	11	12.89	0.08	310	7.30
1605	5.47	0.01	0.156	0	336	-2	4.51	-0.03	290	14	12.87	0.05	310	7.30

COMMENTS: **Sample @ 1610**
ANALYSIS: **MTBE, TBA, TCL VOC+10**

***INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity**

APPENDIX G
Hydrogeologic Testing Data

Appendix G
Joan's Cleaners
Tabernacle Township, New Jersey
Slug Test Results - Hydraulic Conductivity

Monitoring Well ID	Screened Interval (ft bgs)	Lithology	Run Type	Bower-Rice K value (ft/day)	Hvorslev K value (ft/day)
MW01	17 to 27	Coarse to fine SAND, trace Silt	Rising	292	558
				259	451.9
				353	559.2
				344	652.6
				307	489.8
				343	618.7
			Average	316.3	555.0

Monitoring Well ID	Screened Interval (ft bgs)	Lithology	Run Type	Bower-Rice K value (ft/day)	Hvorslev K value (ft/day)
MW12	33 to 43	Medium to fine SAND, some to little Silt	Falling	40	50.4
				47.8	59.9
				41.1	50.9
				34.4	43.9
				34.9	44
				45.4	56
			Falling Average	40.6	50.9
			Rising	58.2	75.6
				59.5	81.4
				62.4	75.7
				61.4	72.6
				61.5	76
				56.7	72.8
			Rising Average	59.95	75.7
Combined Average	50.3	63.3			

Monitoring Well ID	Screened Interval (ft bgs)	Lithology	Run Type	Bower-Rice K value (ft/day)	Hvorslev K value (ft/day)
MW13	87 to 97	Medium to fine SAND, some clayey Silt	Falling	23.8	27
				23.8	25.7
				22.8	24.9
				22.6	24.2
				--	23.4
			Falling Average	23.3	25.0
			Rising	22.2	24.4
				21.2	22.7
				20.7	21.6
				20.5	21.8
				19.7	21.9
Rising Average	20.9	22.5			
Combined Average	22.1	23.8			

Notes:

See Figure 2 for monitoring well locations.
 Well screen interval measured in feet below grade surface.
 K = Permeability calculated in feet/day.

Appendix G
Joan's Cleaners
 Tabernacle Township, New Jersey
Slug Test Results - Velocity Calculations

Well ID	k	i	i	n _e	k (i)	V _{sec}	V _{day}	V _{year}	
									ft/day
MW01	5.55E+02	0.78	370	0.00211	0.25	1.17000	0.000	4.68	1708.20
	5.55E+02	0.78	370	0.00211	0.30	1.17000	0.000	3.90	1423.50

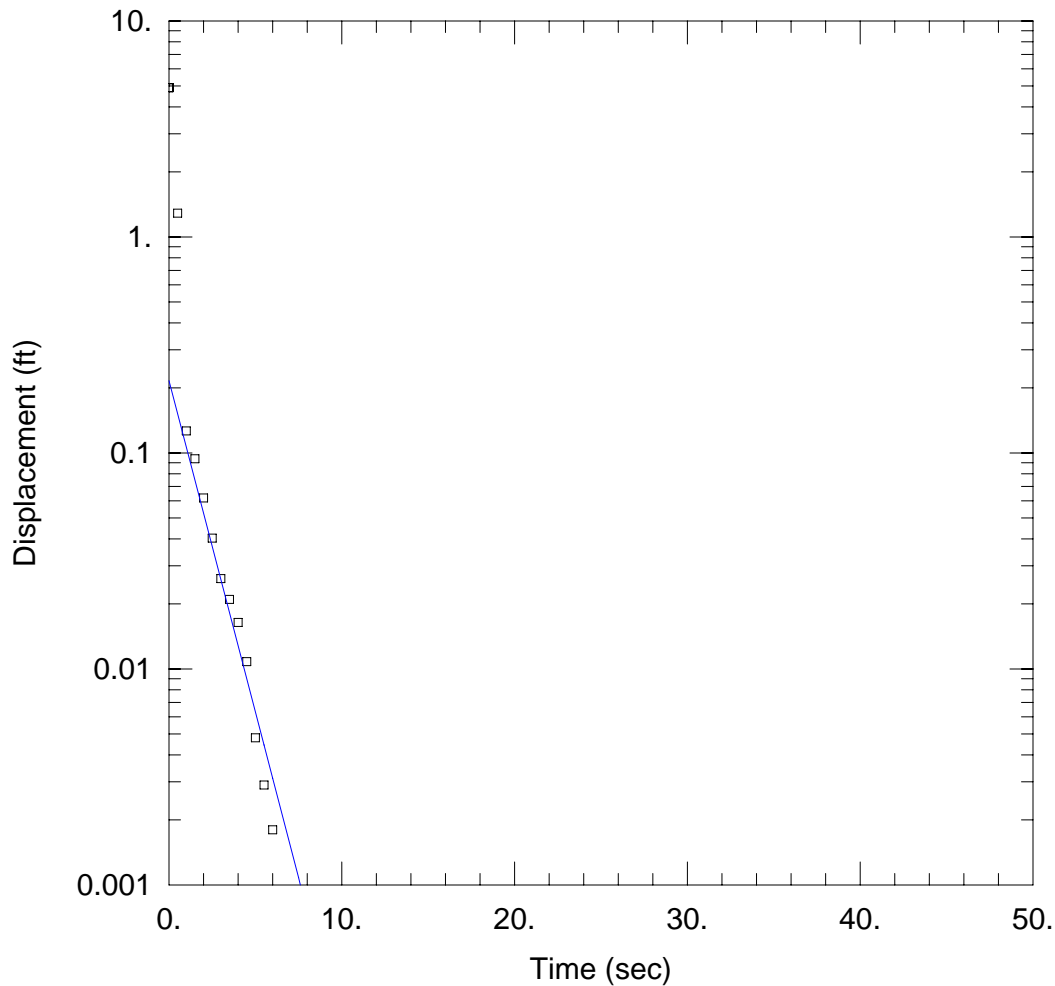
Well ID	k	i	i	n _e	k (i)	V _{sec}	V _{day}	V _{year}	
									ft/day
MW12	6.33E+01	2.13	1000	0.00213	0.30	0.13483	0.000	0.45	164.04
	6.33E+01	2.13	1000	0.00213	0.35	0.13483	0.000	0.39	140.61

Well ID	k	i	i	n _e	k (i)	V _{sec}	V _{day}	V _{year}	
									ft/day
MW13	2.38E+01	2.13	1000	0.00213	0.35	0.05059	0.000	0.14	52.76
	2.38E+01	2.13	1000	0.00213	0.40	0.05059	0.000	0.13	46.16

Notes:

- See Figure 2 for monitoring well locations.
- K = Permeability calculated in feet/day.
- $V_x = [k(i)]/n_e$
- i = gradient (ft/ft)
- n_e = effective porosity calculated as percent (Fetter, 1994)

ATTACHMENT 1
Bower-Rice Analysis



SLUG TEST

Data Set: V:\...\MW01-Rising-1.aqt
 Date: 12/06/12

Time: 09:34:10

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

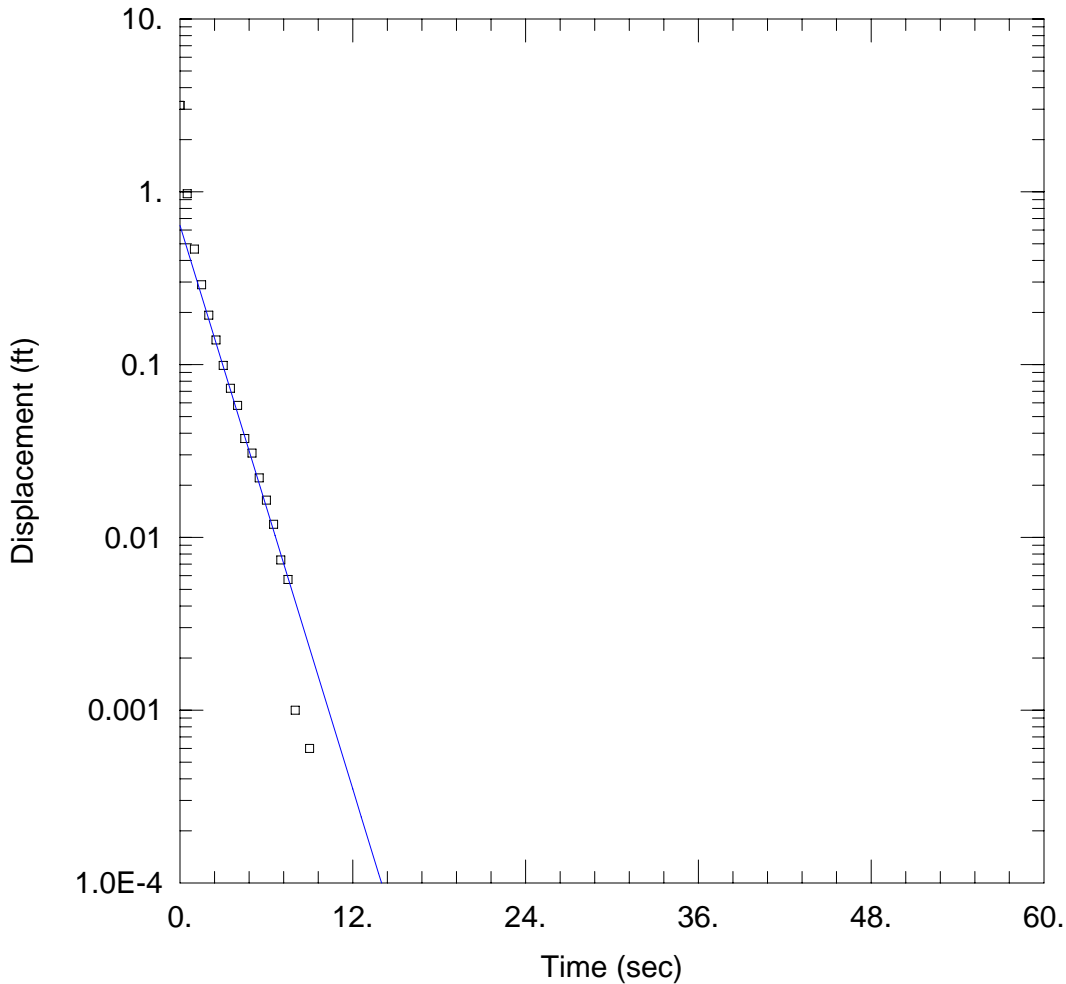
Initial Displacement: 4.908 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 292.7 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.216 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-2.aqt
 Date: 12/06/12

Time: 09:35:04

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

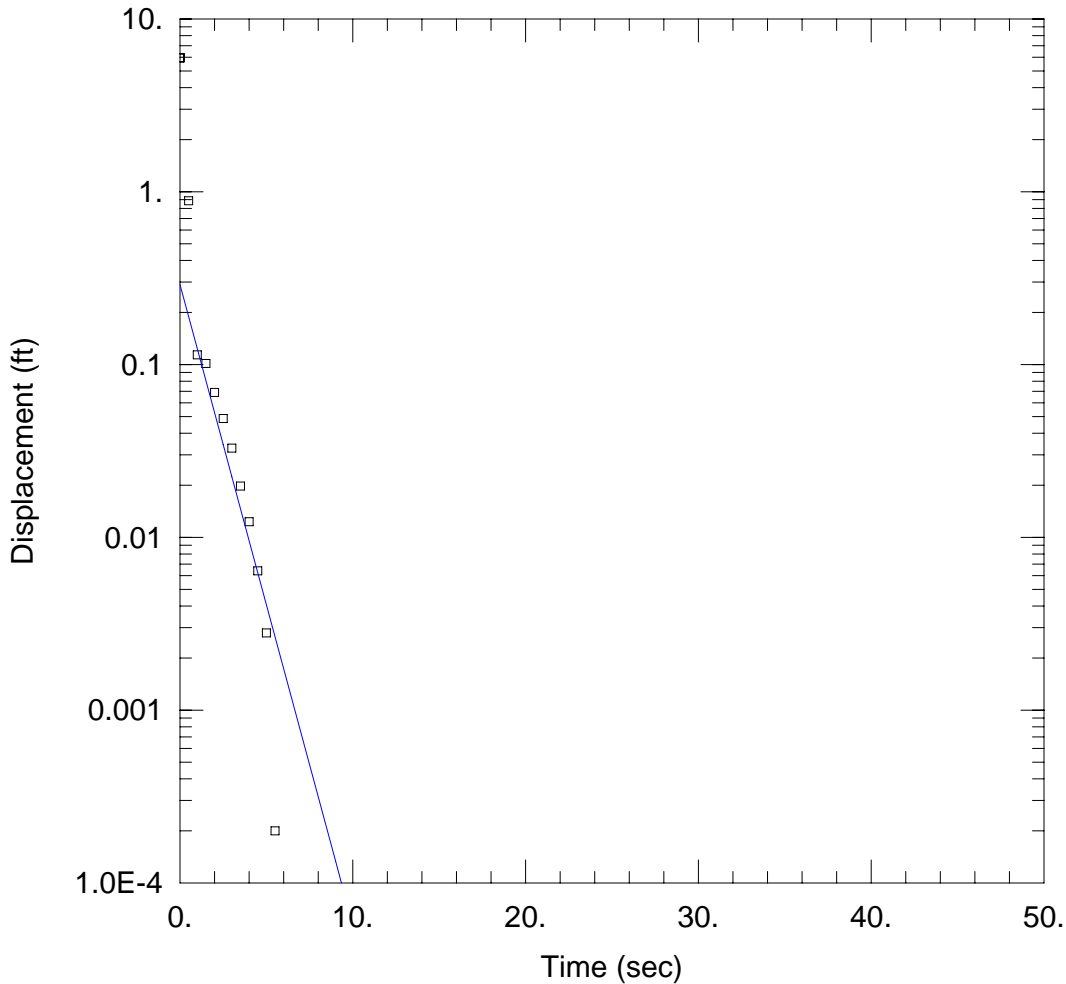
Initial Displacement: 3.156 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 259.3 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.6377 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-4.aqt
 Date: 12/06/12

Time: 09:36:23

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

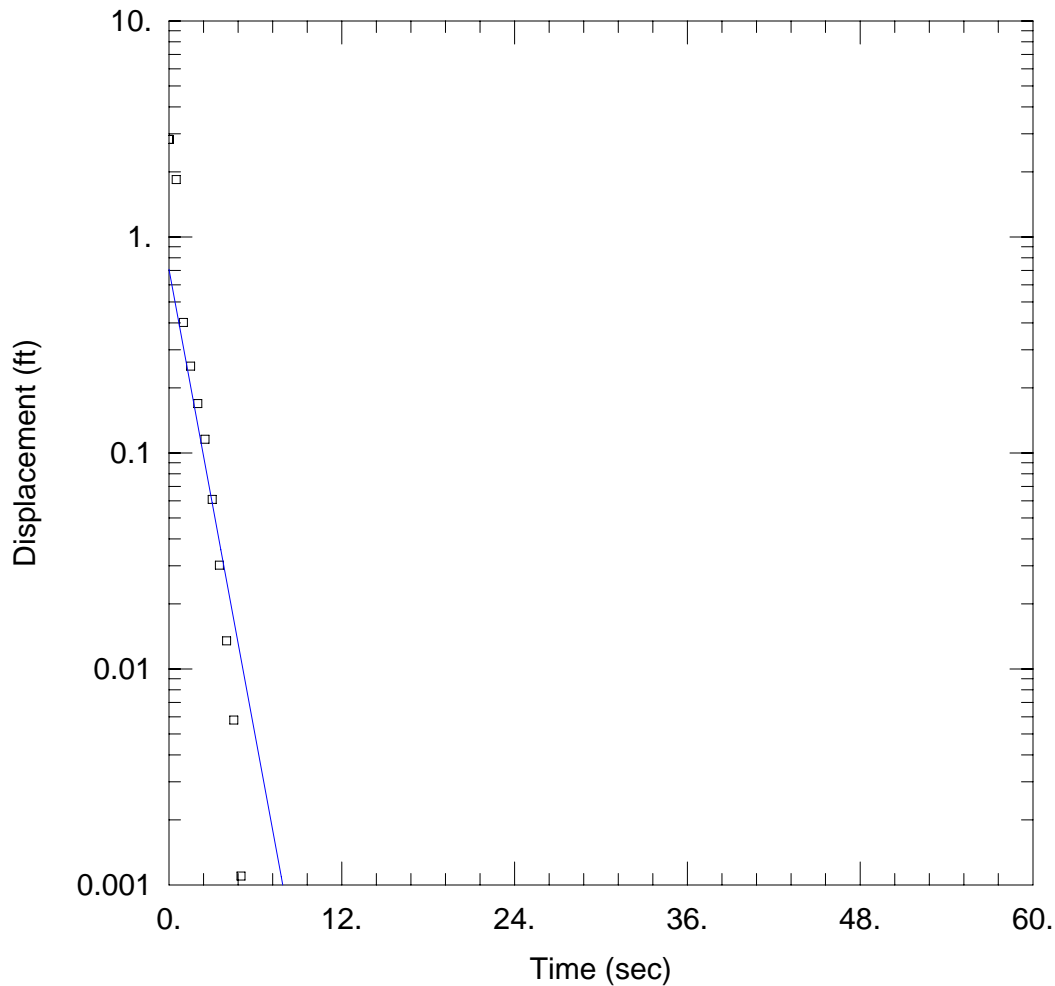
Initial Displacement: 5.949 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 353.6 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.2901 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-5.aqt
 Date: 12/06/12

Time: 09:37:00

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

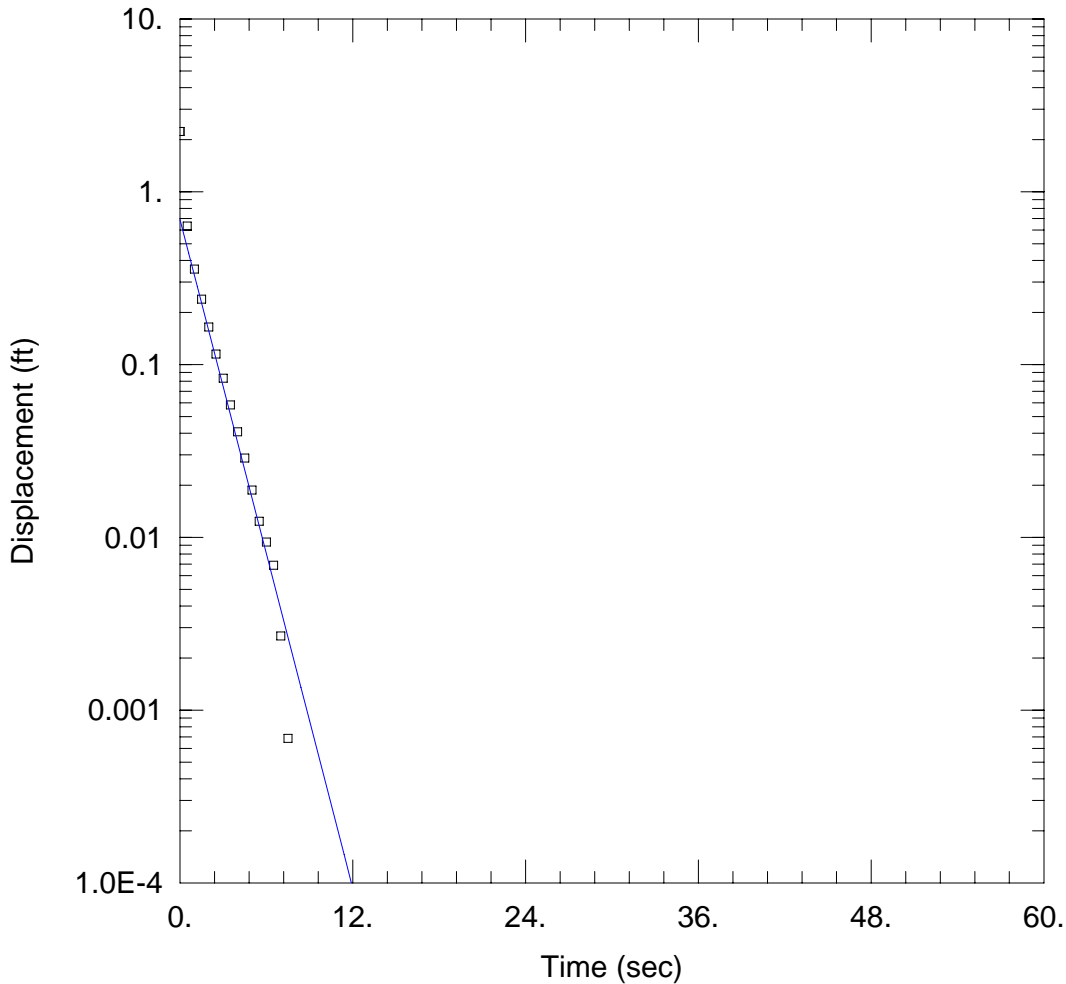
Initial Displacement: 2.827 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 344.1 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.7077 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-6.aqt
 Date: 12/06/12

Time: 09:37:36

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

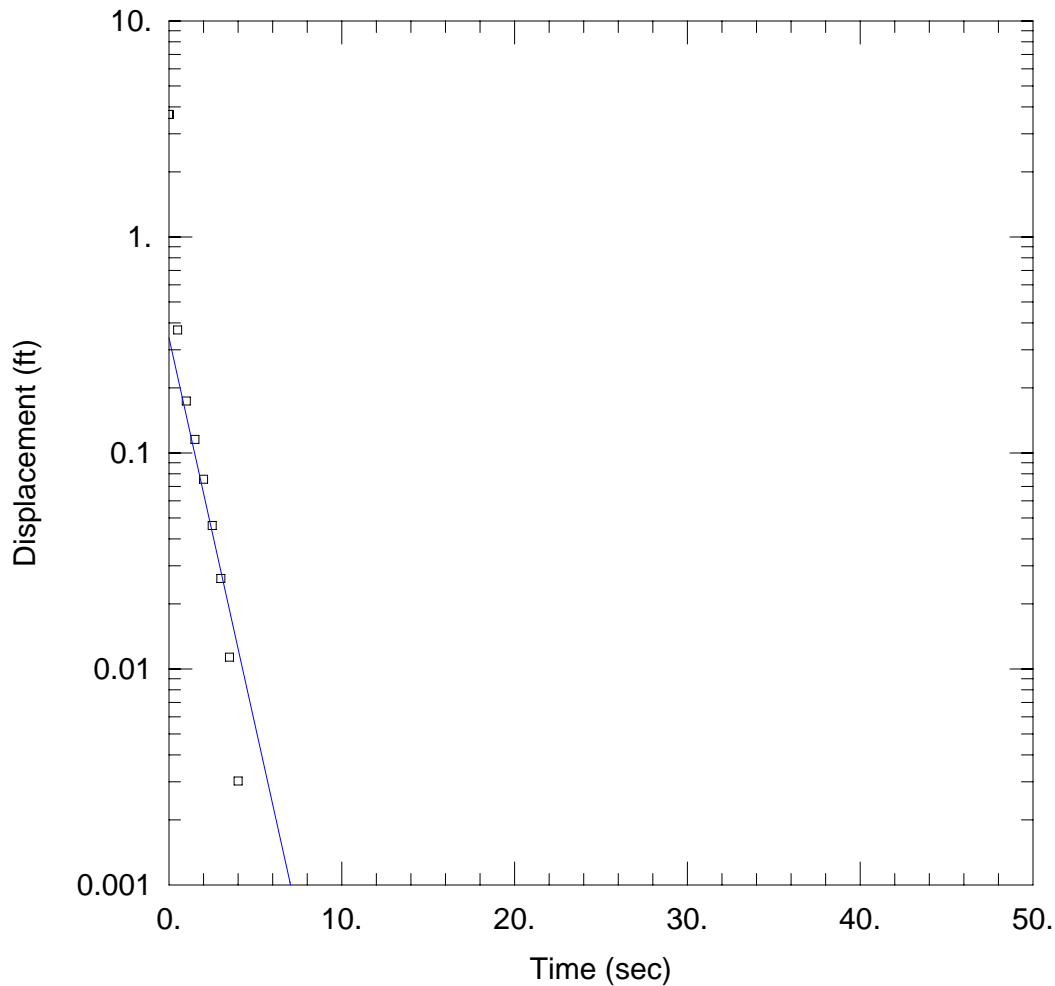
Initial Displacement: 2.232 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 307.6 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.6896 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-7.aqt
 Date: 12/06/12

Time: 09:38:12

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

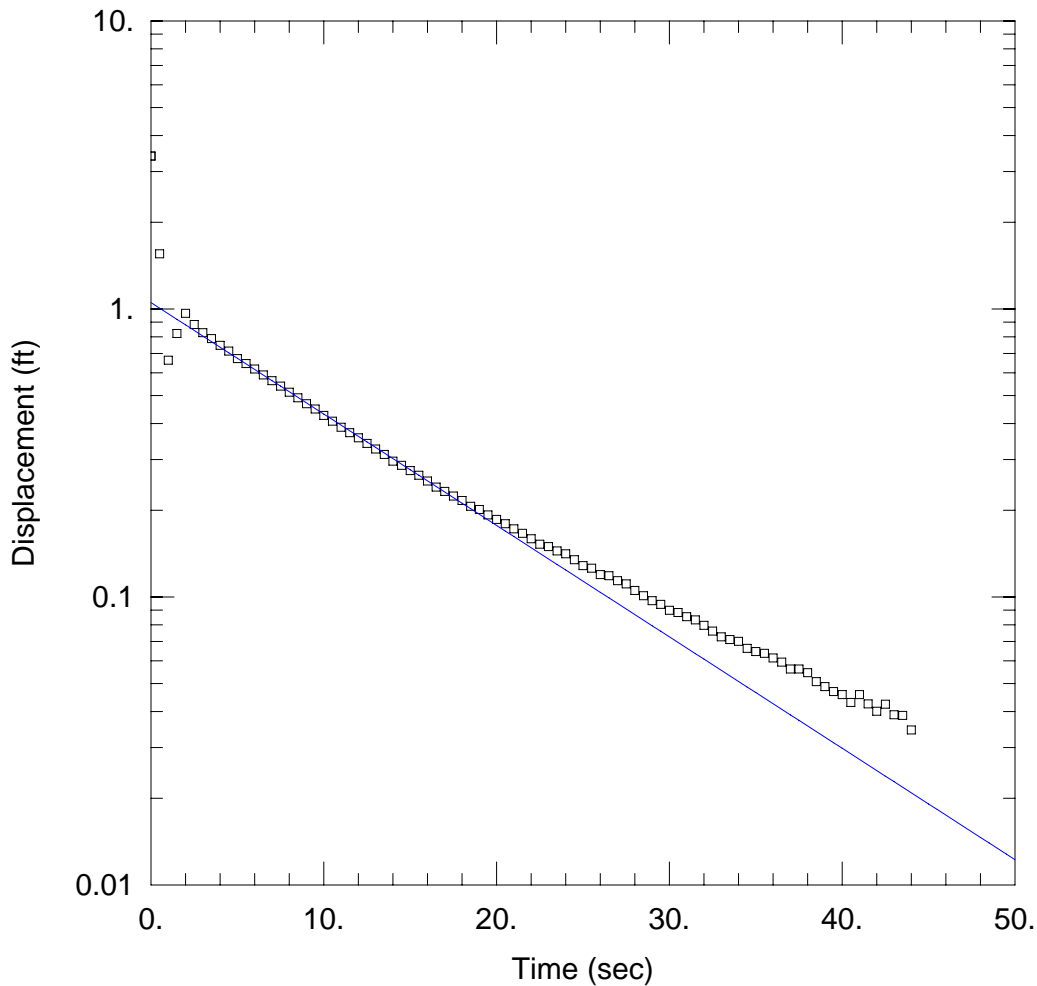
Initial Displacement: 3.691 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 343.6 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.3415 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-1.aqt
 Date: 12/06/12

Time: 09:51:06

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

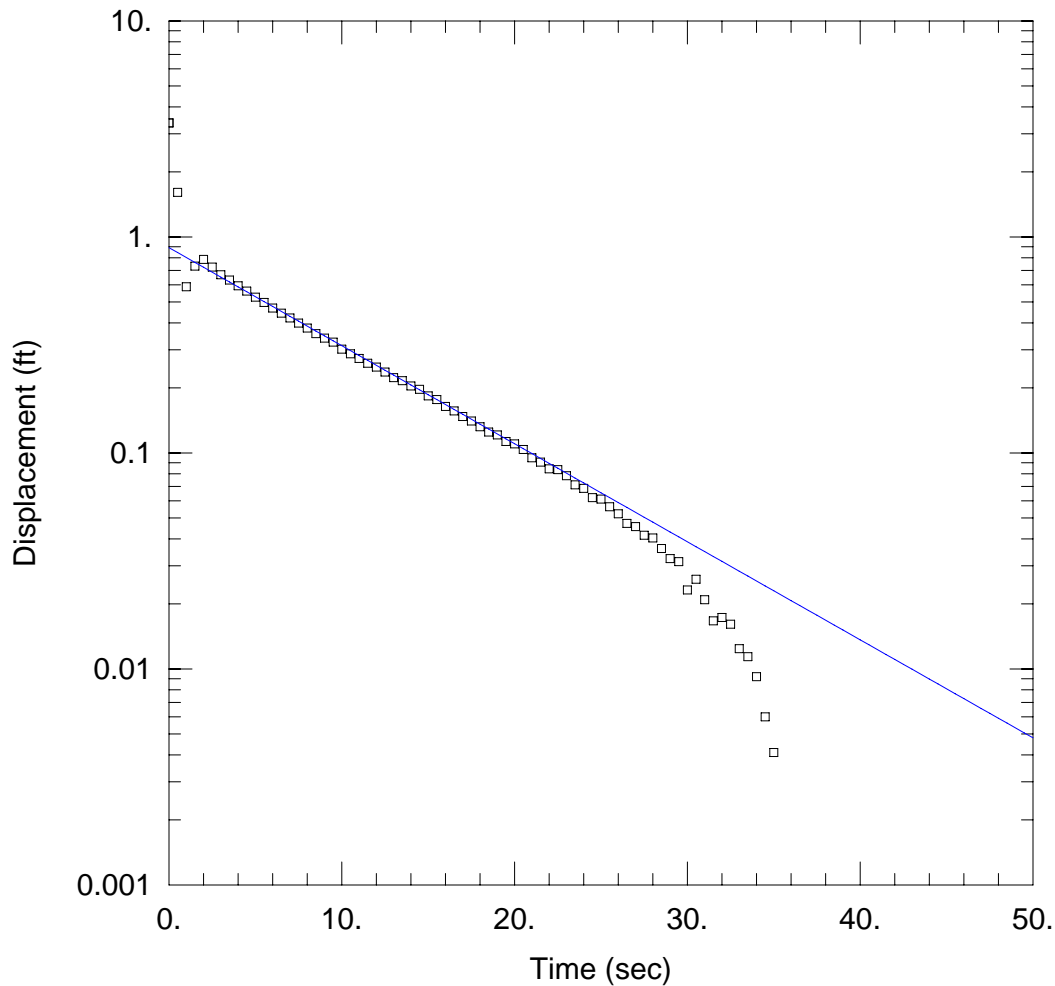
Initial Displacement: 3.394 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 40.73 ft/day

Solution Method: Bouwer-Rice
 y0 = 1.052 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-2.aqt
 Date: 12/06/12

Time: 09:51:59

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

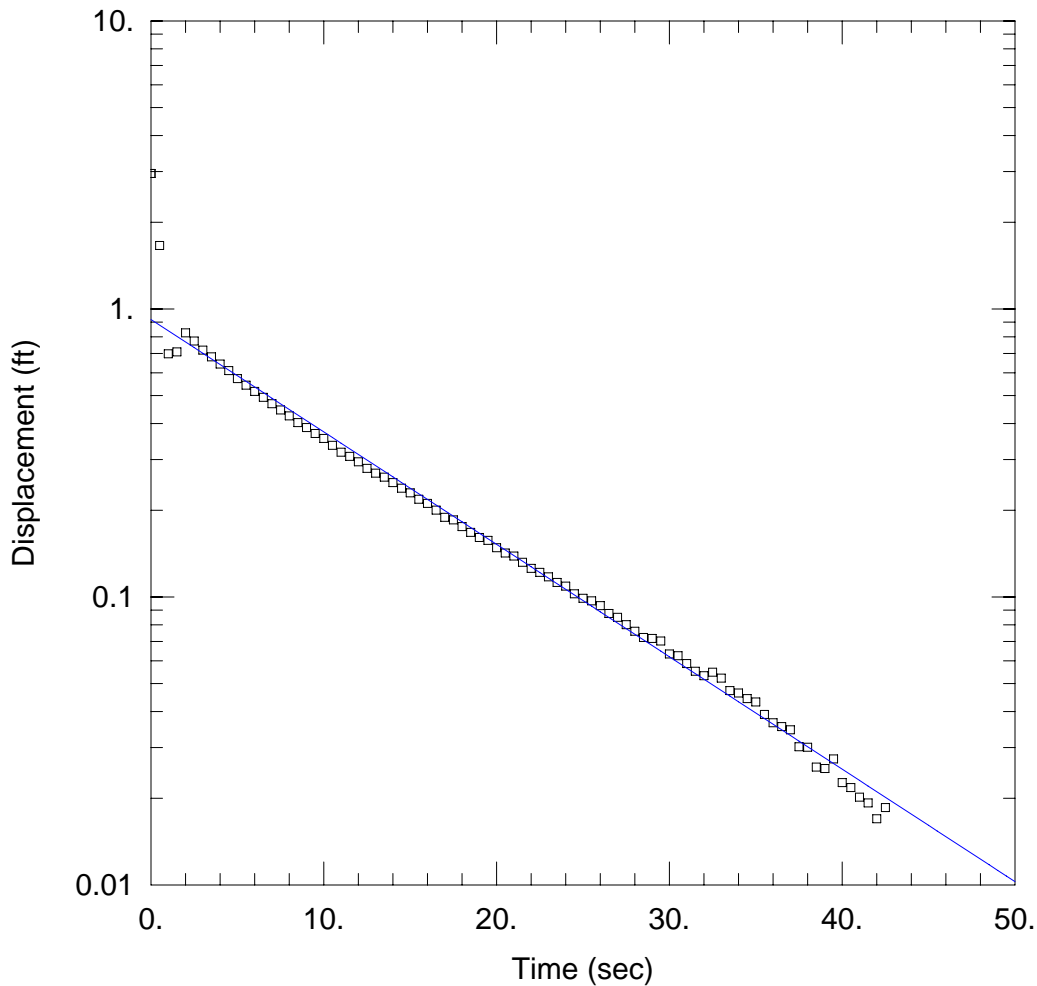
Initial Displacement: 3.371 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 47.79 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.8917 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-3.aqt
 Date: 12/06/12

Time: 09:52:34

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

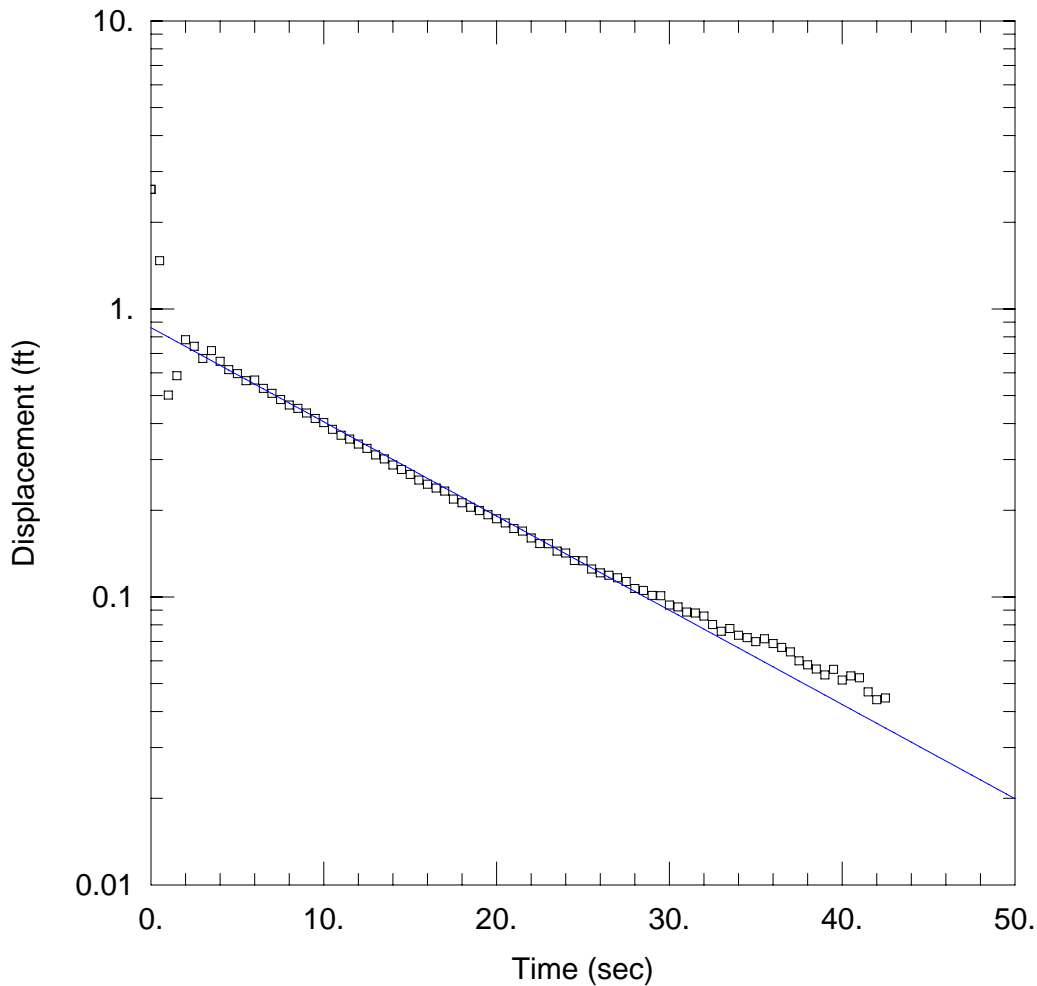
Initial Displacement: 2.954 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 41.1 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.9187 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-4.aqt
 Date: 12/06/12

Time: 09:53:10

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

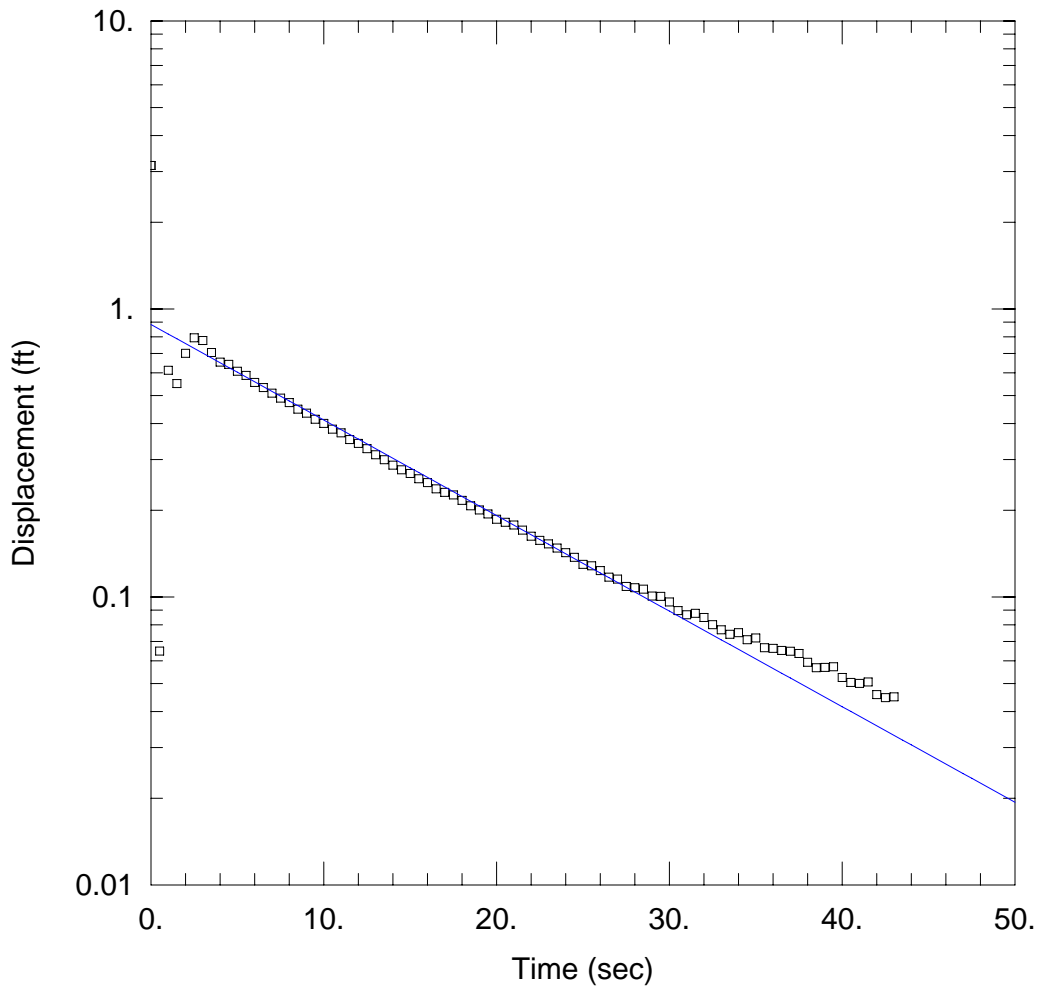
Initial Displacement: 2.601 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 34.44 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.8609 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-5.aqt
 Date: 12/06/12

Time: 09:40:33

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

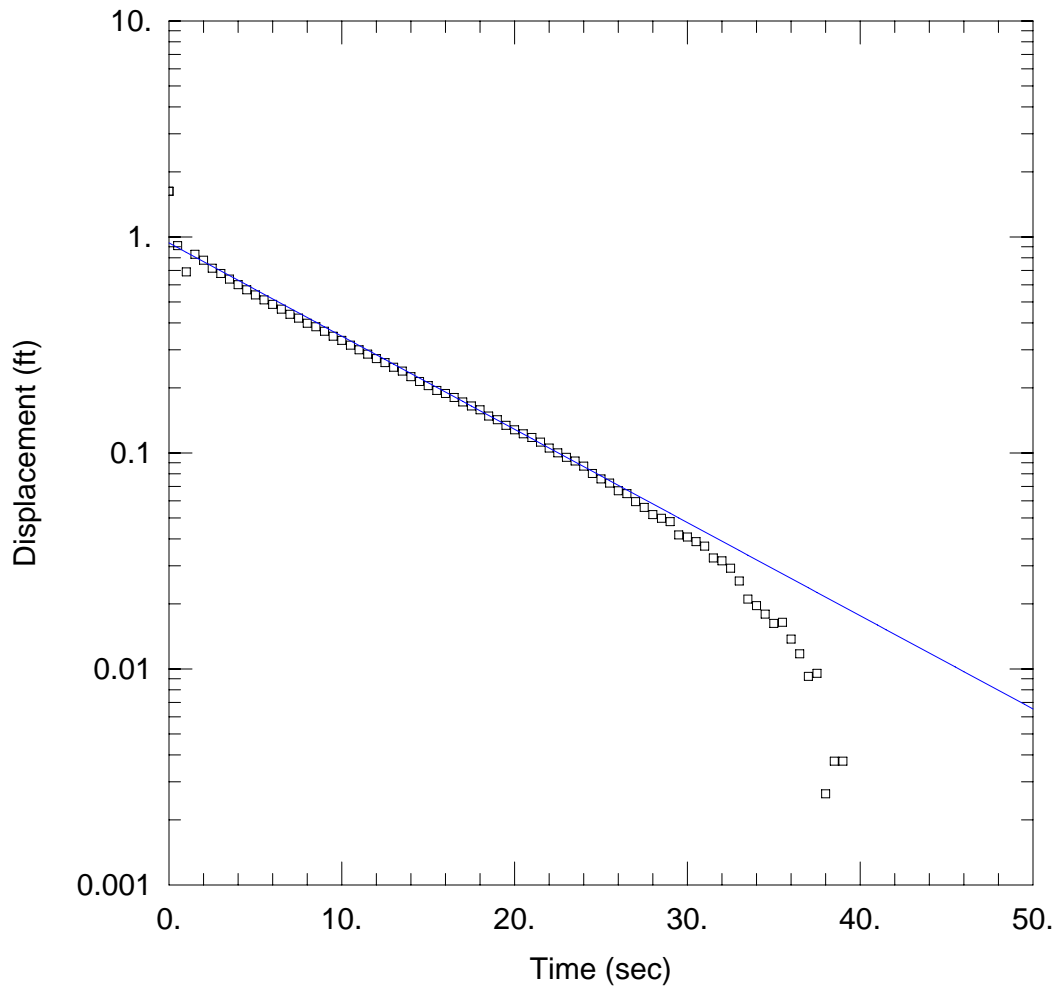
Initial Displacement: 3.148 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 34.93 ft/day

Solution Method: Bowser-Rice
 y0 = 0.8829 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-6.aqt
 Date: 12/06/12

Time: 09:41:12

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

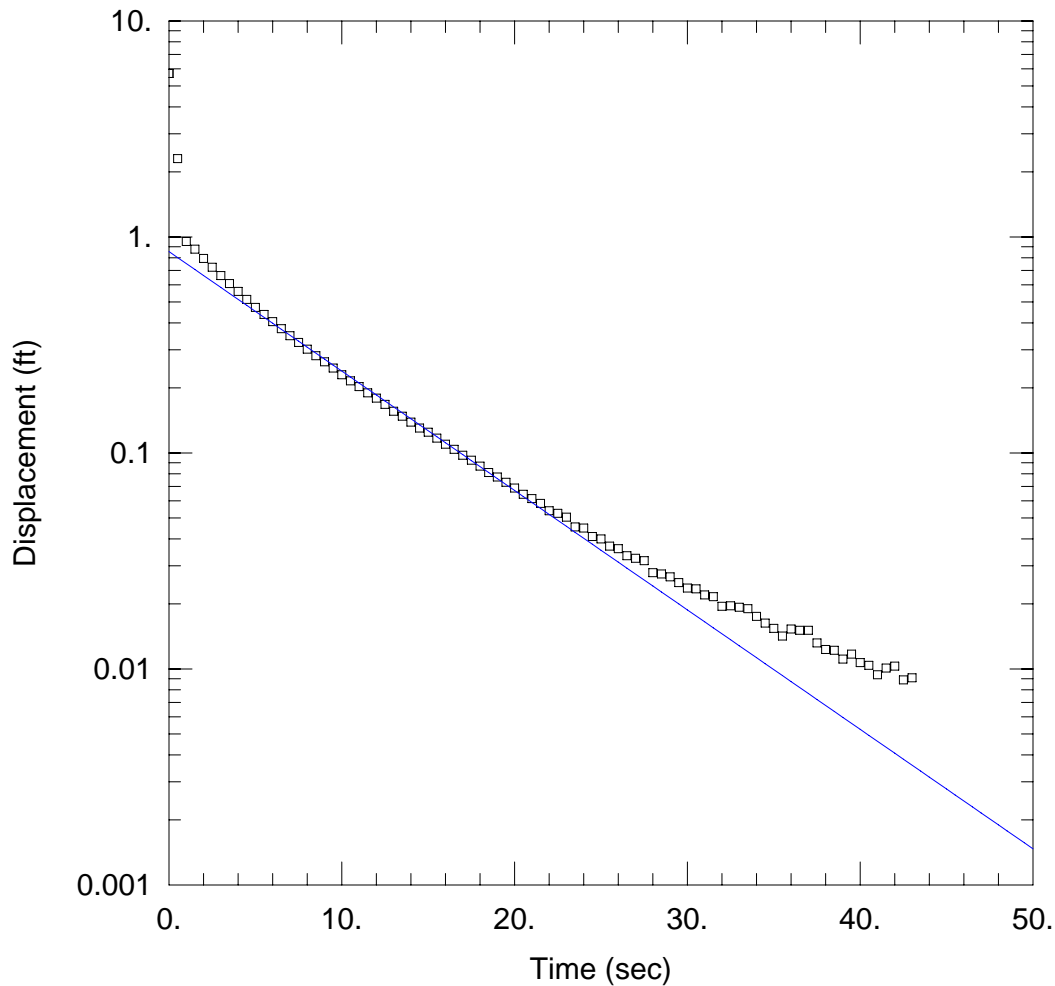
Initial Displacement: 1.628 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 45.43 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.9375 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-1.aqt
 Date: 12/06/12

Time: 09:42:27

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

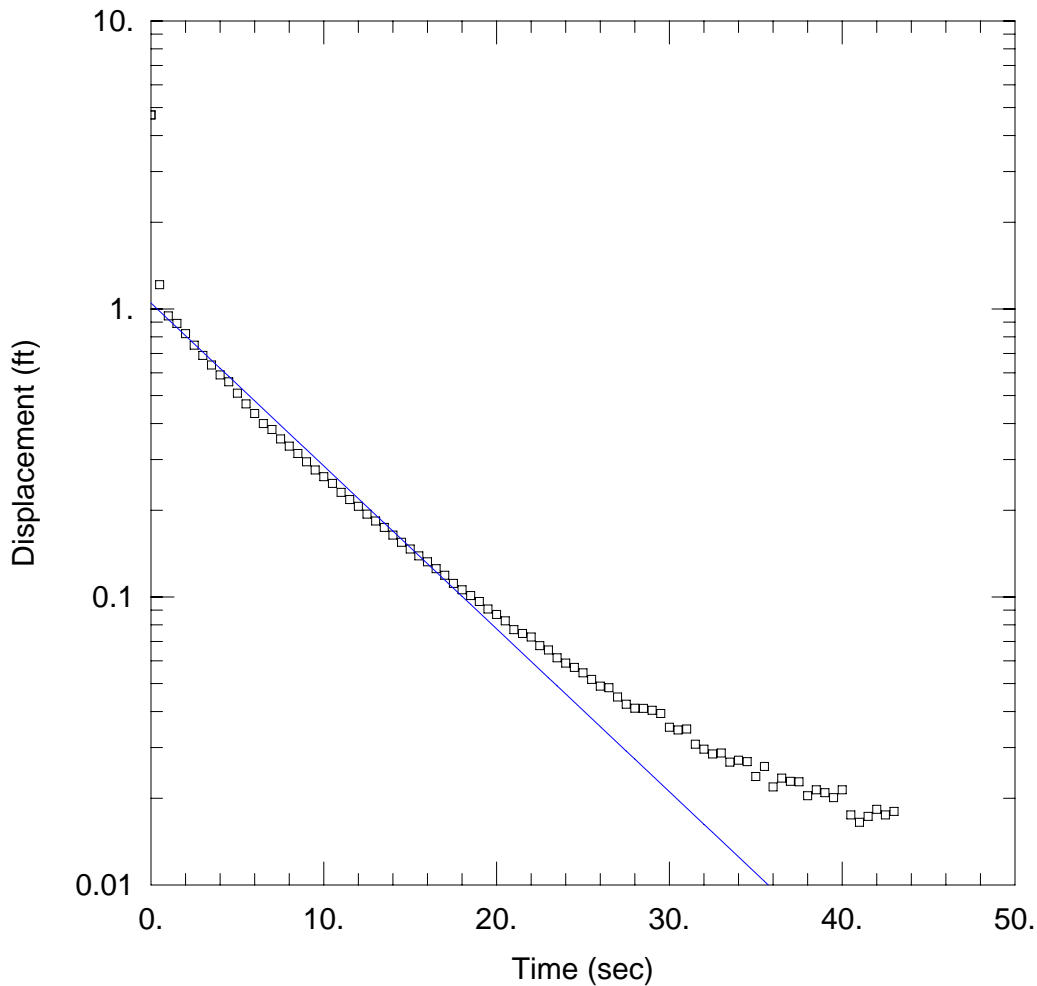
Initial Displacement: 5.712 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 58.21 ft/day

Solution Method: Bouwer-Rice
 y0 = 0.8548 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-2.aqt
 Date: 12/06/12

Time: 09:43:18

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

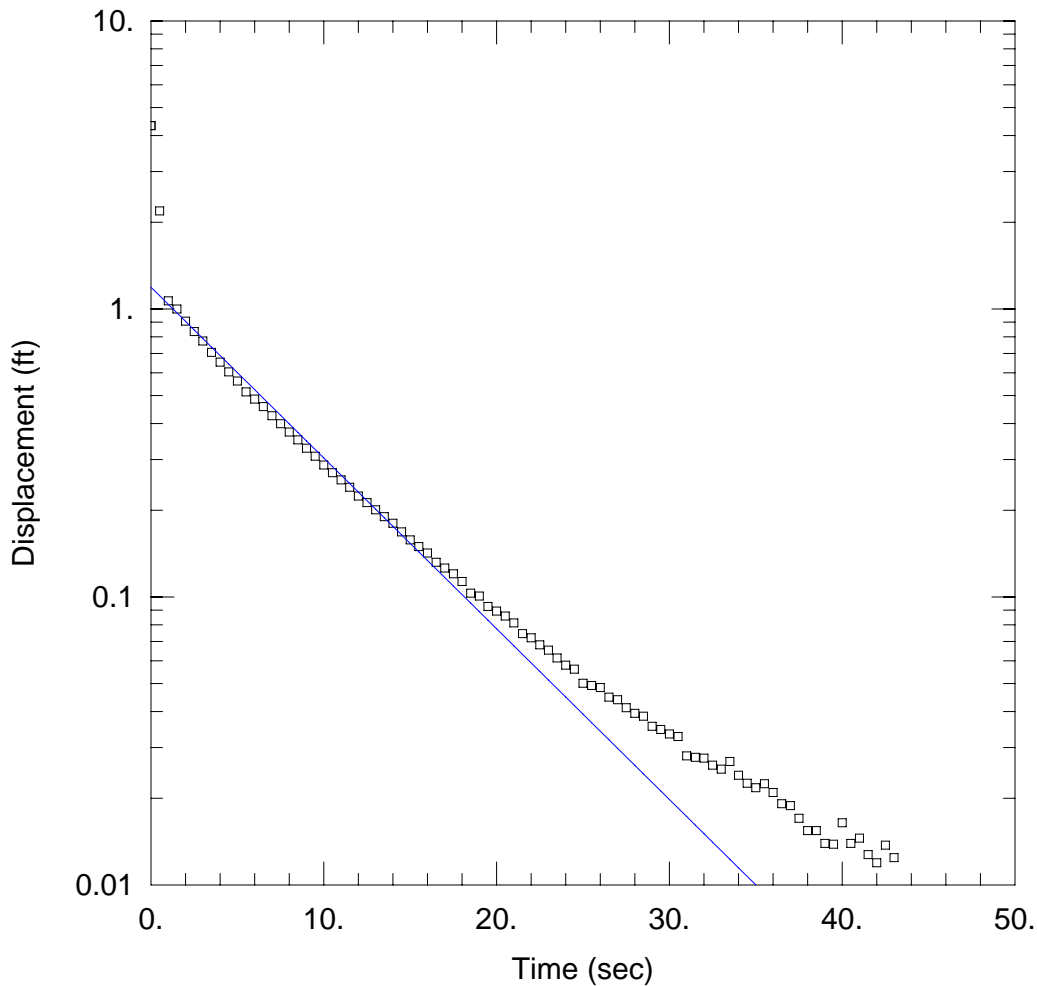
Initial Displacement: 4.718 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 59.54 ft/day

Solution Method: Bower-Rice
 y0 = 1.047 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-3.aqt
 Date: 12/06/12

Time: 09:45:13

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

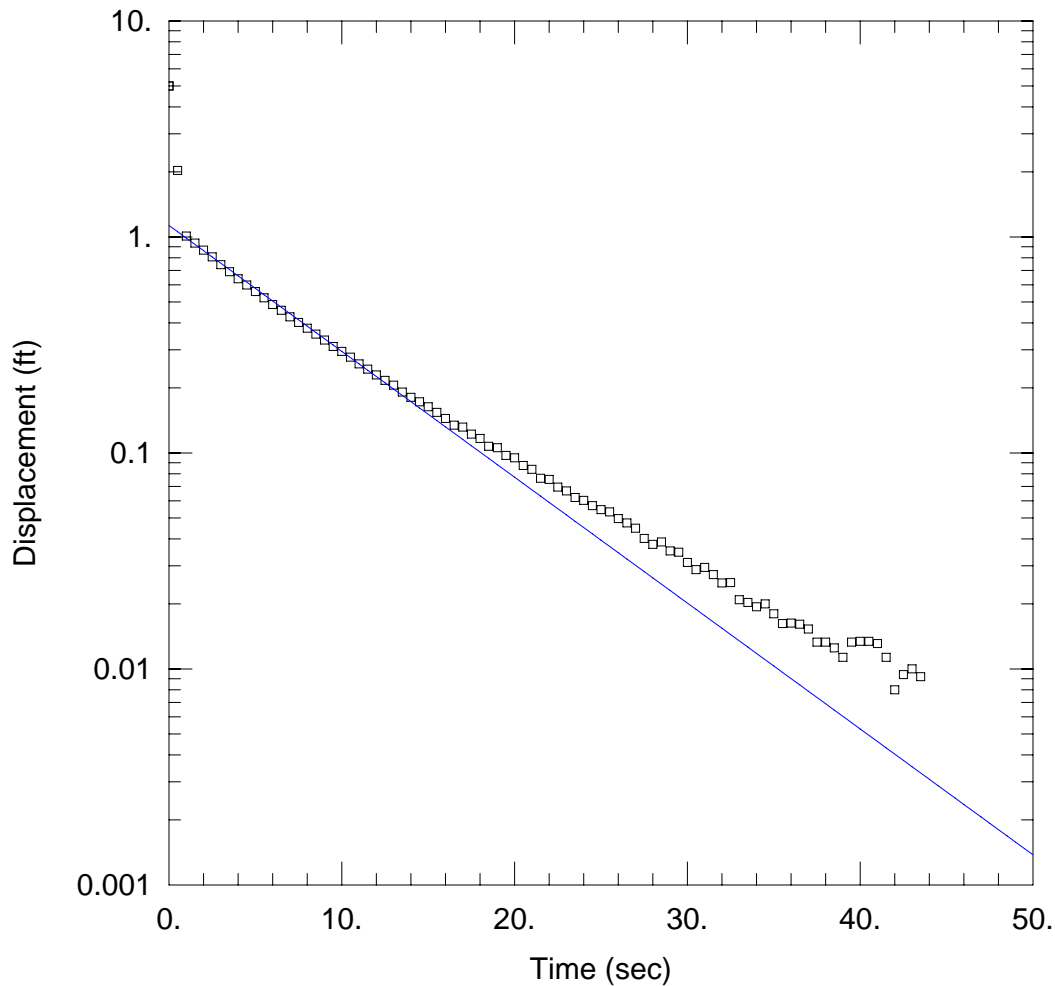
Initial Displacement: 4.332 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 62.43 ft/day

Solution Method: Bower-Rice
 y0 = 1.189 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-4.aqt
 Date: 12/06/12

Time: 09:45:52

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

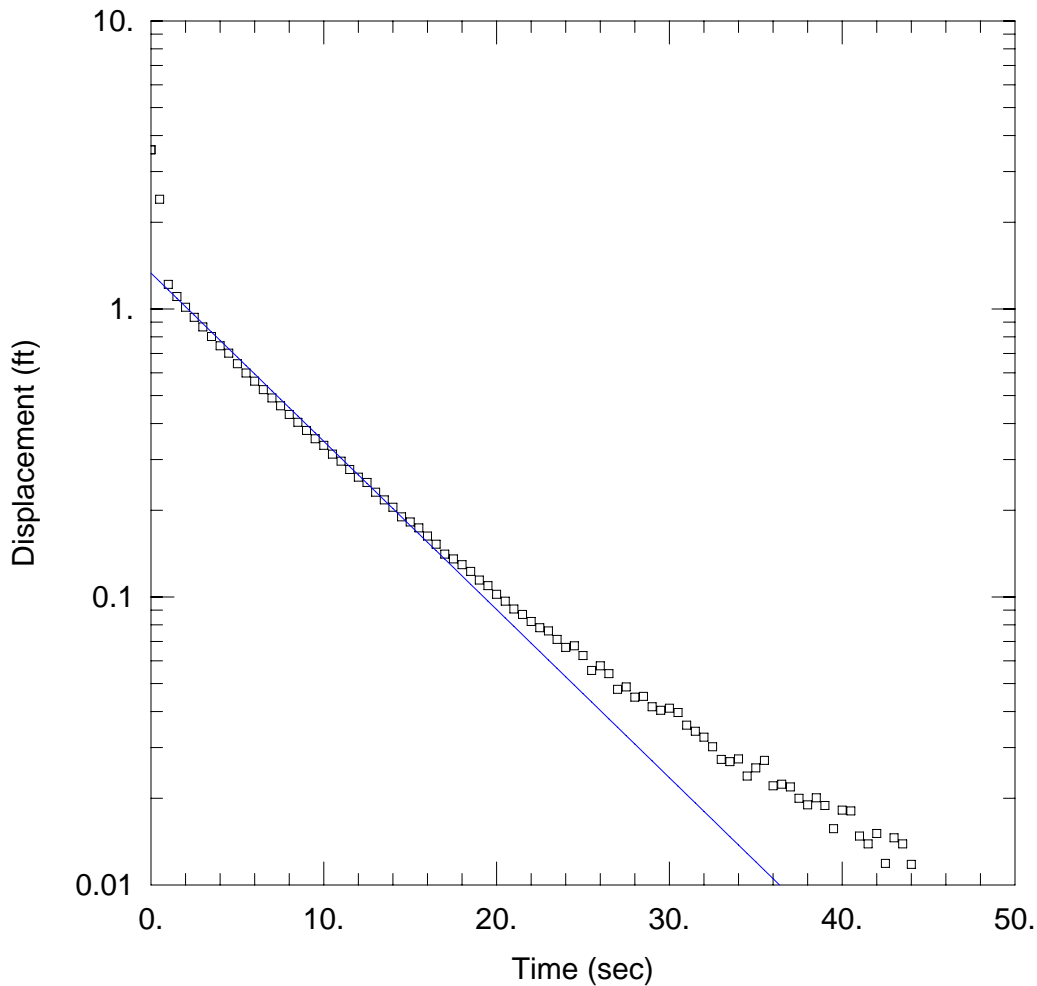
Initial Displacement: 5.002 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 61.35 ft/day

Solution Method: Bowser-Rice
 y0 = 1.13 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-5.aqt
 Date: 12/06/12

Time: 09:46:42

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

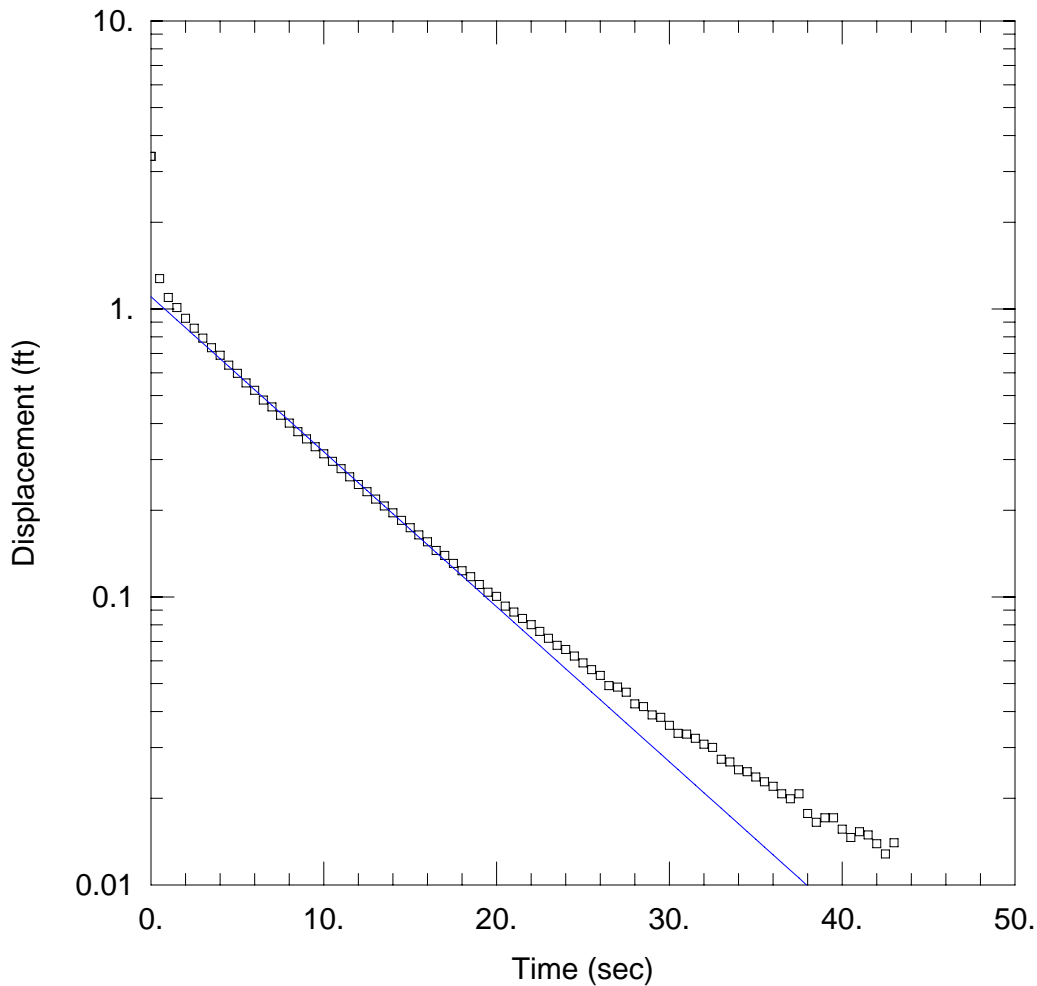
Initial Displacement: 3.57 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 61.49 ft/day

Solution Method: Bower-Rice
 y0 = 1.332 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-6.aqt
 Date: 12/06/12

Time: 09:47:44

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

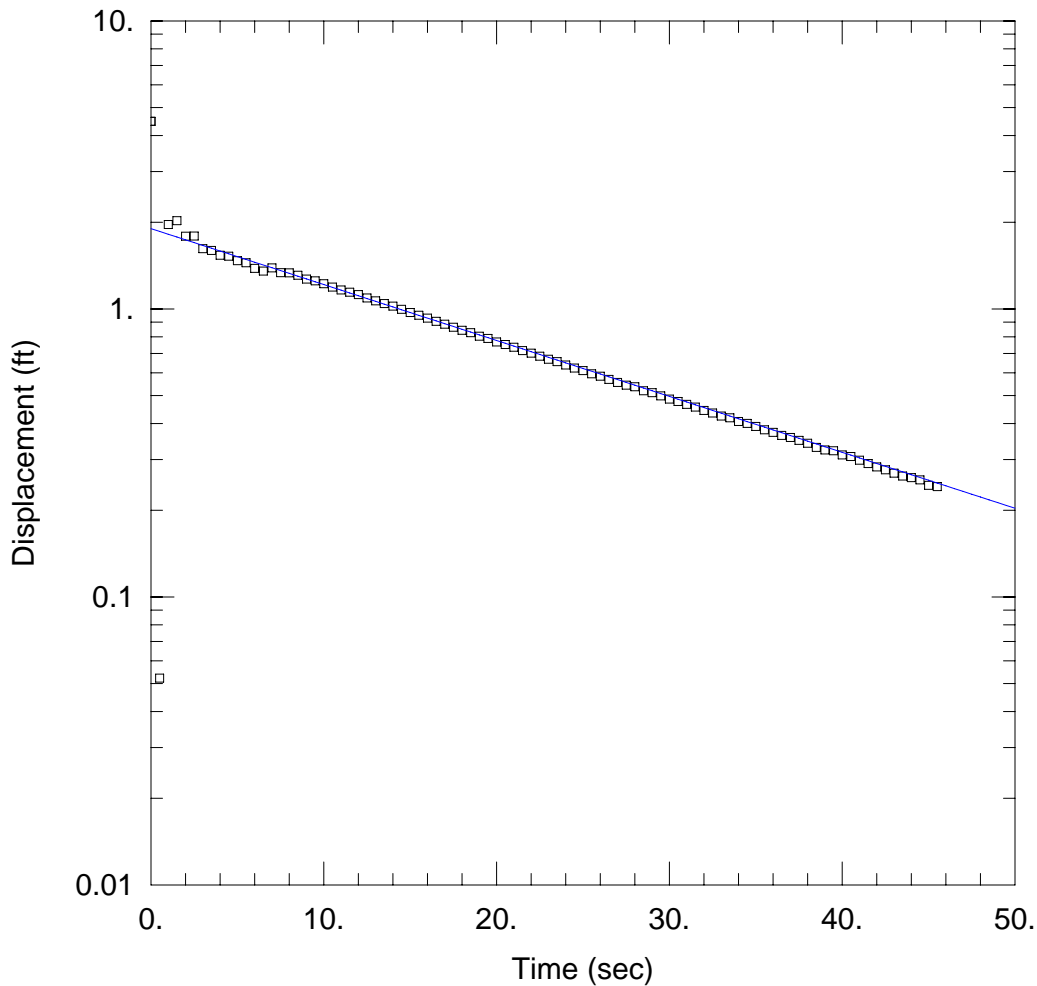
Initial Displacement: 3.385 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 56.67 ft/day

Solution Method: Bower-Rice
 y0 = 1.102 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-1.aqt
 Date: 12/06/12

Time: 09:58:56

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

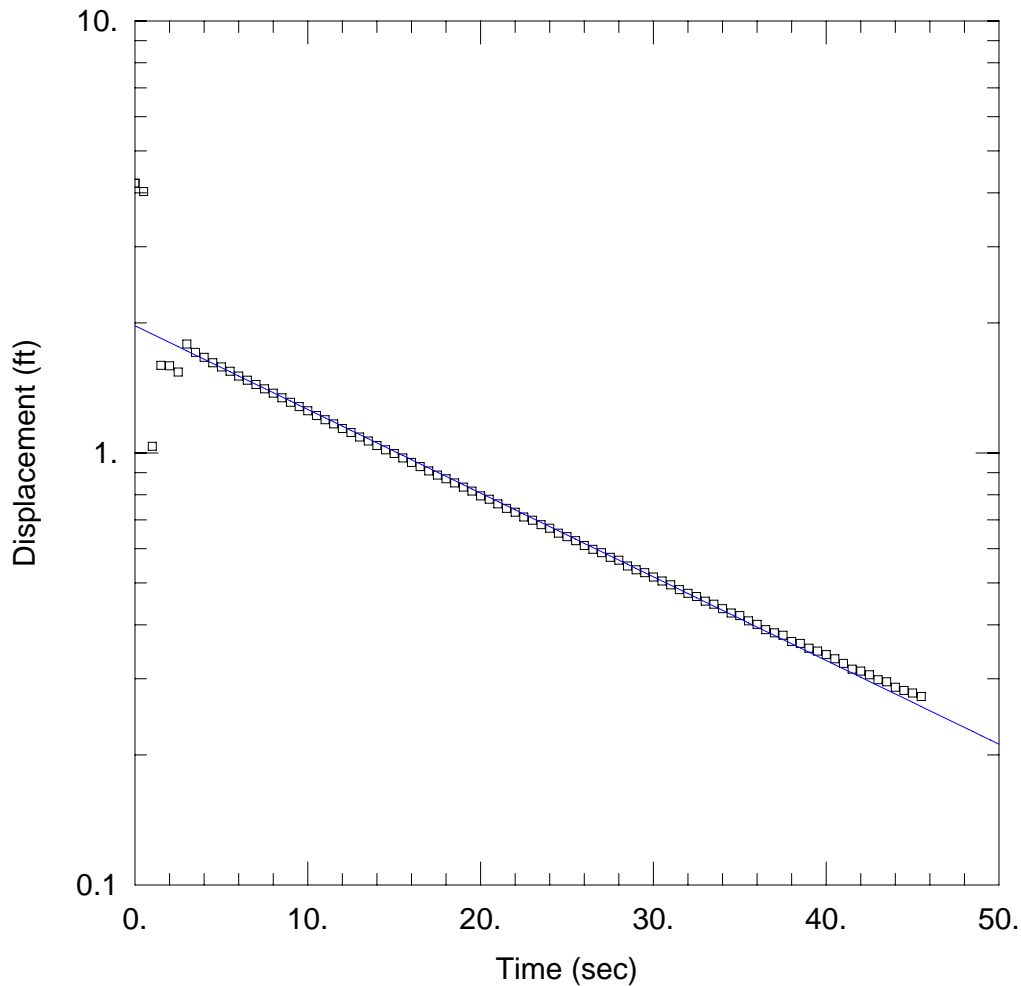
Initial Displacement: 4.483 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 23.82 ft/day

Solution Method: Bower-Rice
 y0 = 1.9 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-2.aqt
 Date: 12/06/12

Time: 09:59:25

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

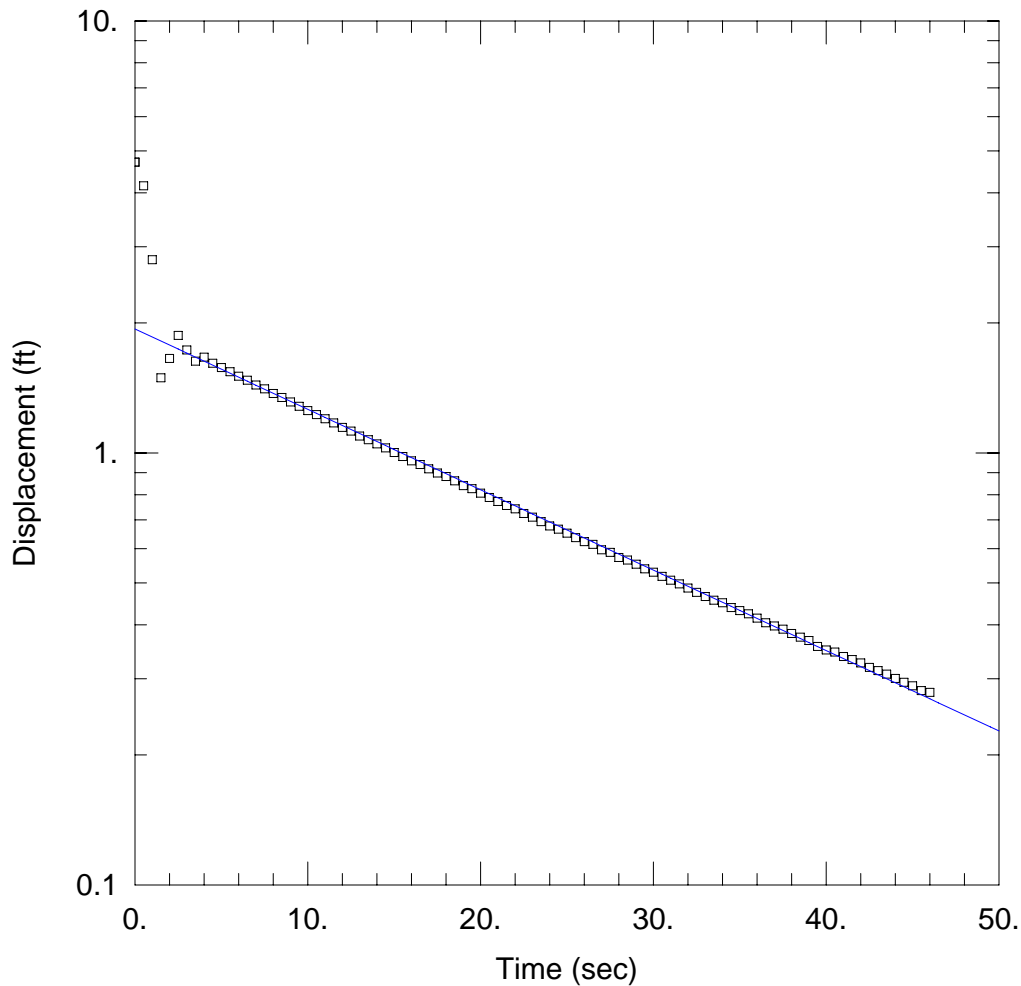
Initial Displacement: 4.21 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 23.77 ft/day

Solution Method: Bower-Rice
 y0 = 1.97 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-3.aqt
 Date: 12/06/12

Time: 09:59:53

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

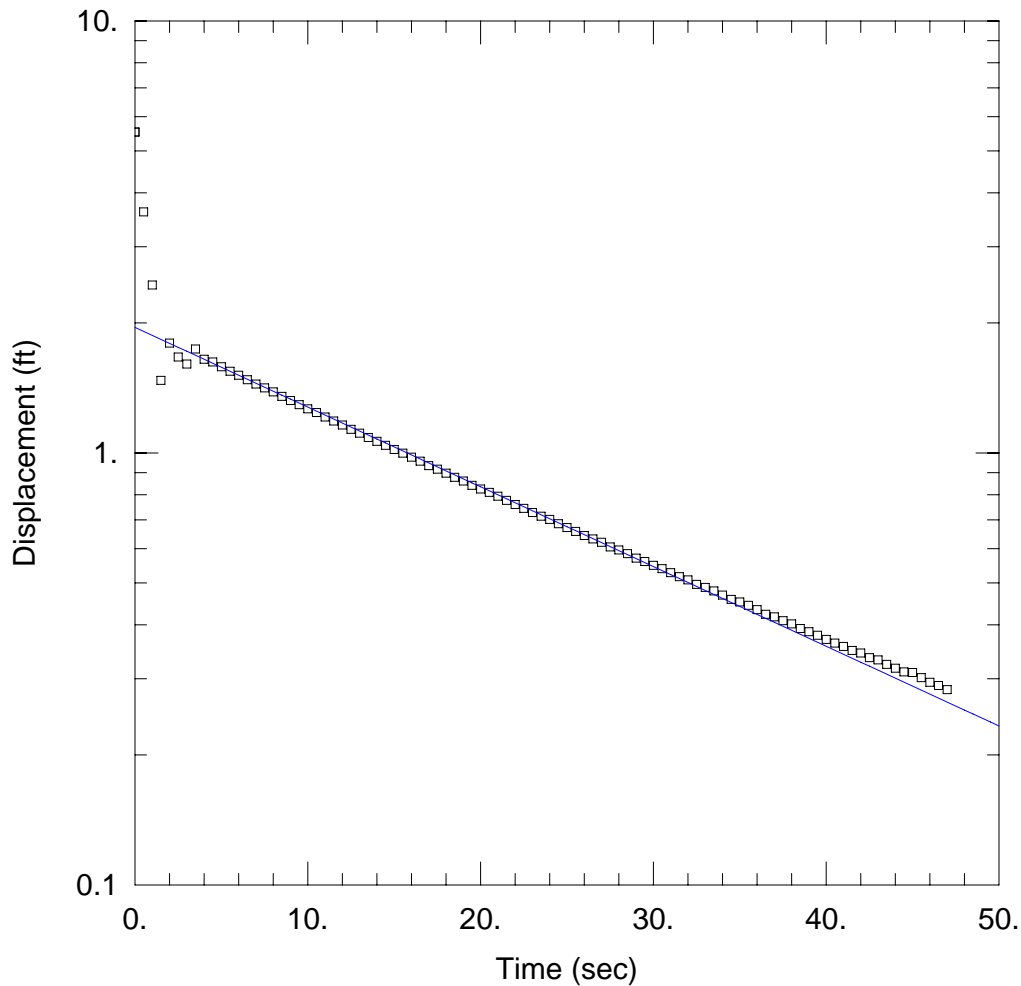
Initial Displacement: 4.71 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 22.84 ft/day

Solution Method: Bower-Rice
 y0 = 1.936 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-4.aqt
 Date: 12/06/12

Time: 10:00:17

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

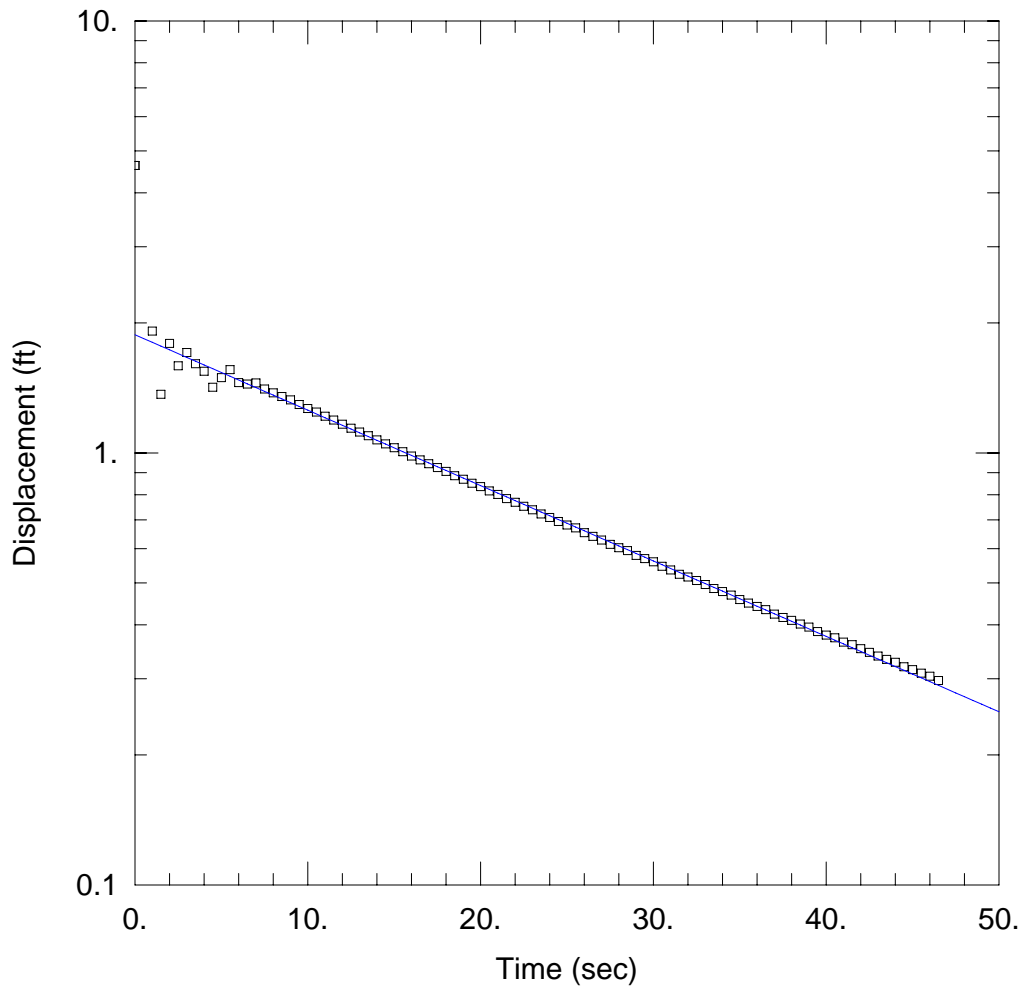
Initial Displacement: 5.533 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 22.64 ft/day

Solution Method: Bower-Rice
 y0 = 1.952 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-5.aqt
 Date: 12/06/12

Time: 09:53:51

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

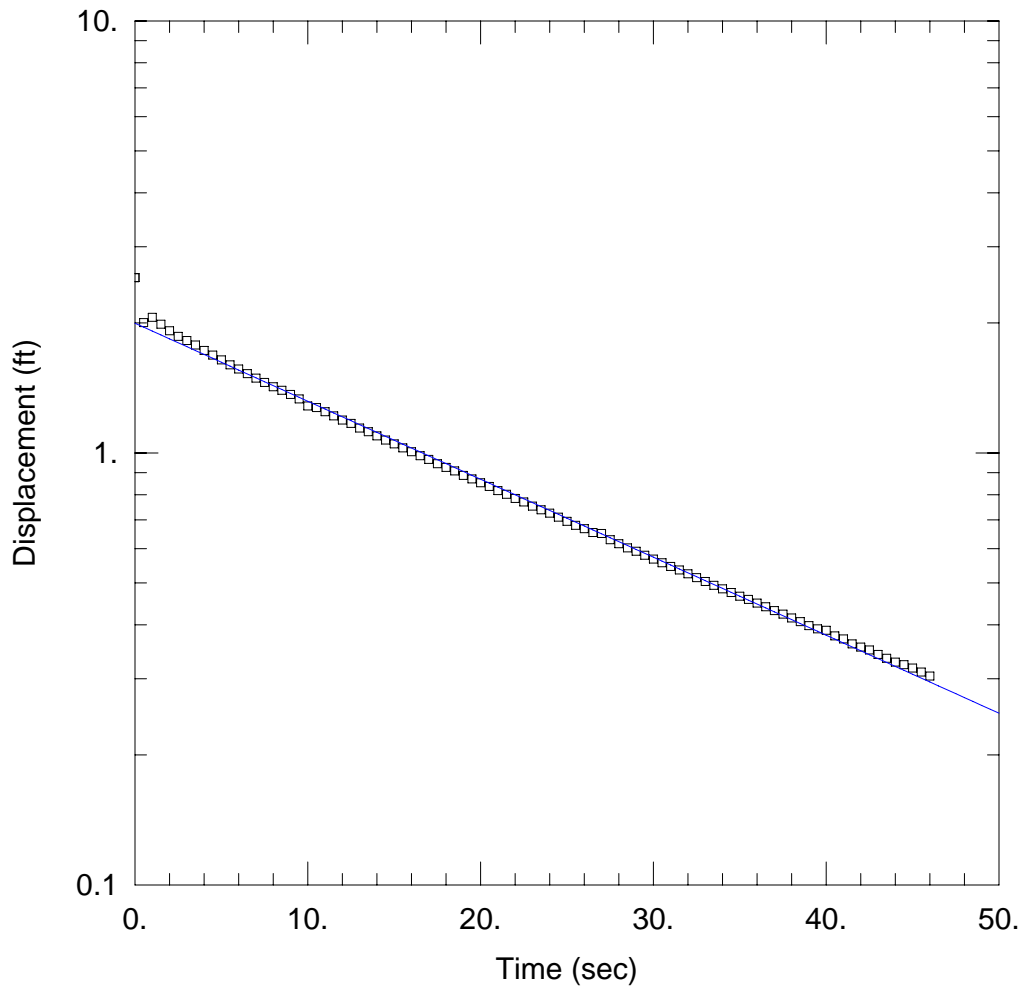
Initial Displacement: 4.626 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 21.42 ft/day

Solution Method: Bower-Rice
 y0 = 1.877 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-1.aqt
 Date: 12/06/12

Time: 09:55:34

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

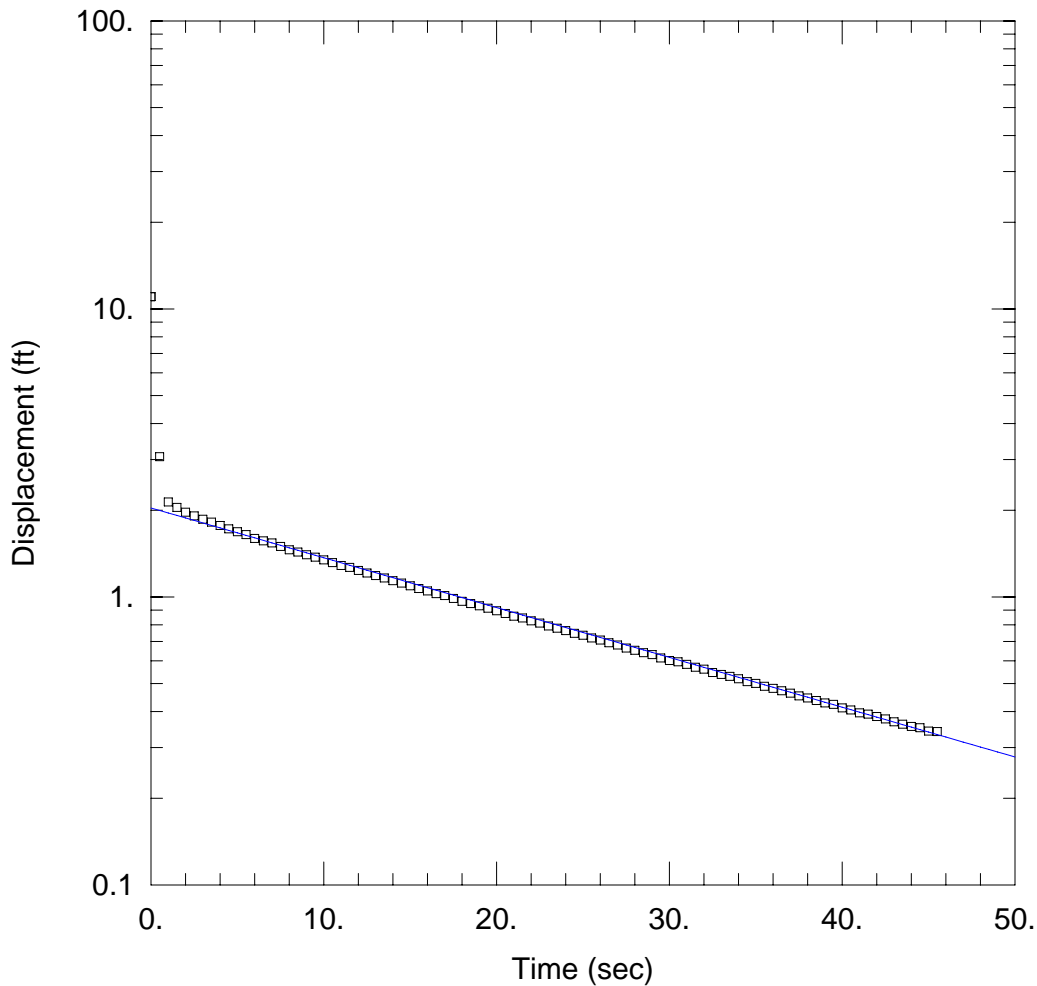
Initial Displacement: 2.545 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 22.15 ft/day

Solution Method: Bower-Rice
 y0 = 1.996 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-2.aqt
 Date: 12/06/12

Time: 09:56:00

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

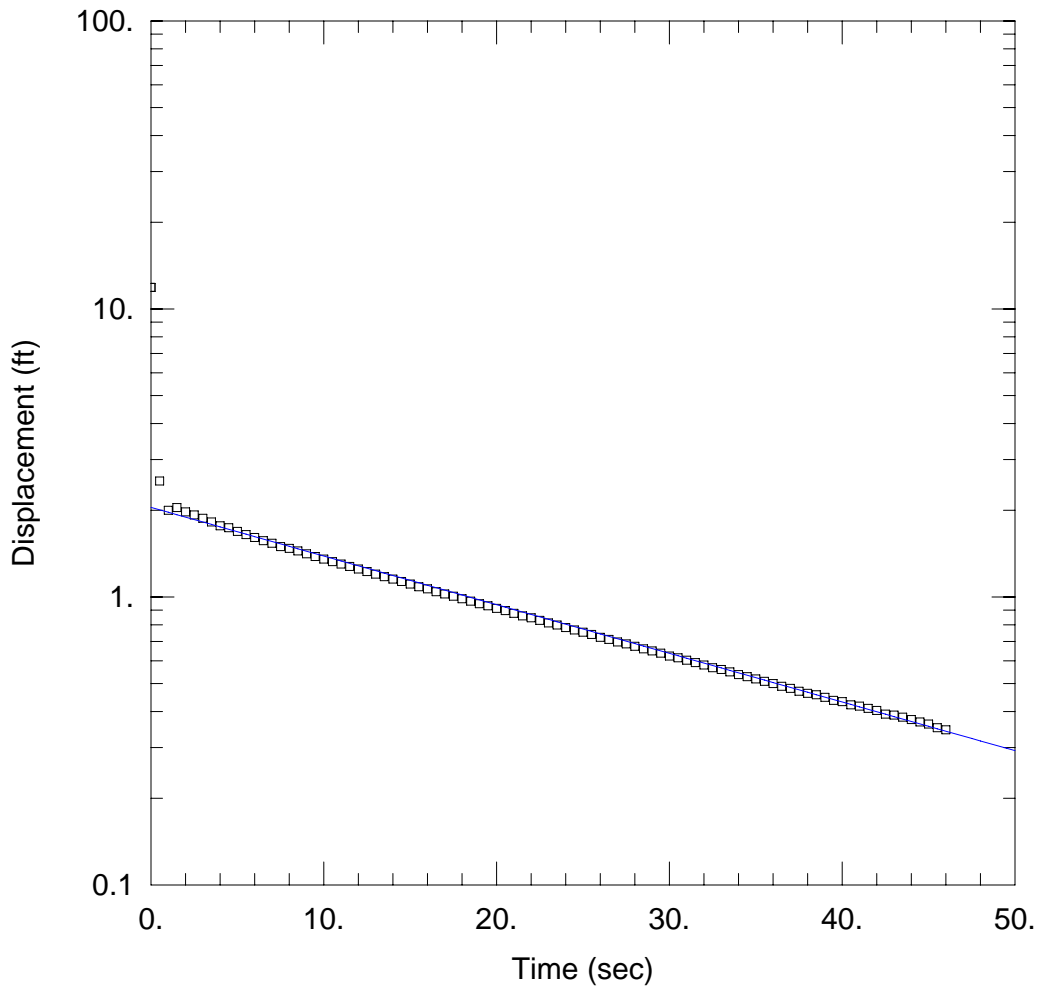
Initial Displacement: 11.03 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 21.22 ft/day

Solution Method: Bower-Rice
 y0 = 2.036 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-3.aqt
 Date: 12/06/12

Time: 09:56:26

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

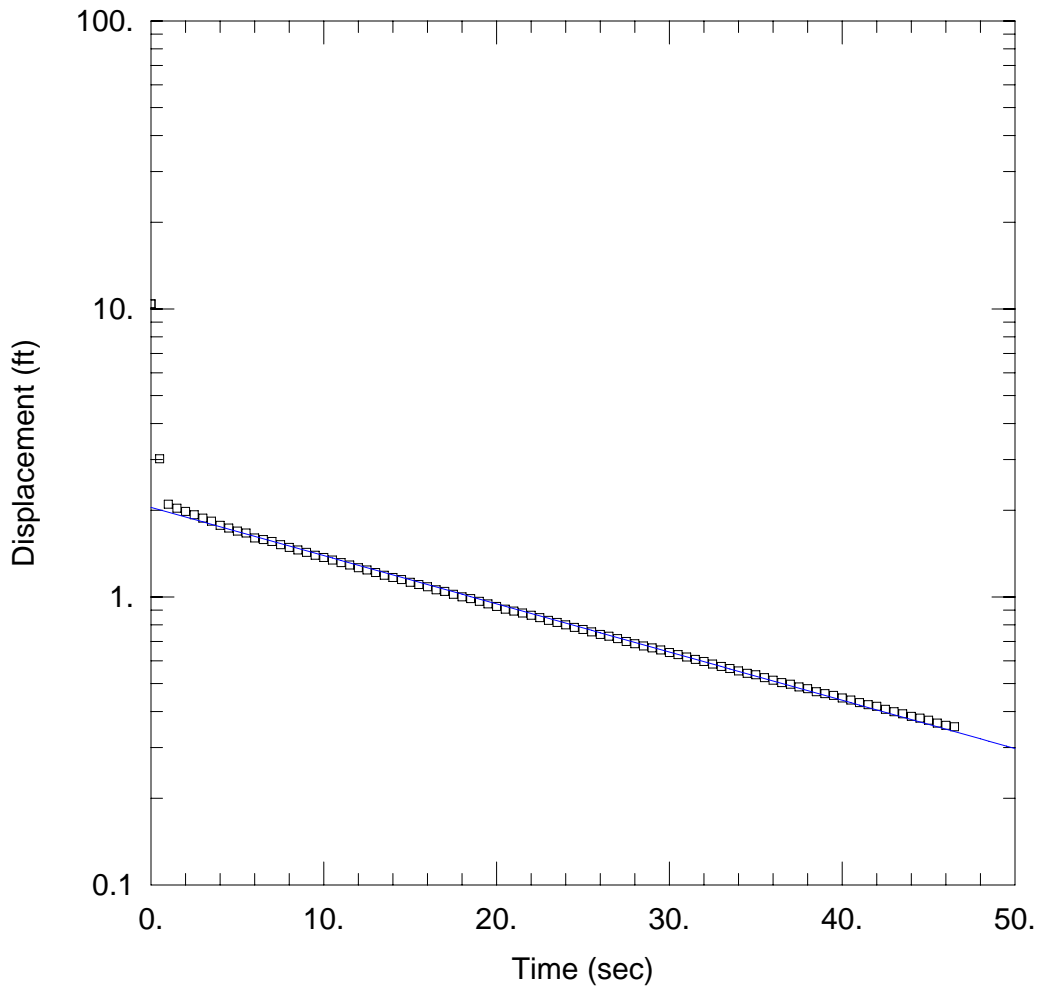
Initial Displacement: 11.88 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 20.73 ft/day

Solution Method: Bouwer-Rice
 y0 = 2.045 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-4.aqt
 Date: 12/06/12

Time: 09:57:38

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

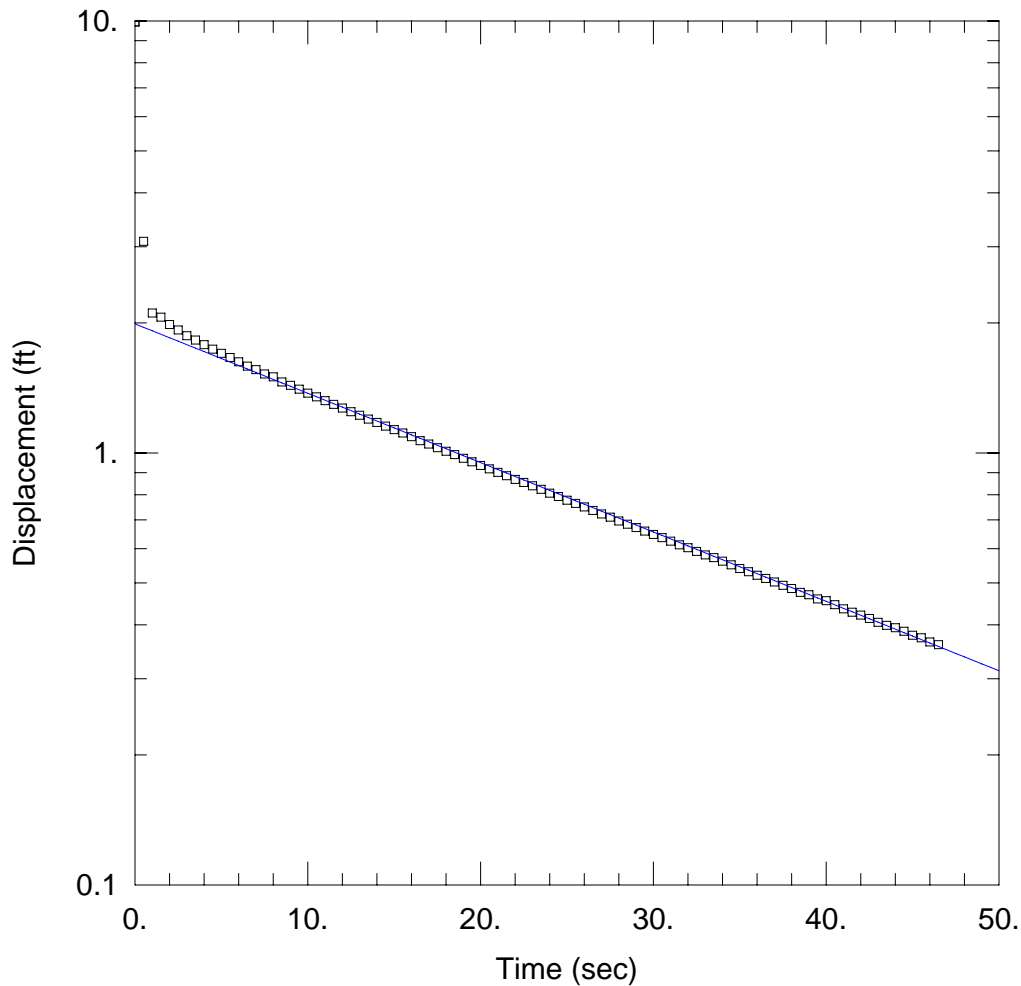
Initial Displacement: 10.41 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 20.54 ft/day

Solution Method: Bower-Rice
 y0 = 2.046 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-5.aqt
 Date: 12/06/12

Time: 09:58:29

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

Initial Displacement: 9.944 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

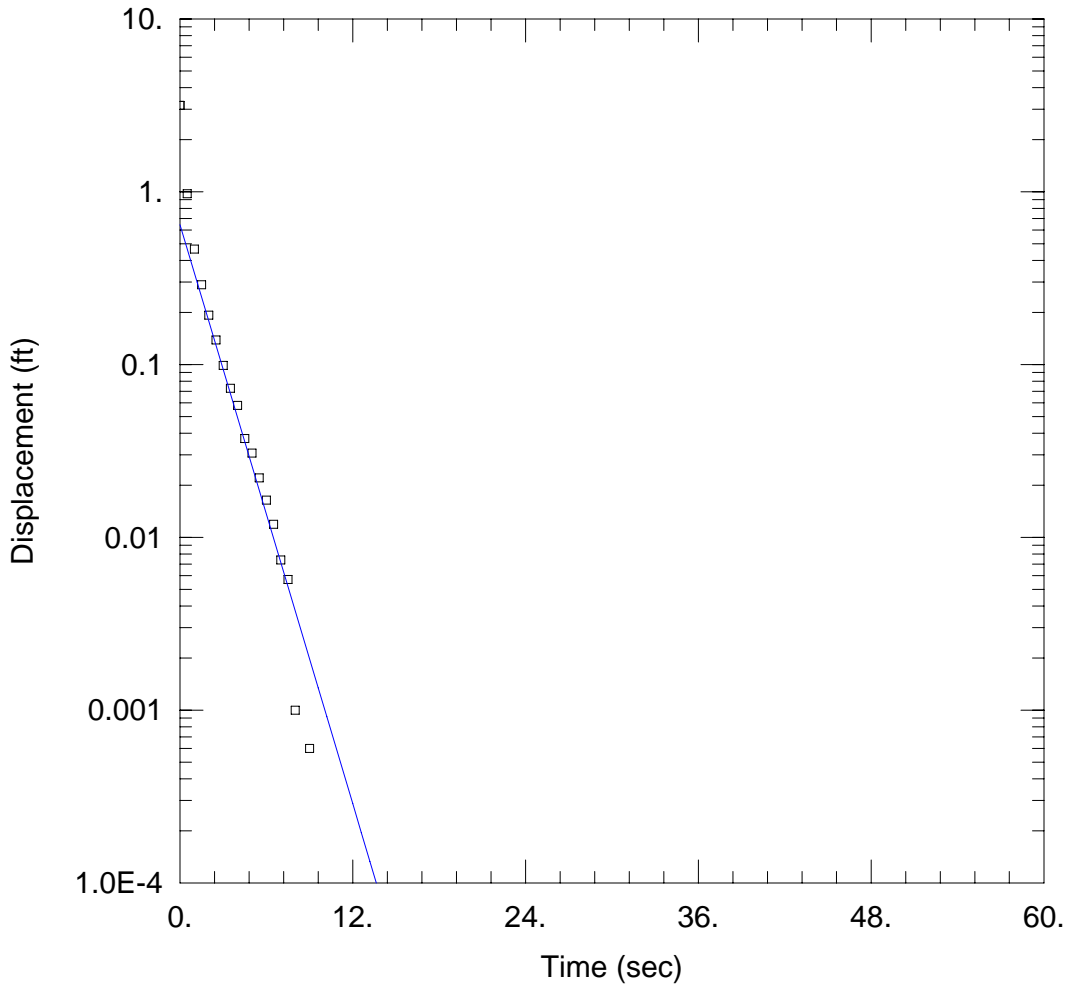
Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 19.71 ft/day

Solution Method: Bouwer-Rice
 y0 = 1.989 ft

ATTACHMENT 2
Hvorslev Analysis



SLUG TEST

Data Set: V:\...\MW01-Rising-2.aqt
 Date: 12/06/12

Time: 10:35:29

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

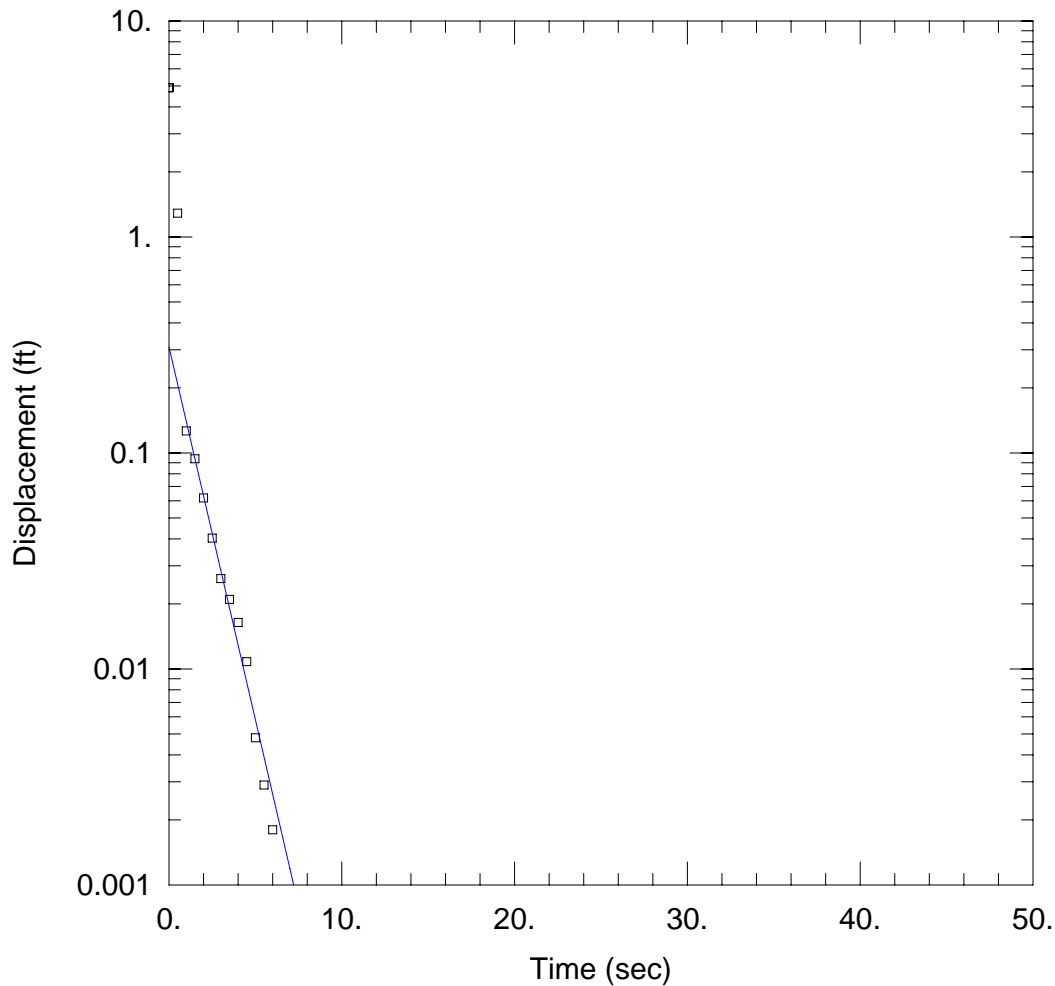
Initial Displacement: 3.156 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 451.9 ft/day

Solution Method: Hvorslev
 y0 = 0.6444 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-1.aqt
 Date: 12/06/12

Time: 10:33:49

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

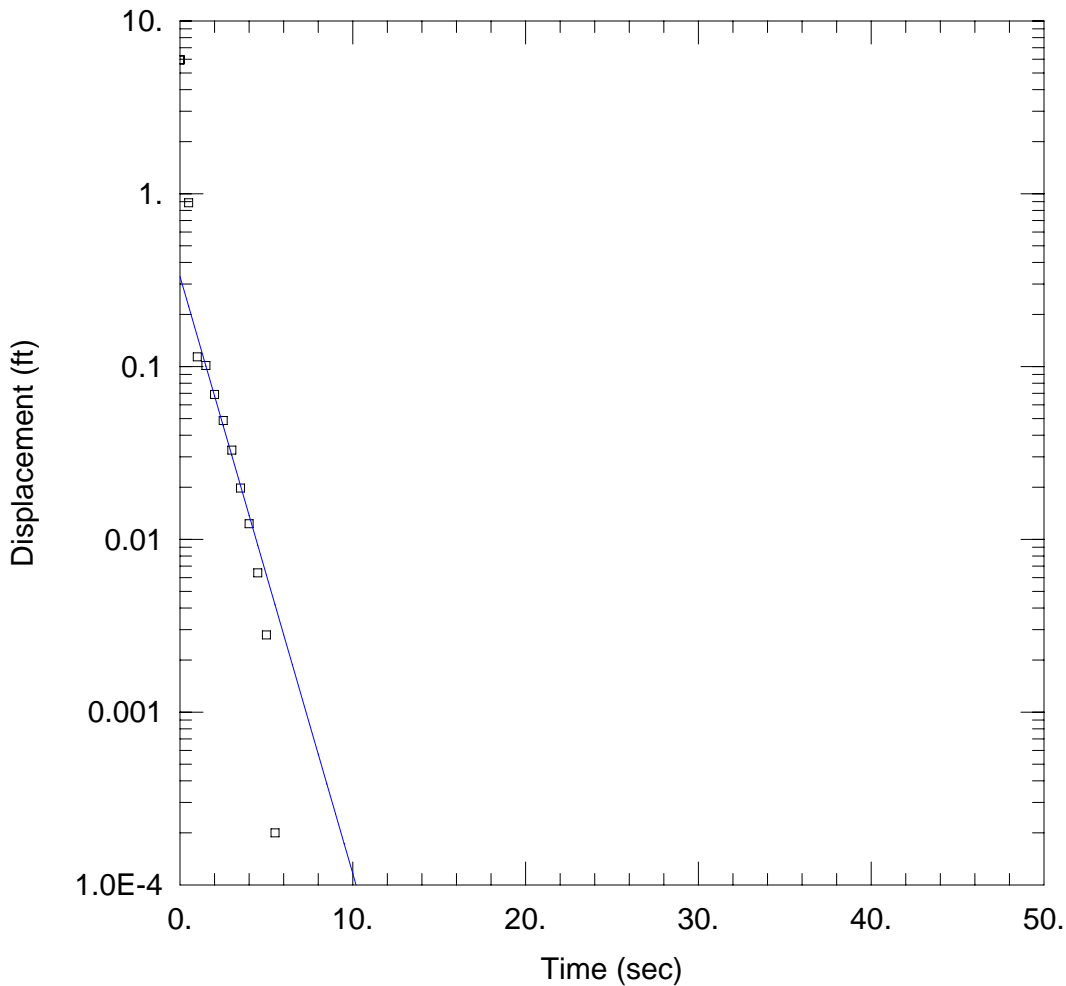
Initial Displacement: 4.908 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 558.6 ft/day

Solution Method: Hvorslev
 y0 = 0.3095 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-4.aqt
 Date: 12/06/12

Time: 10:36:19

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

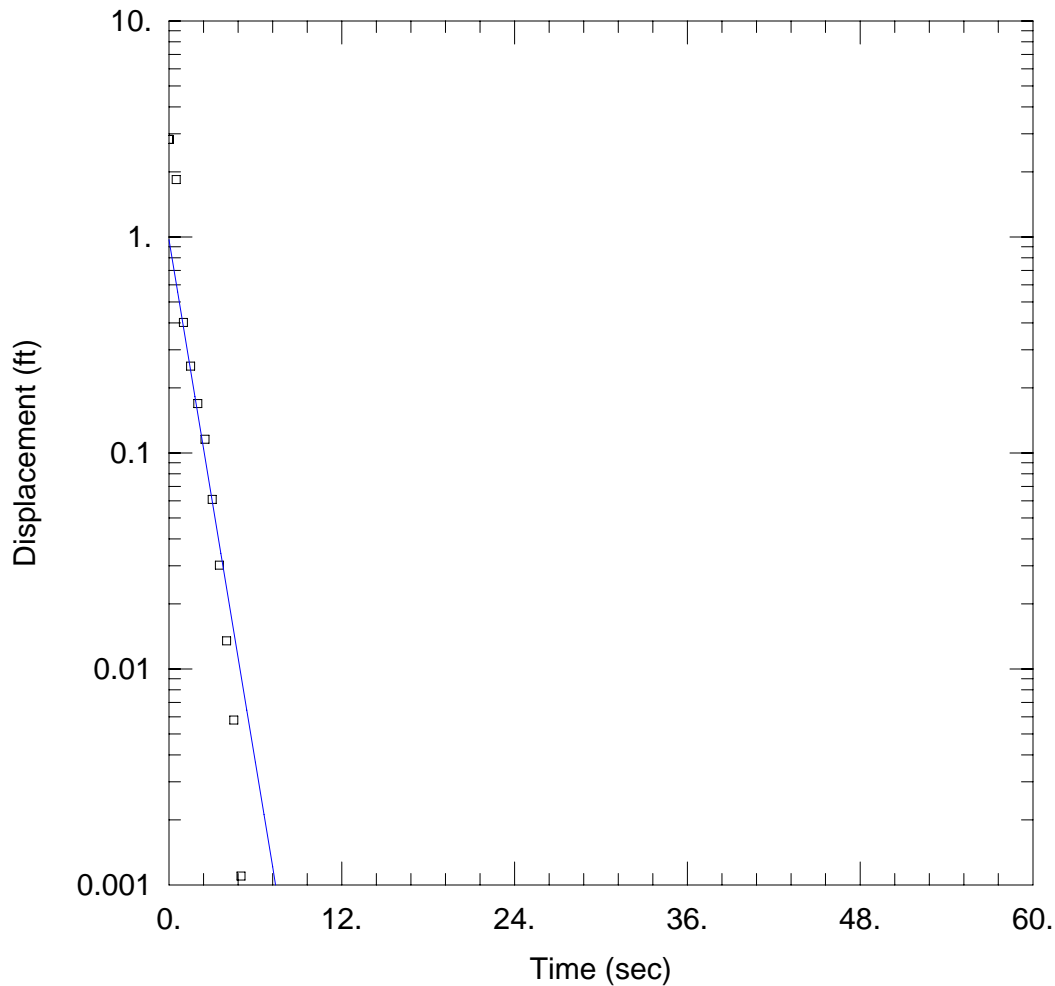
Initial Displacement: 5.949 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 559.2 ft/day

Solution Method: Hvorslev
 y0 = 0.3318 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-5.aqt
 Date: 12/06/12

Time: 10:37:41

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

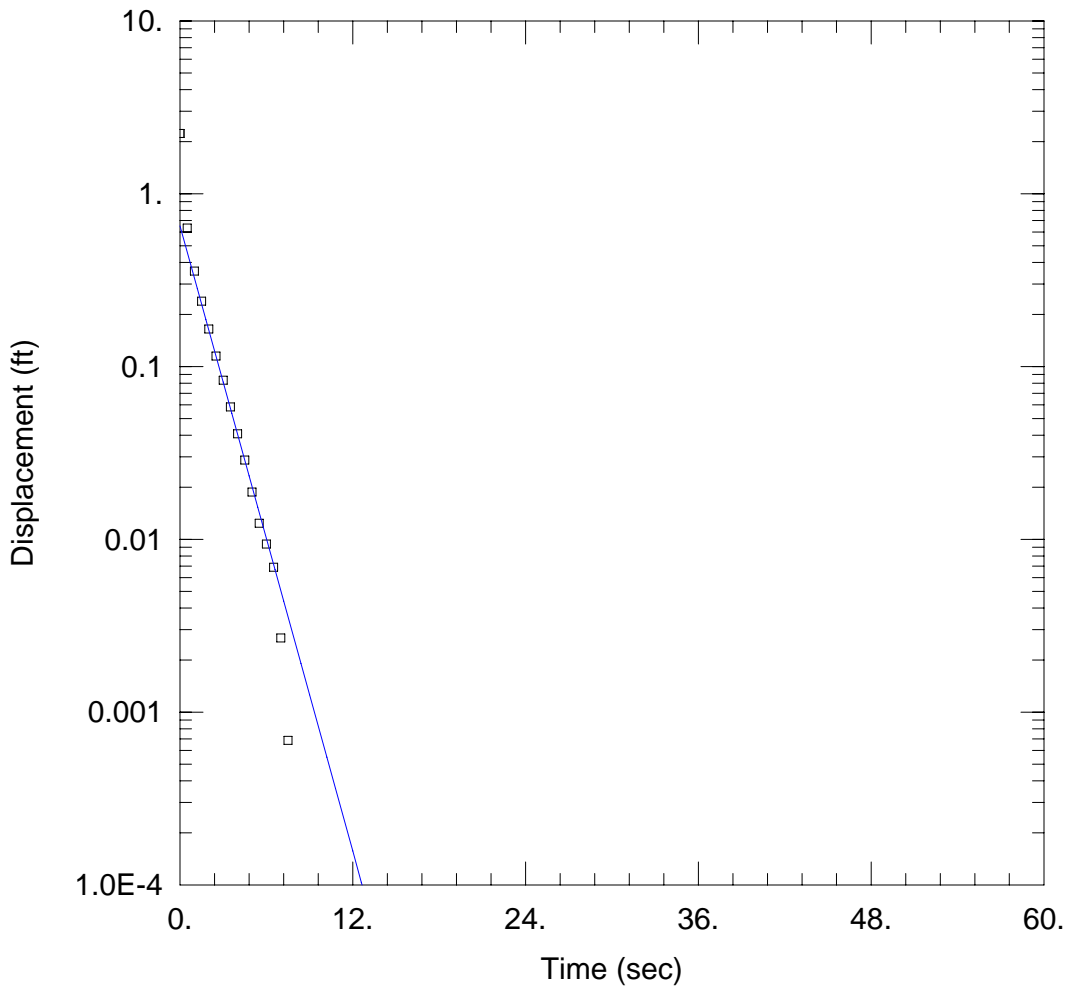
Initial Displacement: 2.827 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 652.6 ft/day

Solution Method: Hvorslev
 y0 = 0.9708 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-6.aqt
 Date: 12/06/12

Time: 10:38:14

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

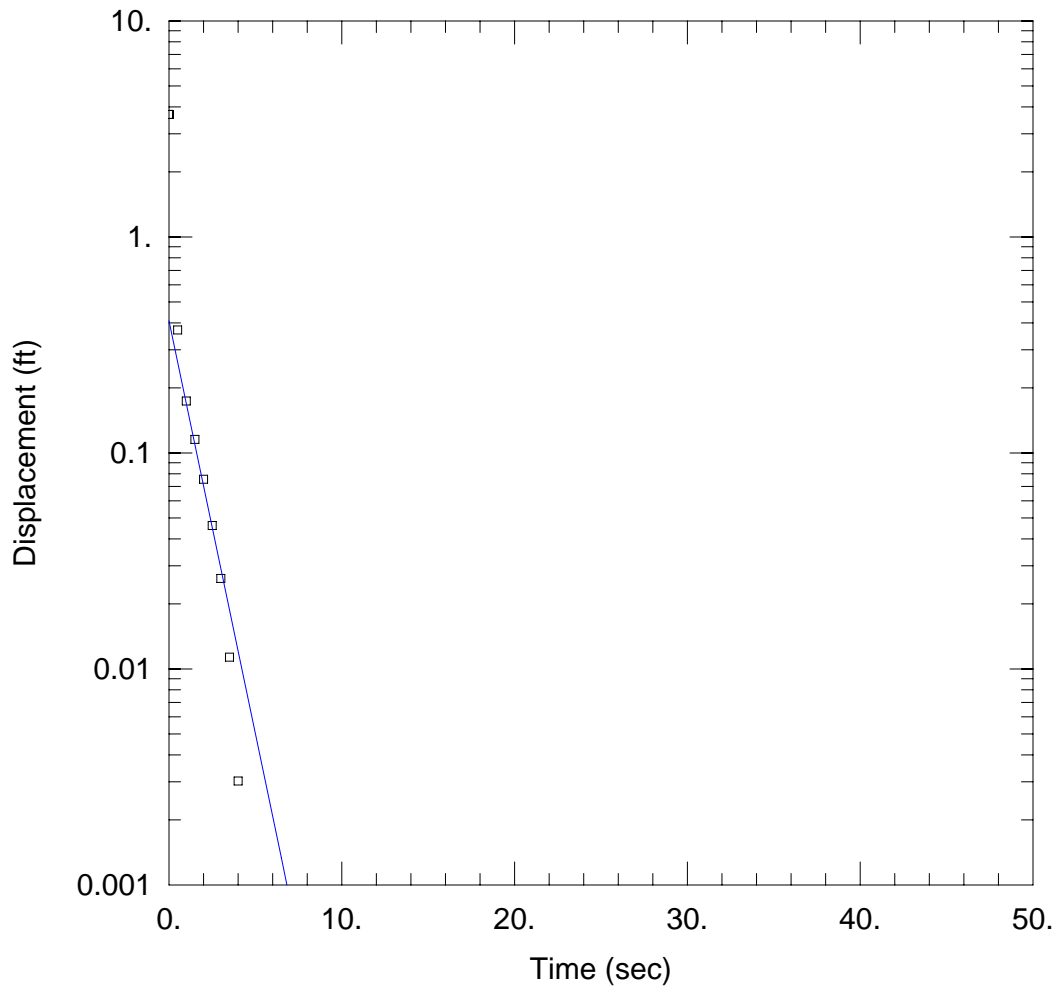
Initial Displacement: 2.232 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 487.8 ft/day

Solution Method: Hvorslev
 y0 = 0.6515 ft



SLUG TEST

Data Set: V:\...\MW01-Rising-7.aqt
 Date: 12/06/12

Time: 10:42:30

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW01
 Test Date: 10/7/2012

AQUIFER DATA

Saturated Thickness: 9.05 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW01)

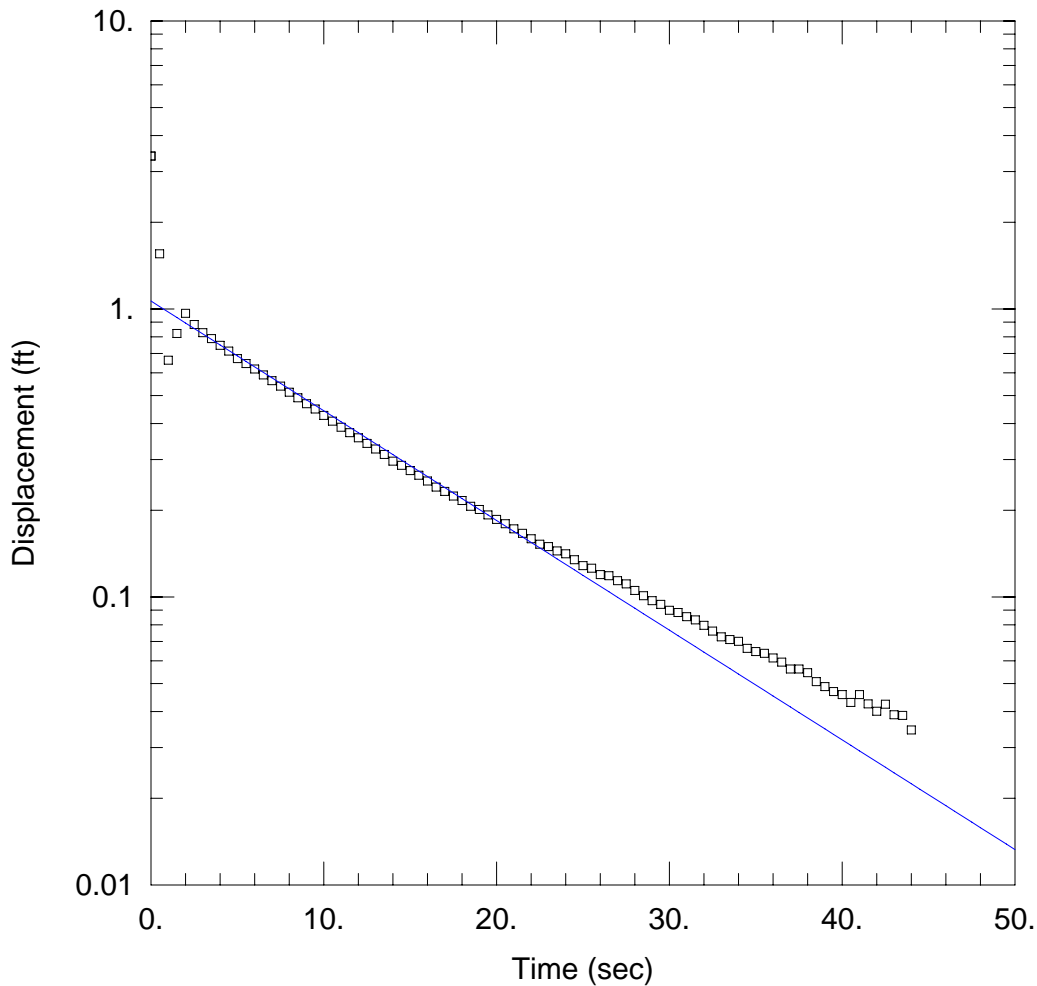
Initial Displacement: 3.691 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 9.05 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 618.7 ft/day

Solution Method: Hvorslev
 y0 = 0.4089 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-1.aqt
 Date: 12/06/12

Time: 10:43:38

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

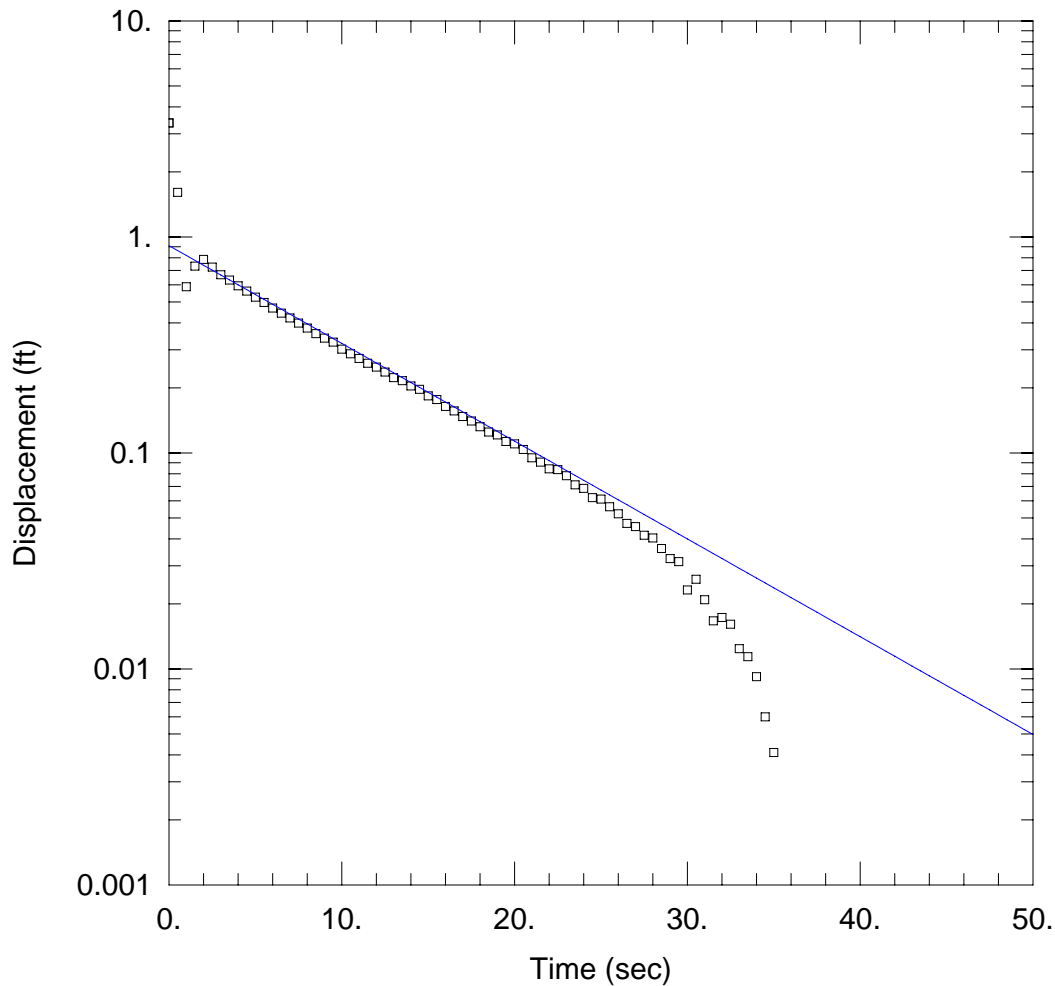
Initial Displacement: 3.394 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 50.41 ft/day

Solution Method: Hvorslev
 y0 = 1.065 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-2.aqt
 Date: 12/06/12

Time: 10:44:13

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

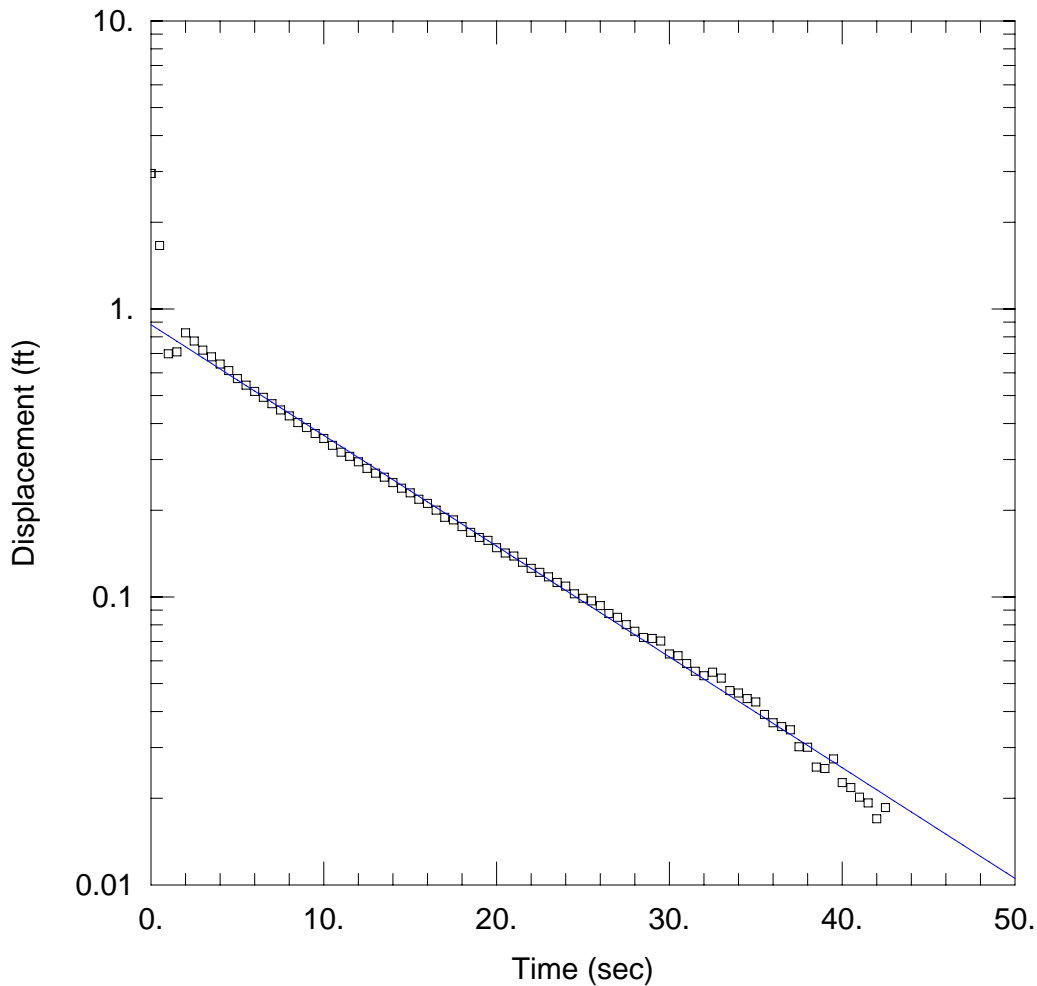
Initial Displacement: 3.371 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 59.89 ft/day

Solution Method: Hvorslev
 y0 = 0.9107 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-3.aqt
 Date: 12/06/12

Time: 10:44:53

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

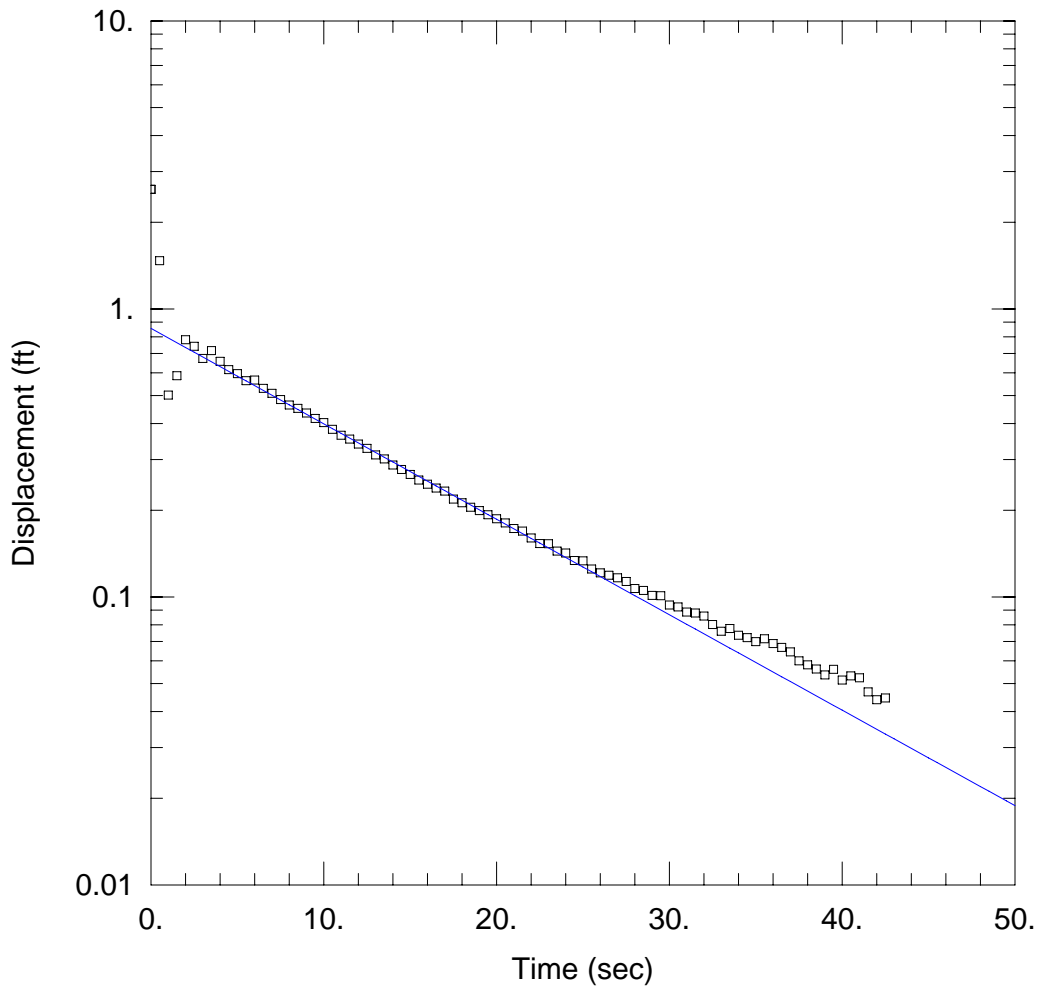
Initial Displacement: 2.954 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 50.89 ft/day

Solution Method: Hvorslev
 y0 = 0.8816 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-4.aqt
 Date: 12/06/12

Time: 10:45:38

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

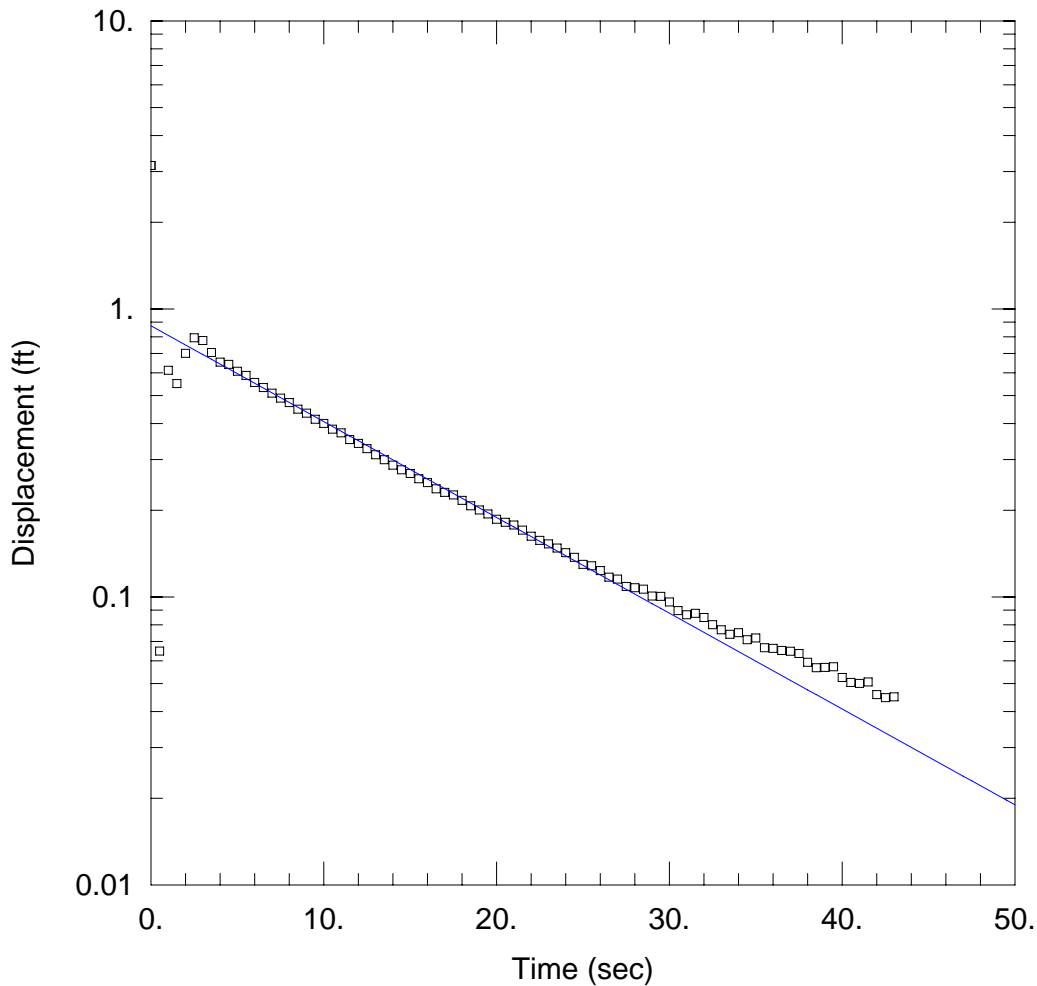
Initial Displacement: 2.601 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 43.86 ft/day

Solution Method: Hvorslev
 y0 = 0.8557 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-5.aqt
 Date: 12/06/12

Time: 10:46:31

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

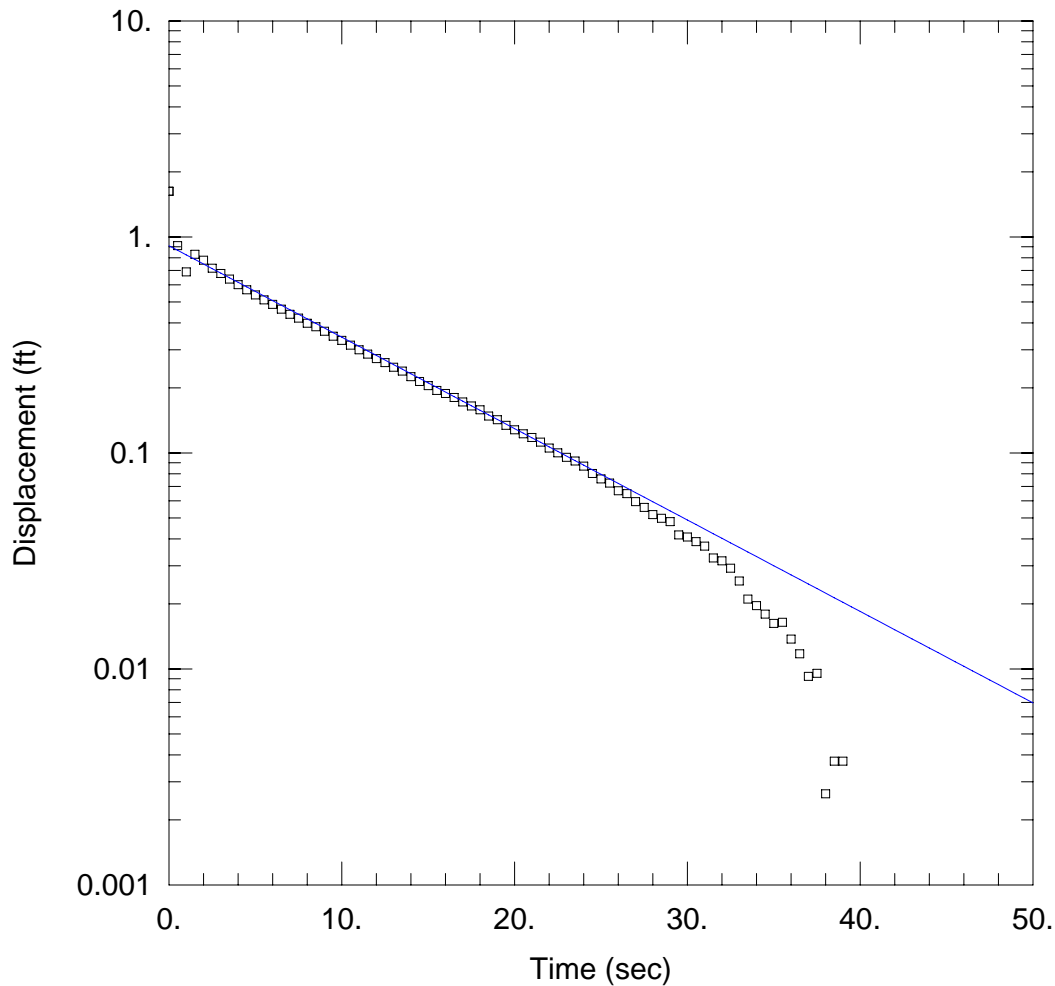
Initial Displacement: 3.148 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 44.03 ft/day

Solution Method: Hvorslev
 y0 = 0.8739 ft



SLUG TEST

Data Set: V:\...\MW12-Falling-6.aqt
 Date: 12/06/12

Time: 10:47:14

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

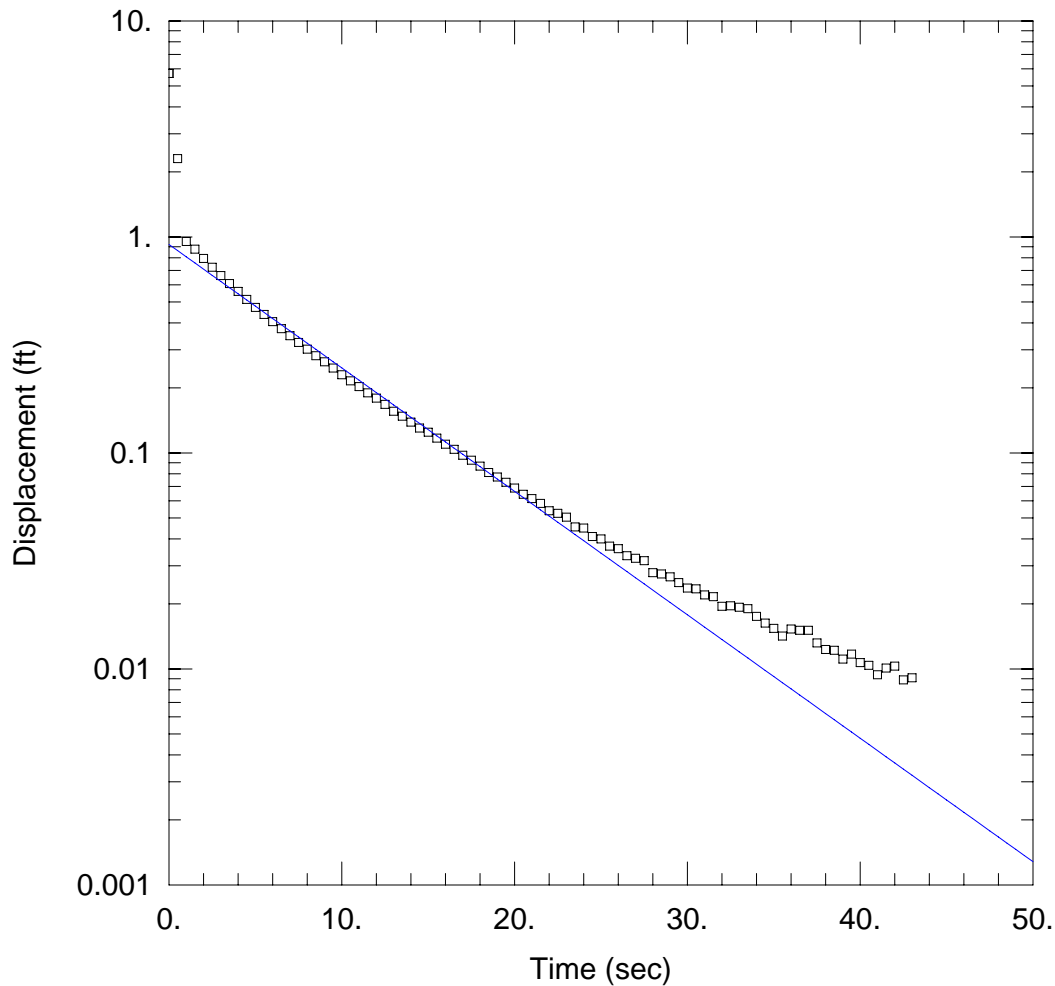
Initial Displacement: 1.628 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 56.01 ft/day

Solution Method: Hvorslev
 y0 = 0.91 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-1.aqt
 Date: 12/06/12

Time: 10:48:04

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

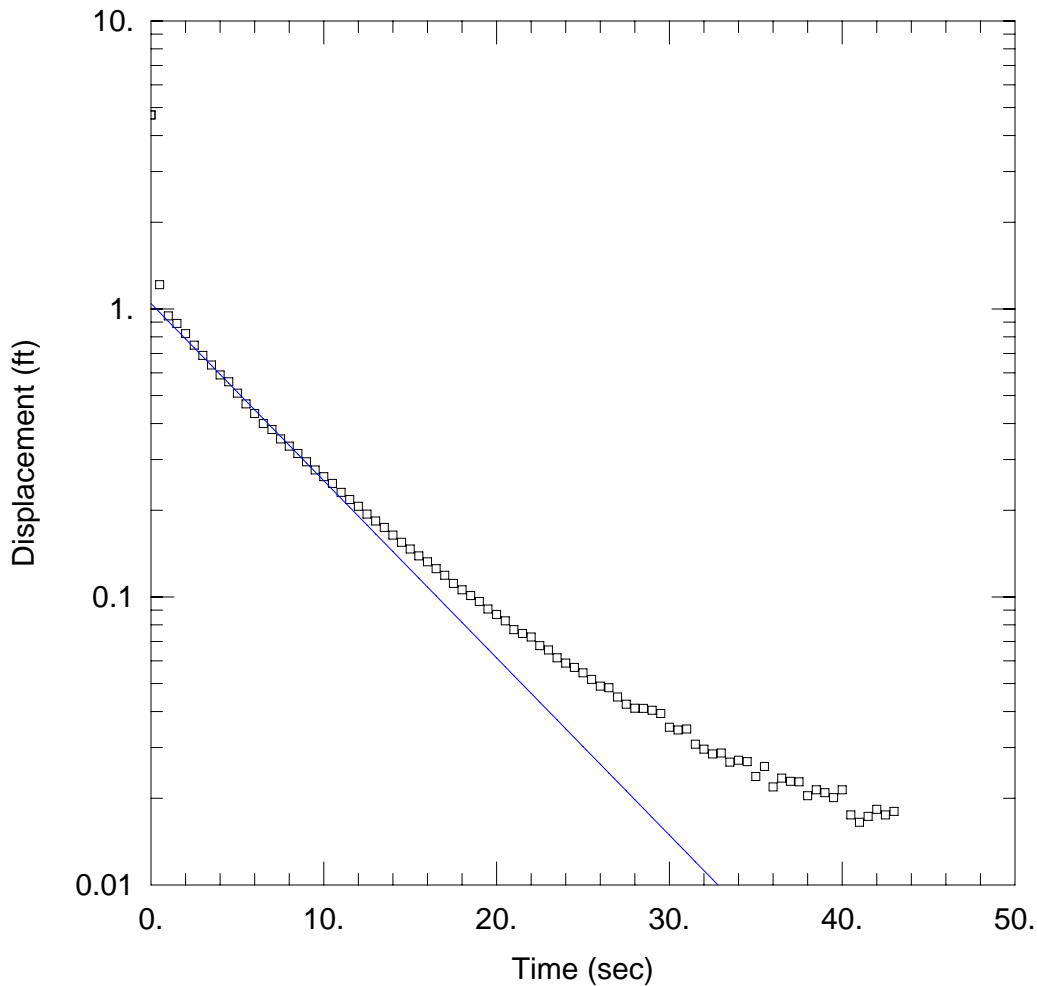
Initial Displacement: 5.712 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 75.63 ft/day

Solution Method: Hvorslev
 y0 = 0.9227 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-2.aqt
 Date: 12/06/12

Time: 10:49:09

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

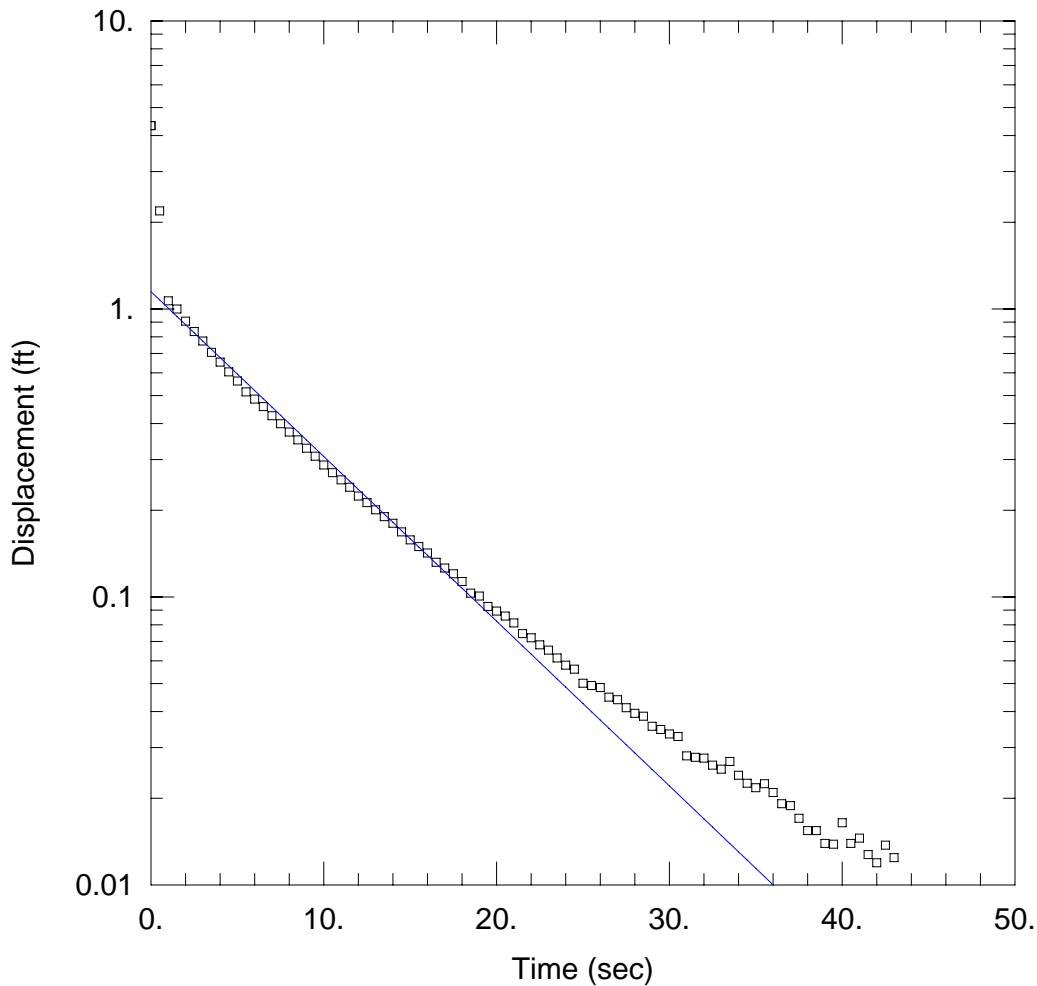
Initial Displacement: 4.718 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 81.42 ft/day

Solution Method: Hvorslev
 y0 = 1.044 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-3.aqt
 Date: 12/06/12

Time: 10:49:43

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

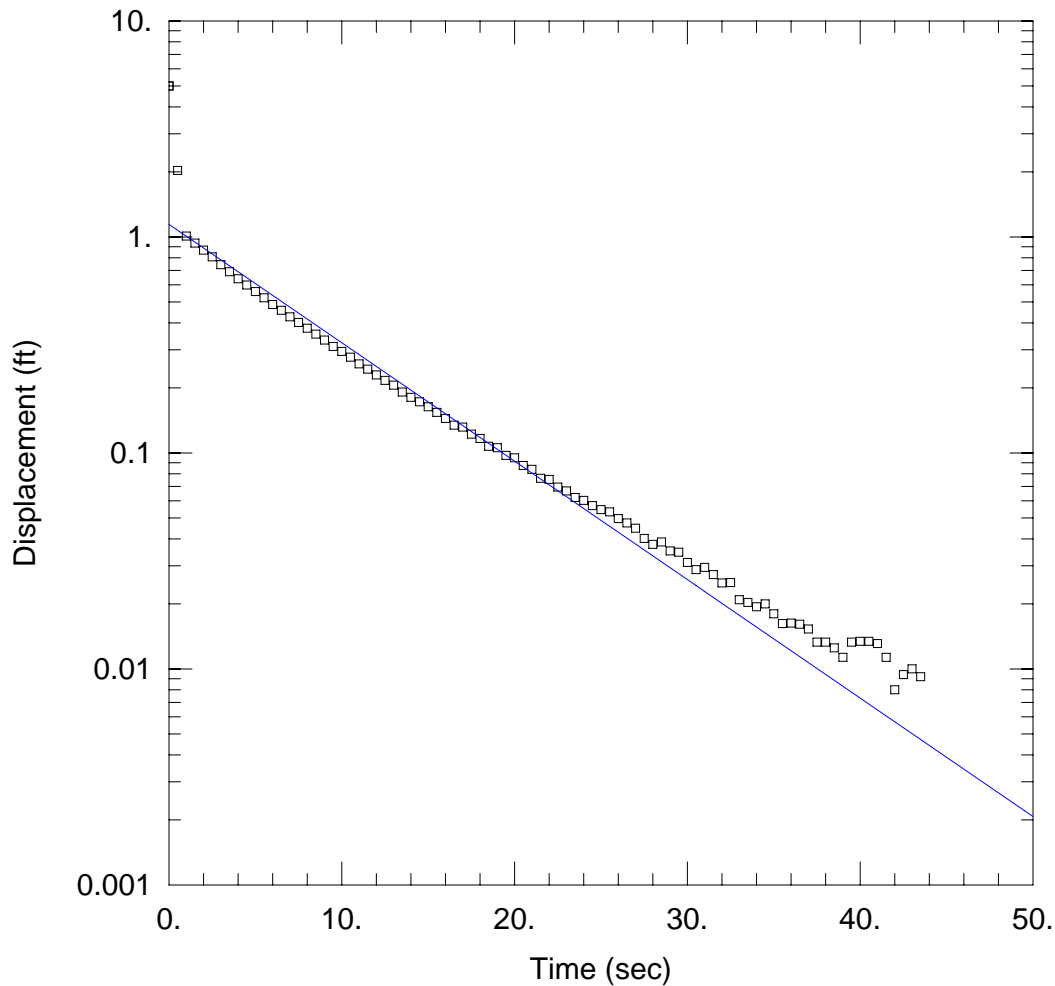
Initial Displacement: 4.332 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 75.7 ft/day

Solution Method: Hvorslev
 y0 = 1.148 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-4.aqt
 Date: 12/06/12

Time: 10:50:22

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

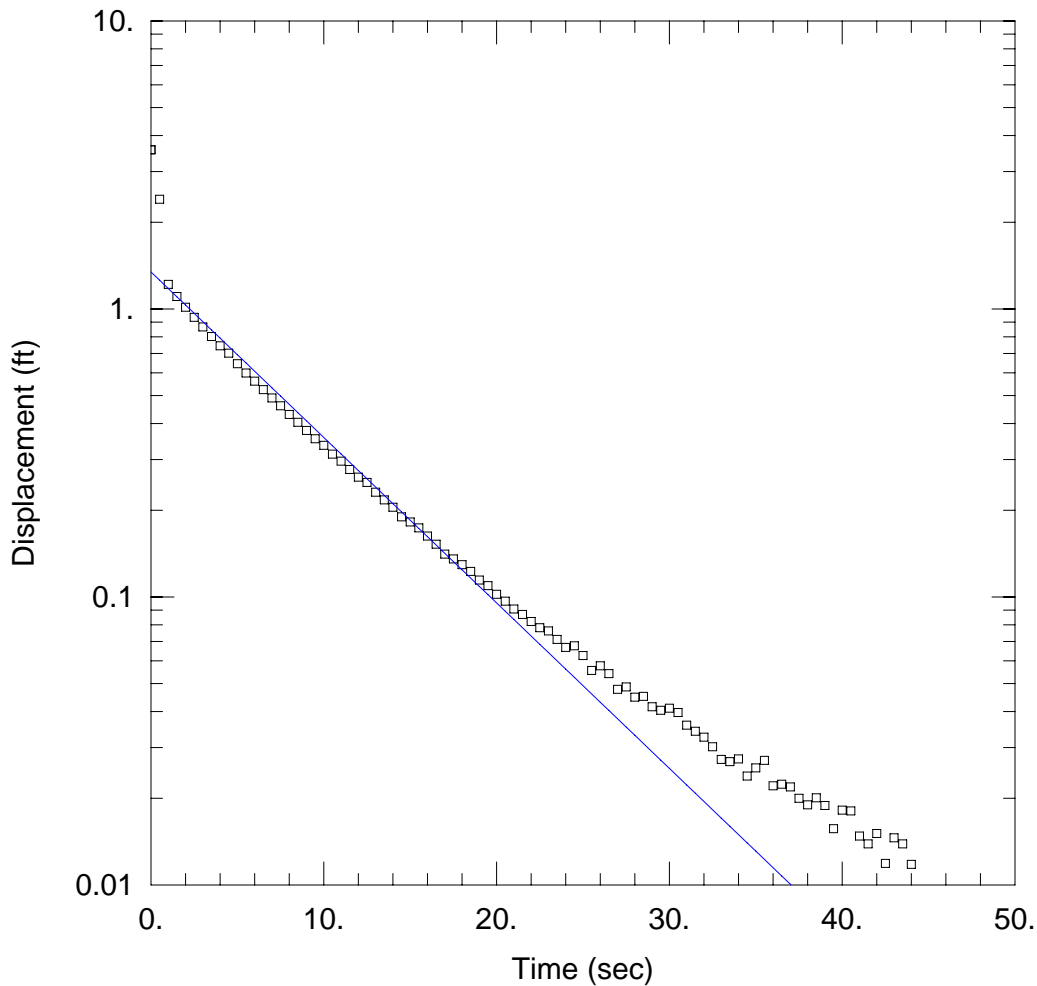
Initial Displacement: 5.002 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 72.55 ft/day

Solution Method: Hvorslev
 y0 = 1.143 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-5.aqt
 Date: 12/06/12

Time: 10:51:17

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

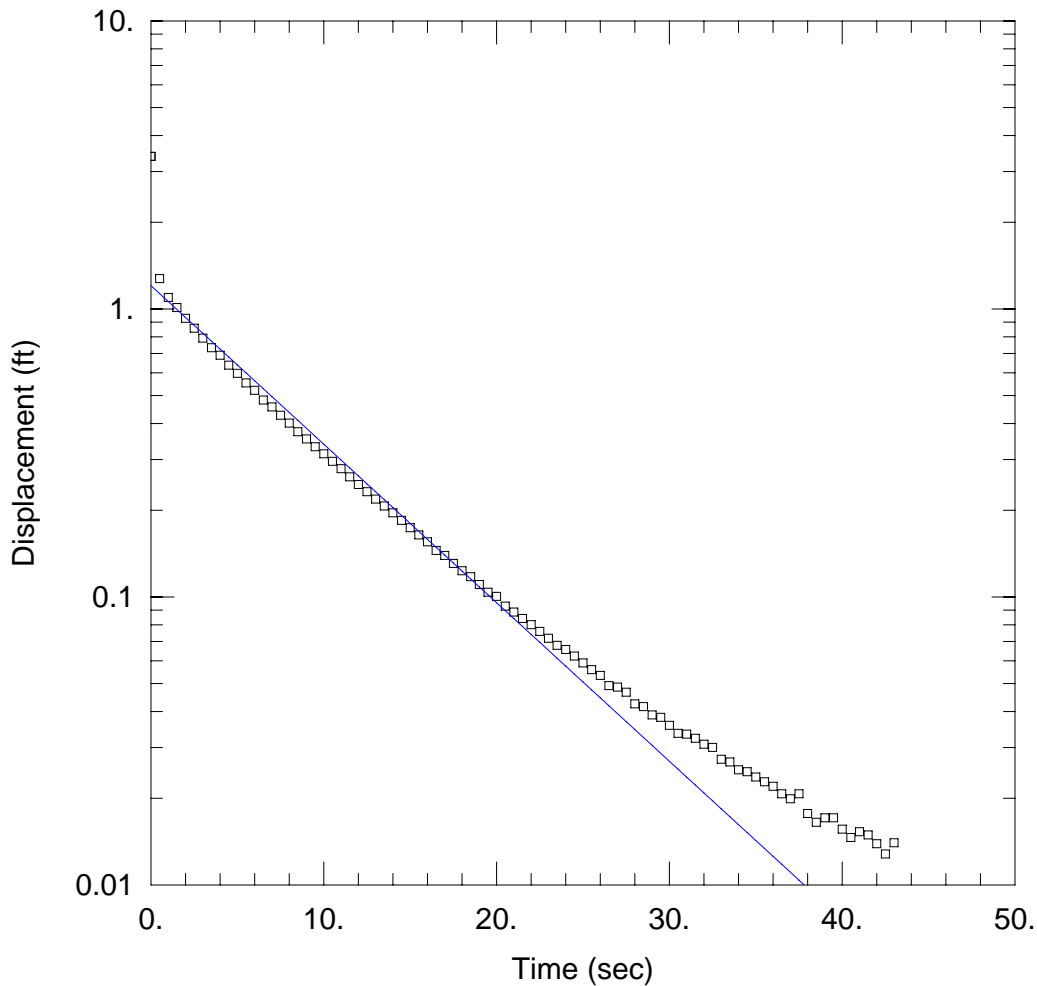
Initial Displacement: 3.57 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 76.03 ft/day

Solution Method: Hvorslev
 y0 = 1.344 ft



SLUG TEST

Data Set: V:\...\MW12-Rising-6.aqt
 Date: 12/06/12

Time: 10:51:58

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW12
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 29.36 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW12)

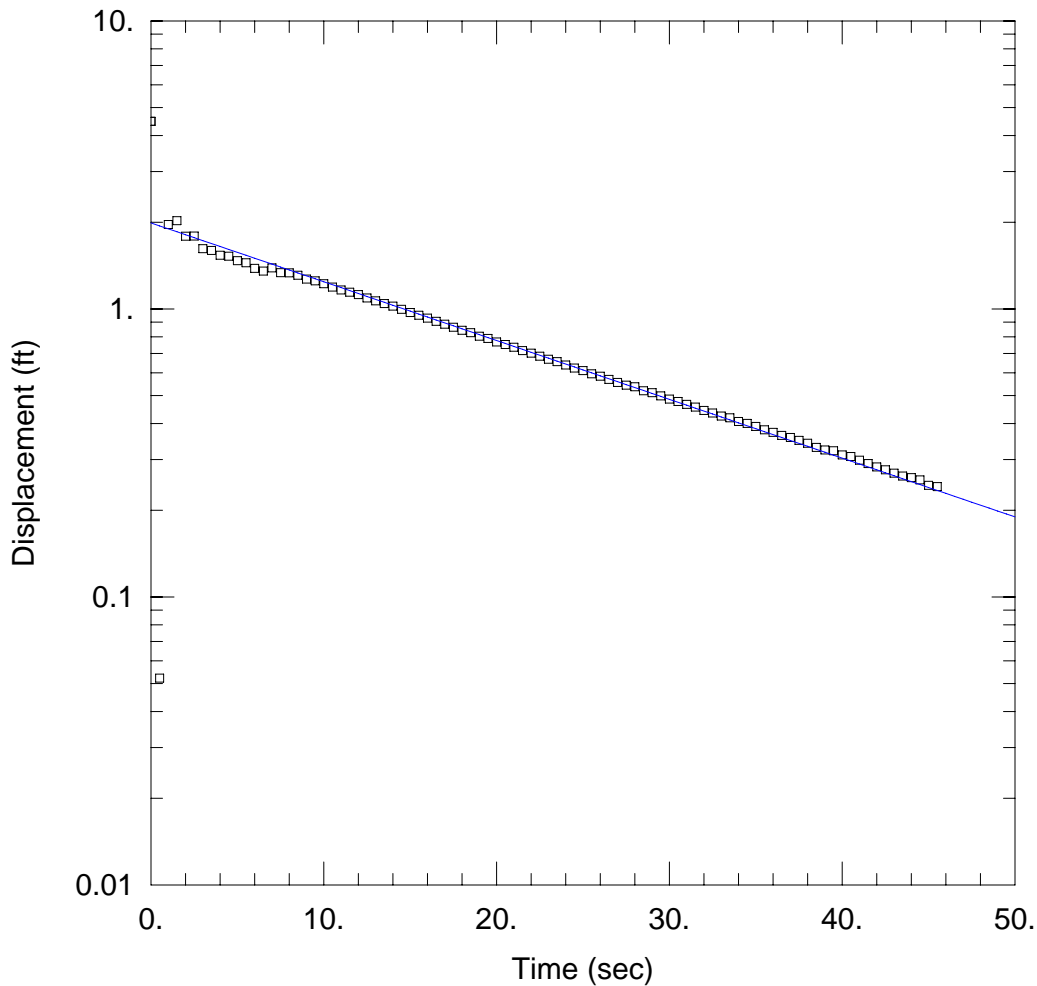
Initial Displacement: 3.385 ft
 Total Well Penetration Depth: 29.36 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 29.36 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 72.84 ft/day

Solution Method: Hvorslev
 y0 = 1.204 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-1.aqt
 Date: 12/06/12

Time: 10:52:55

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

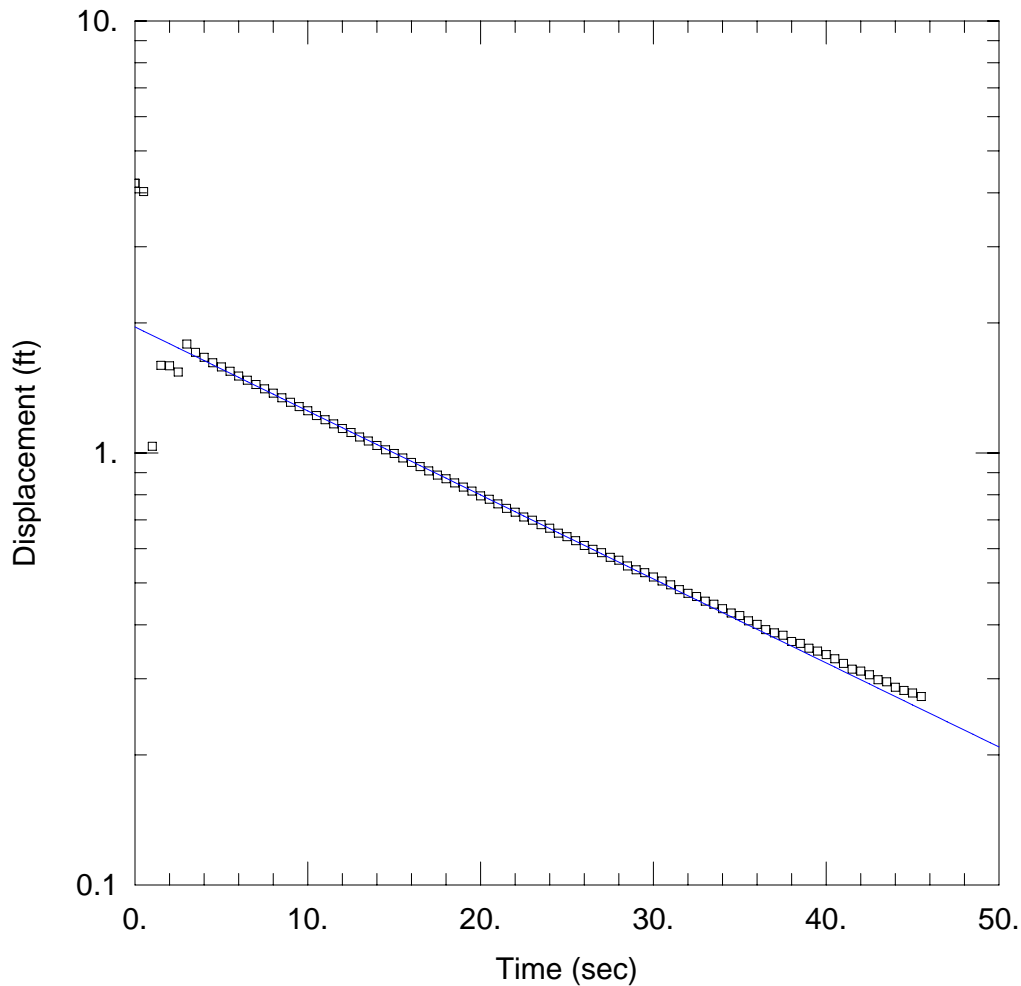
Initial Displacement: 4.483 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 27.01 ft/day

Solution Method: Hvorslev
 y0 = 1.988 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-2.aqt
 Date: 12/06/12

Time: 10:53:28

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

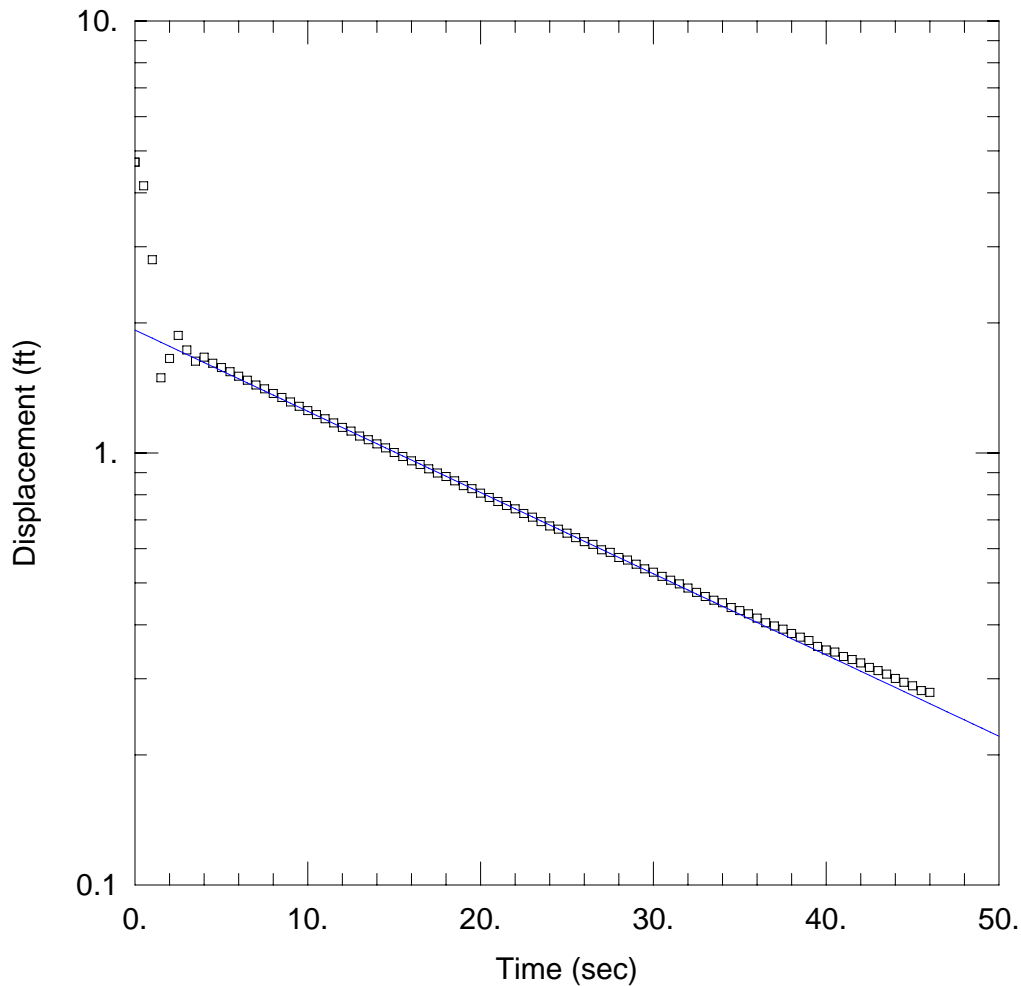
Initial Displacement: 4.21 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 25.73 ft/day

Solution Method: Hvorslev
 y0 = 1.957 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-3.aqt
 Date: 12/06/12

Time: 10:53:59

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

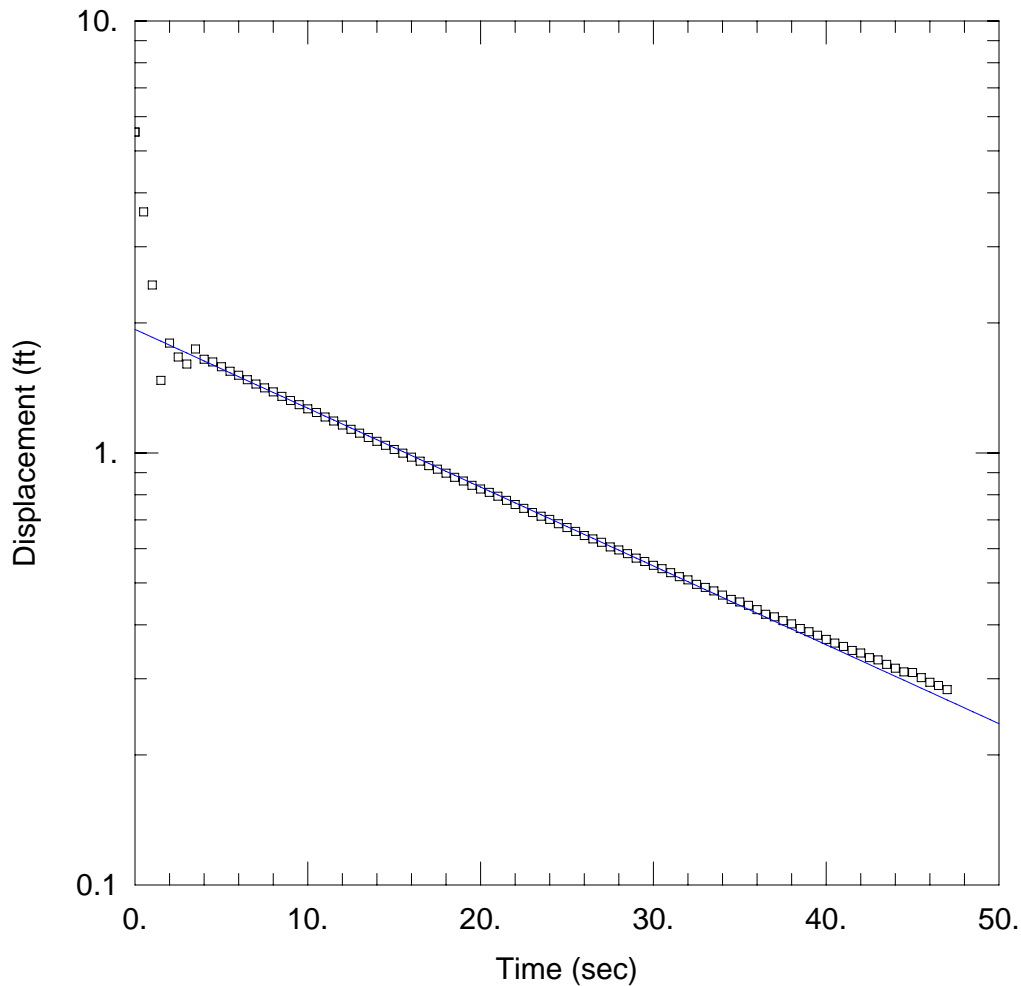
Initial Displacement: 4.71 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 24.88 ft/day

Solution Method: Hvorslev
 y0 = 1.925 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-4.aqt
 Date: 12/06/12

Time: 10:54:32

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

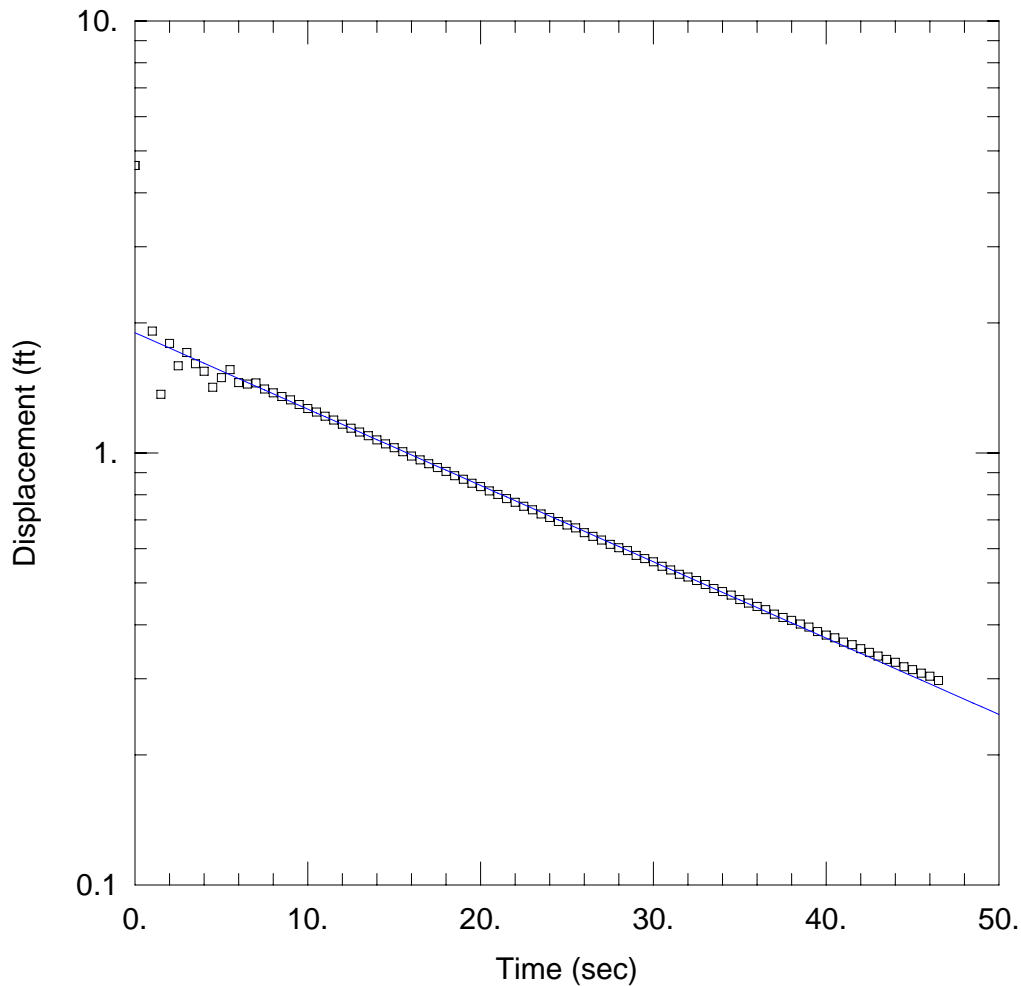
Initial Displacement: 5.533 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 24.15 ft/day

Solution Method: Hvorslev
 y0 = 1.932 ft



SLUG TEST

Data Set: V:\...\MW13-Falling-5.aqt
 Date: 12/06/12

Time: 10:55:04

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

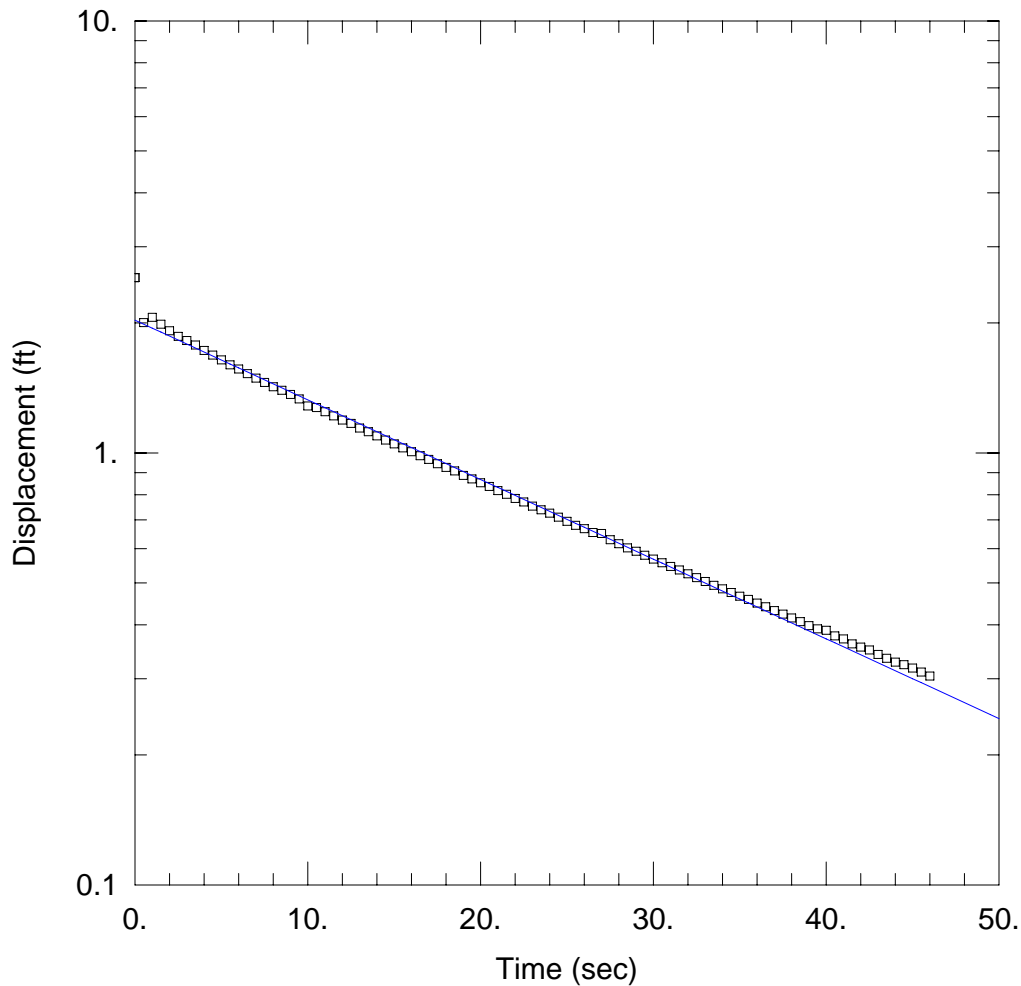
Initial Displacement: 4.626 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 23.38 ft/day

Solution Method: Hvorslev
 y0 = 1.897 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-1.aqt
 Date: 12/06/12

Time: 10:55:38

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

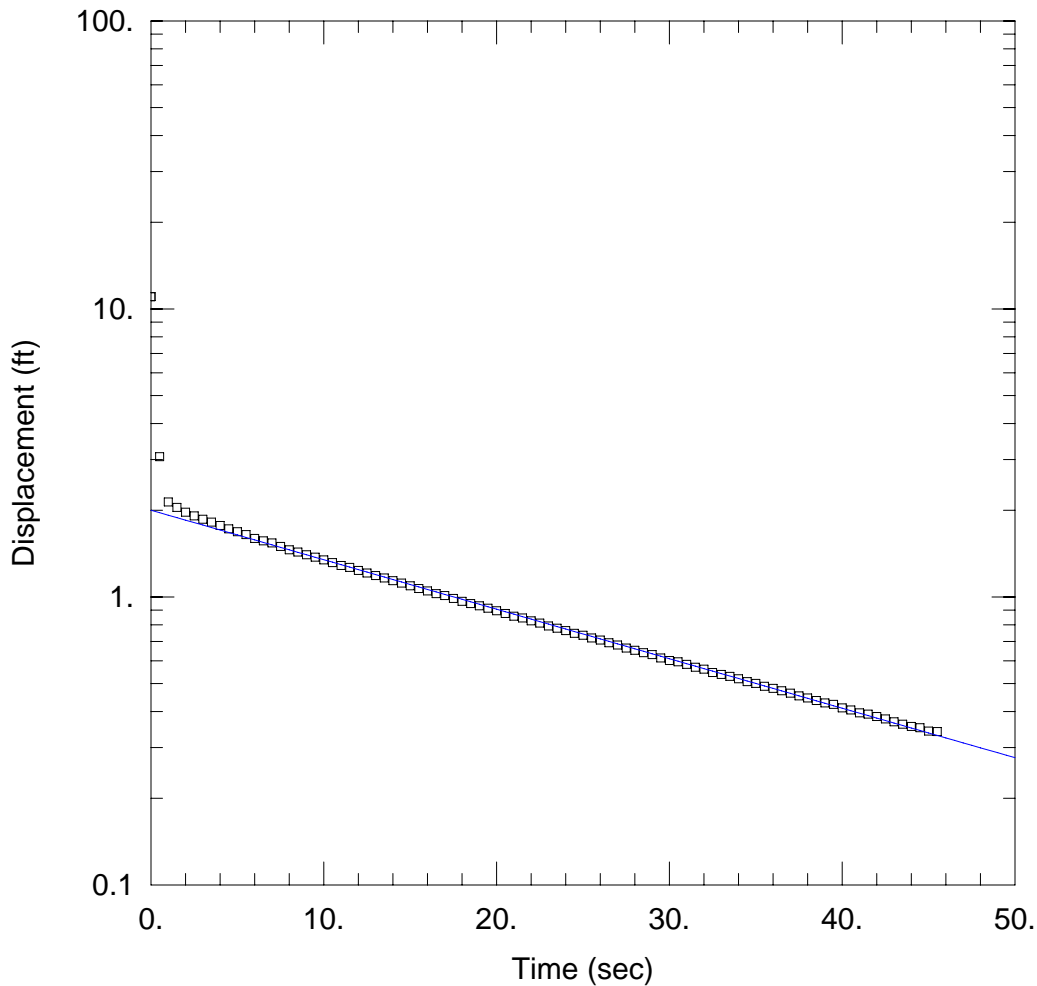
Initial Displacement: 2.545 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 24.41 ft/day

Solution Method: Hvorslev
 y0 = 2.029 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-2.aqt
 Date: 12/06/12

Time: 10:56:20

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

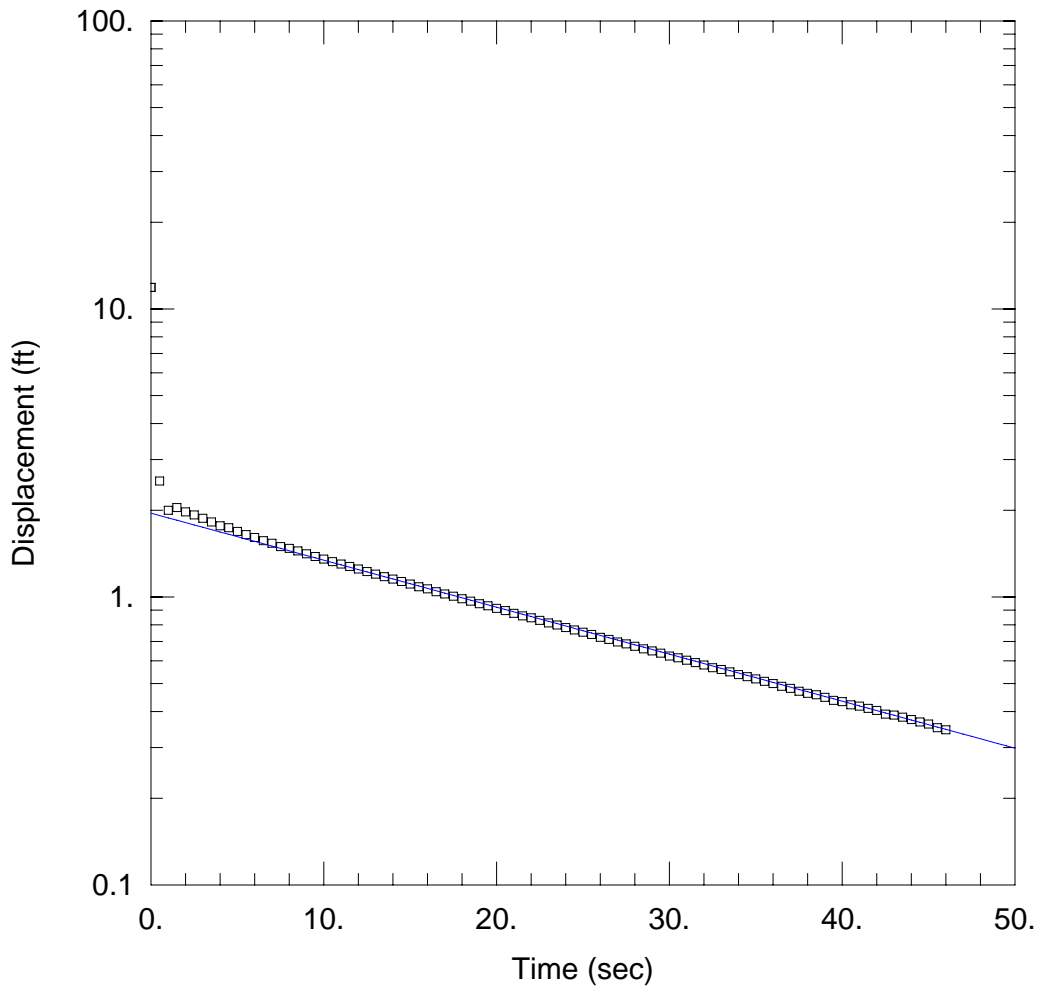
Initial Displacement: 11.03 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 22.74 ft/day

Solution Method: Hvorslev
 y0 = 2. ft



SLUG TEST

Data Set: V:\...\MW13-Rising-3.aqt
 Date: 12/06/12

Time: 10:57:10

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

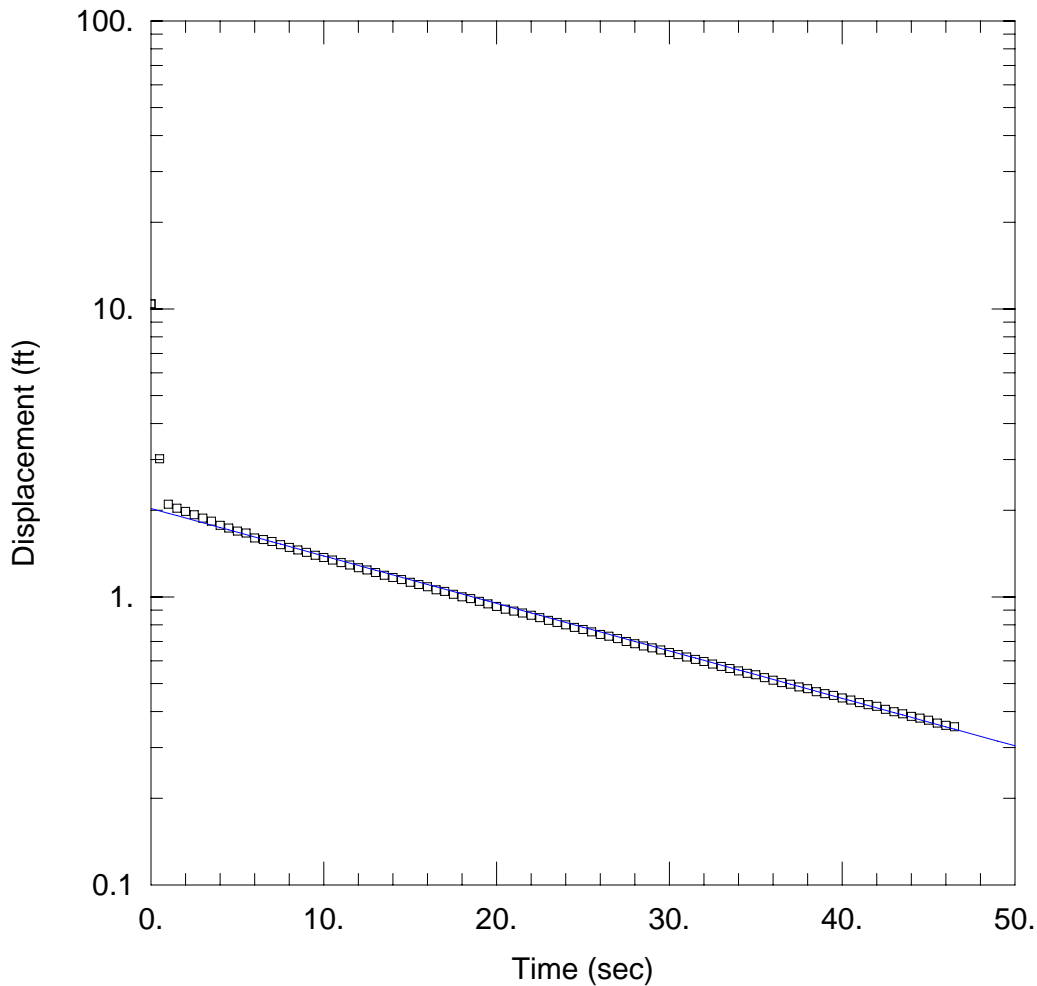
Initial Displacement: 11.88 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 21.59 ft/day

Solution Method: Hvorslev
 y0 = 1.953 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-4.aqt
 Date: 12/06/12

Time: 10:57:39

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

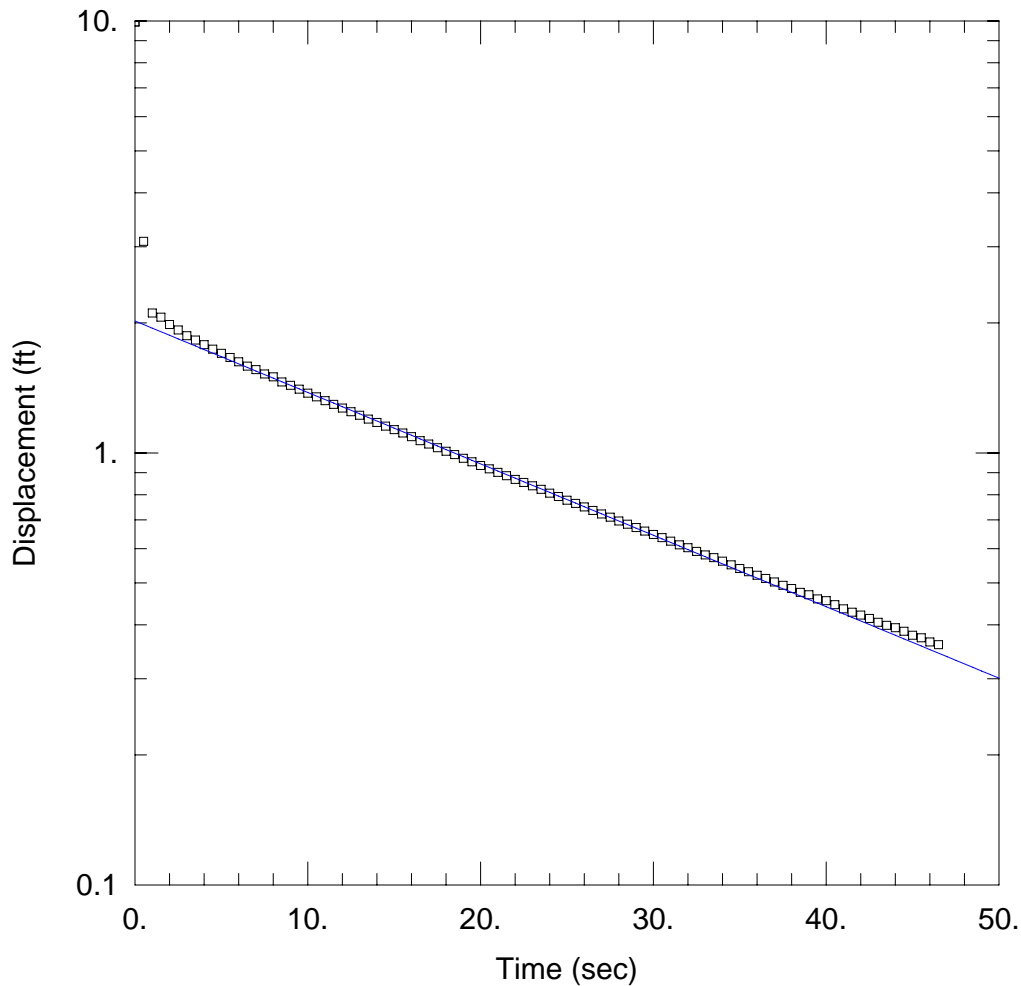
Initial Displacement: 10.41 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 21.81 ft/day

Solution Method: Hvorslev
 y0 = 2.028 ft



SLUG TEST

Data Set: V:\...\MW13-Rising-5.aqt
 Date: 12/06/12

Time: 10:58:12

PROJECT INFORMATION

Company: The Louis Berger Group, Inc,
 Client: NJDEP
 Project: Joan's Cleaners
 Location: Tabernacle, NJ
 Test Well: MW13
 Test Date: 10/5/2012

AQUIFER DATA

Saturated Thickness: 88.04 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW13)

Initial Displacement: 9.944 ft
 Total Well Penetration Depth: 88.04 ft
 Casing Radius: 0.1667 ft

Static Water Column Height: 88.04 ft
 Screen Length: 10. ft
 Well Radius: 0.1667 ft

SOLUTION

Aquifer Model: Unconfined
 K = 21.88 ft/day

Solution Method: Hvorslev
 y0 = 2.02 ft

APPENDIX H
IDW Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. 1 973 326-8800		Manifest Document No. 12011202	2. Page 1 of 1
3. Generator's Name and Mailing Address NJDEP-Joan's Cleaners 1529 Route 206 Tabernacle NJ 08088					
4. Generator's Phone (973) 407-1414					
5. Transporter 1 Company Name Freehold Cartage, Inc.		6. US EPA ID Number NJ0054126164		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-4162-1001	
9. Designated Facility Name and Site Address Waste Recovery Solutions 343 King Street Myerstown PA 17067		10. US EPA ID Number PAR 000043026		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone 717-866-9455	
11. WASTE DESCRIPTION			12. Containers	13. Total Quantity	14. Unit Wt./Vol.
a. Non-Regulated Waste Material, Non-DOT/Non-RCRA (soil cuttings)			No. 5	Type DM	3000 None P
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above 1JLFI-15331			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
GENERATOR					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Melissa Cameron				Signature <i>Melissa Cameron</i>	
				Date Month Day Year 1 12 12	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name Chris Roberts		Signature <i>Chris Roberts</i>		Date Month Day Year 1 12 12	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Date Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Signature	
				Date Month Day Year	

NON-HAZARDOUS WASTE

TRANSPORTER FACILITY

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. 1 973 326-8800		Manifest Document No. 12011907	2. Page 1 of 1	
3. Generator's Name and Mailing Address NJDEP-Joan's Cleaners 1529 Route 206 Tabernacle NJ 08088						
4. Generator's Phone (973 407-1414)						
5. Transporter 1 Company Name Freehold Cartage, Inc.		6. US EPA ID Number NJ0054176164		A. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-462-1001		
9. Designated Facility Name and Site Address Waste Recovery Solutions 343 King Street Myerstown PA 17067		10. US EPA ID Number PAR00604306		C. State Transporter's ID		
				D. Transporter 2 Phone		
				E. State Facility's ID		
				F. Facility's Phone 717-866-9955		
11. WASTE DESCRIPTION			12. Containers		13. Total Quantity	14. Unit Wt./Vol.
			No.	Type		
a. Non-Regulated Waste Material, Non-DOT/Non-RCRA (soil cuttings)			6	DM	NONE	P
b. non-Regulated waste material, non-Dot/non-RCRA (Purge water)			2	DM	110	J
c.						
d.						
G. Additional Descriptions for Materials Listed Above 1)LF1-15331			H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information						
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.						
Printed/Typed Name Melissa Cameron			Signature <i>Melina Cameron</i>		Date 1 19 12	
17. Transporter 1 Acknowledgement of Receipt of Materials			Printed/Typed Name Dave Shauwa		Signature <i>D</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials			Printed/Typed Name		Signature	
19. Discrepancy Indication Space						
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.						
Printed/Typed Name			Signature		Date	

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 12012604	2. Page 1 of 1
3. Generator's Name and Mailing Address NJDEP-Joan's Cleaners 1529 Route 206 Tabernacle (NJ) 08088				SAME	
4. Generator's Phone No. 973 407-1414		5. Transporter 1 Company Name Freshold Garbage, Inc.		6. US EPA ID Number NJD054126164	
7. Transporter 2 Company Name		8. US EPA ID Number		A. State Transporter's ID	
9. Designated Facility Name and Site Address Waste Recovery Solutions 343 King Street Myerstown PA 17087		10. US EPA ID Number PAR000043026		B. Transporter 1 Phone 732 402-1001	
11. WASTE DESCRIPTION				C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone 717 866-9955	
		12. Containers		13. Total Quantity	
		No. Type		14. Unit Wt./Vol.	
a. Non-Regulated Waste Material, Non-DOT/Non-RCRA (soil cuttings)		42		18,900	
b.		DM		P	
c.					
d.					
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above	
a. LFI-15331				a.	
b.				c.	
				b.	
				d.	
15. Special Handling Instructions and Additional Information 1					
Emergency Contact: Prime 973-328-8800					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name				Date	
Melissa Cameron				1/26/12	
Signature				Month Day Year	
<i>Melissa Cameron</i>					
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name				Date	
DENNIS JACONSKI				1/26/12	
Signature				Month Day Year	
<i>Dennis Jaconski</i>					
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name				Date	
Signature				Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Date	
Signature				Month Day Year	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No. 12020201	2. Page 1 of 1
3. Generator's Name and Mailing Address NJDEP-Joan's Cleaners 1529 Route 206 Tabernacle, NJ 08088			SAME	
4. Generator's Phone 973 407-1414		6. US EPA ID Number NJD054126164	A. State Transporter's ID	
5. Transporter 1 Company Name Freehold Cartage, Inc.		8. US EPA ID Number	B. Transporter 1 Phone 732 462-1001	
7. Transporter 2 Company Name		10. US EPA ID Number	C. State Transporter's ID	
9. Designated Facility Name and Site Address Waste Recovery Solutions 343 King Street Myerstown PA 17067			D. Transporter 2 Phone	
			E. State Facility's ID	
			F. Facility's Phone 717 866-9955	
11. WASTE DESCRIPTION		12. Containers	13. Total Quantity	14. Unit Wt./Vol.
a. Non-Regulated Waste Material, Non-DOT/Non-RCRA (soil cuttings)		No. 19	Type DM	8000
b.				P
c.				
d.				
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above	
a. LFI-15331			c.	
b.			d.	
15. Special Handling Instructions and Additional Information 1			Emergency Contact: Prime 973-326-8800	
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.				
Printed/Typed Name		Signature	Date	
x Melissa Camacho		x Melissa Camacho	2 2 12	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature	Date	
Chris Reu		Chris Reu	2 2 12	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature	Date	
19. Discrepancy Indication Space				
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.				
Printed/Typed Name		Signature	Date	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

APPENDIX I
Baseline Ecological Evaluation

**JOAN'S CLEANERS
TABERNACLE TOWNSHIP, NEW JERSEY**

BASELINE ECOLOGICAL EVALUATION

Submitted to:

**The New Jersey Department of Environmental Protection
Site Remediation Program
Trenton, New Jersey**

On Behalf of:

**The New Jersey Department of Environmental Protection
Division of Publicly Funded Remediation
Trenton, New Jersey**

Prepared by:

**The Louis Berger Group, Inc.
Morristown, New Jersey**

April 2013

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	EVALUATION OF EXISTING INFORMATION	2
3.0	SITE INSPECTION.....	3
4.0	ECOLOGICAL EVALUATION.....	5
4.1	Environmentally Sensitive Areas.....	5
4.2	Contaminants of Ecological Concern	6
4.3	Contaminant Migration Pathways.....	7
5.0	CONCLUSIONS.....	8
6.0	REFERENCES.....	9

FIGURES

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 NJDEP Wetlands Map

ATTACHMENTS

- Attachment 1 Site Photographs

1.0 INTRODUCTION

This Baseline Ecological Evaluation (BEE) has been prepared by The Louis Berger Group, Inc. (Berger), on behalf of the New Jersey Department of Environmental Protection (NJDEP), for the Joan's Cleaners site located in Tabernacle Township, Burlington County, New Jersey (the Site). The Site is located within a strip mall on approximately two acres of property at 1529 Route 206 (Block 320, Lot 5) in Tabernacle Township, Burlington County, New Jersey. Figure 1 is an annotated U.S.G.S. 7.5-minute quadrangle (Indian Mills, NJ 1977 and Medford Lakes, NJ 1981) showing the Site's location, local topography, surface water, and cultural features.

The Site was formerly a dry cleaning facility located within a strip mall now known as Celebration Plaza shopping center. The former Joan's Cleaner's site is presently operated as Subway sandwich shop. In 2005 a 1,000 gallon underground storage tank (UST) containing fuel oil for heating was replaced with a 575 gallon above ground fuel oil storage tank. Soil contamination was discovered at the time of tank replacement and remediated. NJDEP records show that Joan's Cleaners used tetrachloroethylene (PCE) for the entire time that the business was in operation, from 1983 to 2005. In 2006, groundwater contamination was detected in a private well down-gradient of the Site. Subsequent sampling revealed groundwater contamination of private wells by PCE and derivative chlorinated products, such as trichloroethene (TCE) and cis-1,2 dichloroethene (DCE), as well as the gasoline additive methyl tert-butyl ether (MTBE). Berger initiated Site-specific Remedial Investigations (RIs) on behalf of NJDEP to characterize potential sources of contamination originating from the Site and to identify potential impacts to human and ecological receptors. The Remedial Investigation Report (RIR) provides a detailed description of all investigative activities performed; an analysis of all derived investigative data; a comparison of all data to NJDEP groundwater, surface water, and ecological criteria; conclusions drawn from the investigations; and recommendations for any further remedial investigations or remedial actions if warranted.

This BEE was conducted as part of the RI to evaluate the possibility that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors. The BEE is qualitative in nature and was conducted in accordance with the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-3.11).

2.0 EVALUATION OF EXISTING INFORMATION

Berger reviewed available plans, reports, and data to identify ecological stressor sources and characteristics, exposure pathways, characteristics of the ecosystem, and potential receptors. A Site history and description of investigative activities completed to date are discussed in detail in the RIR and summarized below.

The Joan's Cleaners Site operated as a dry cleaning facility from approximately 1983 to 2005. According to manifest records approximately 3,300 lbs of waste solvent was removed off site during the period of April 1988 to December 1994 from Joan's Cleaners. This is the only record of waste being transported off site during the period of operation. On-site waste disposal operated through use of a septic system, which was replaced in 1988 and 2005. It is suspected that PCE disposal through the septic system lead to ground water contamination in the area.

In March 2006, groundwater contamination was discovered in a private well down-gradient of the Site. Over 70 private wells in the area were sampled by the NJDEP and the local health department. PCE, TCE, DCE and MTBE were discovered in approximately 30 of the wells. In July of 2006, NJDEP conducted soil sampling in the area of the septic tank; however, these samples showed PCE levels to be below the 1 part per million (PPM) Impact to Ground Water Soil Remediation Standards (IGWSRS).

The NJDEP conducted additional groundwater screening during the period of May 2006 and July 2007. Concentrations of several groundwater samples exceeded the NJDEP Class I-PL: Pinelands groundwater quality criteria at elevations as deep as 64 feet bgs. Due to the Site being located within the Pinelands Protection Area, the criteria for all constituents is defined as background and the groundwater quality criteria shall default to the practical quantitation level (PQL).

3.0 SITE INSPECTION

On August 20, 2010, a Site inspection was conducted by Berger scientists experienced in the use of techniques and methodologies for conducting ecological risk assessments in accordance with the U.S. Environmental Protection Agency's *Final Guidelines for Ecological Risk Assessment* (April 1998). The Site and the surrounding properties were inspected for environmentally sensitive areas and any evidence of impacts from contamination such as stressed or dead vegetation, discolored soil, sediment, or water, absence of biota, or presence of a seep or discharge. Site photographs are included as Attachment 1.

The former Joan's Cleaners Site, now a Subway sandwich shop located within Celebration Plaza shopping center (Photograph 1), is located at the intersection of Cramer Road and NJ Route 206. The plaza consists of four businesses as well as one private residence, located to the rear of the plaza (Photograph 2). Within the Site boundary is also located a three bay garage structure. The dominant vegetation on site is mowed lawn (Photograph 3). The Site is border to the south by deciduous forest comprised of red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), southern red oaks (*Quercus falcate*), hickory species (*Carya* spp.) and black walnut (*Juglans nigra*) trees. The understory is dominated by witch hazel (*Hamamelis virginiana*), multiflora rose (*Rosa multiflora*), and Japanese barberry (*Berberis thunbergii*) (Photograph 3). The area surrounding the Site is dominated by commercial and residential buildings and paved streets and parking areas. The Site and the surrounding area were inspected for stressed or dead vegetation, discolored soil, or other discharges. No such indicators of ecological stress were observed.

No wetlands or surface water was observed within or immediately adjacent to the Site. The nearest surface water body to the Site is the Bread and Cheese Run located approximately 2,500 feet southeast of the Site (Photograph 4). Bread and Cheese Run is ponded before it travels under Carranza Road southeast of the Site (Photographs 5 & 6). Vegetation within and surrounding the ponded area is comprised of broad-leaved cattail (*Typha latifolia*), knotweeds (*Polygonum* spp.), duckweed (*Lemna minor*), red maples, tear thumb (*Polygonum sagittatum*), sensitive fern (*Onoclea sensibilis*), wool grass (*Scirpus cyperinus*), grape vine, Japanese honeysuckle (*Lonicera japonica*), and cinnamon fern (*Osmundastrum cinnamomeum*). East of Carranza Road, the tributary is bordered by deciduous wooded wetlands on both sides (Photograph 7). Vegetation in this area was dominated by red maples, sycamore (*Platanus occidentalis*), and sweet gum (*Liquidambar styraciflua*) trees with an understory of multiflora rose, *Carex* species and water willow (*Salix nigra*). This area was inspected for stressed or dead vegetation, discolored soil, or other discharges. No such indicators of ecological stress were observed.

The headwater of Bear Swamp River is located approximately 3,800 feet northeast of the Site (Photograph 8). This waterway forms in a deciduous wooded wetlands dominated by red maple trees and highbush blueberry (*Vaccinium corymbosum*) shrubs (Photograph 9). It is impounded, forming a small pond adjacent to a residence, near its headwaters (Photograph 10). The outfall of this pond travels through adjacent farm fields before entering a forested area further northeast of the Site. This area was inspected for stressed or dead vegetation, discolored soil, or other discharges. No such indicators of ecological stress were observed.

4.0 ECOLOGICAL EVALUATION

Based on a review of existing information and the Site inspection, the potential for contaminant migration pathways to any environmentally sensitive areas was evaluated.

4.1 Environmentally Sensitive Areas

4.1.1 Wetlands

Figure 3 depicts NJDEP mapped wetlands within the vicinity of the Site. No wetlands are mapped within or immediately adjacent to the Site. Deciduous wooded wetlands are located approximately 1,000 feet southeast of the Site. Modified agricultural wetlands are located approximately 2,000 feet southeast of the Site. Two small stands of Atlantic White Cedar forested wetlands are located 4,000 and 5,300 feet southeast of the Site. Forested wetlands associated with Cold Water Run are located approximately 1,700 feet northwest of the Site. As described in Section 3.0, deciduous wooded wetlands associated with Bread and Cheese Run and Bear Swamp River begin approximately 2,500 feet to the southeast of the Site and approximately 3,600 feet northeast of the Site, respectively. The deciduous wooded wetland ecosystems observed in the area are comprised of an overstory dominated by red maple, an understory of black cherry (*Prunus serotina*), southern arrowwood (*Viburnum dentatum*) and multiflora rose, and an herbaceous layer of cat greenbrier (*Smilax glauca*), poison ivy (*Toxicodendron radicans*), and cinnamon fern.

4.1.2 Surface Water

No surface water is present within the Site boundaries. It is likely that surface drainage flows northwest toward Cold Water Run, which is located approximately 2,000 feet from the Site. Bear Swamp River is located approximately 3,800 feet northeast of the Site. Bread and Cheese Run is located approximately 2,500 feet southeast of the Site. Bread and Cheese Run flows west to Rancocas Creek, which ultimately drains to the Delaware River.

4.2 Contaminants of Ecological Concern

Contaminants of ecological concern include those that exceed available criteria recommended by the NJDEP, U.S. Environmental Protection Agency, or other Federal natural resource agencies for use in conducting ecological assessments.

There are no surface waters or associated sediments found within the Site. As discussed in detail in the RIR, groundwater and soil sampling was completed to assess the nature and extent of contamination originating from the Site.

4.2.1 Soil

As discussed in detail in the RIR, a soil investigation was conducted to investigate on-site contamination related to the possible release of tetrachloroethene (PCE) from the former Joan's Cleaners facility. Between July 2010 and May 2012, soils were investigated from around the perimeter of the leach field, extending to the eastern perimeter of the front parking lot. The laboratory analytical results associated with the sampling event were compared to the NJDEP Soil Remediation Standards (SRS). The analytical results of the soil sampling indicated that no exceedances of VOCs were observed in samples collected.

4.2.2 Groundwater

A total of 52 samples collected from 18 locations exhibited concentrations of chlorinated solvent related compounds including PCE, TCE, cis-1,2-dichloroethene, and/or 1,1,2,2-tetrachloroethane at or above the laboratory PQL's. Of the 52 samples with detections of COCs, 30 are exceedances to the Class IIa GWQS of PCE, TCE, or 1,1,2,2 tetrachloroethane.

The spatial distribution of the groundwater analytical exceedances from the groundwater screening phase of the investigation shows one large plume of CVOC contaminated groundwater emanating from the Joan's Site and flowing east-northeast, towards the Bear Swamp River headwaters. The flow direction of the plume appears to coincide with the overall northeast groundwater flow direction. The presence of the varying concentrations, particularly on the southern edges of the plume, may be due to the effect of historic variations in groundwater flow possibly due to local groundwater withdrawals east of the investigation area by commercial or agricultural wells screened in the Cohansey aquifer.

Vertically, groundwater contamination appears to extend from the water table (16-19 ft bgs) to at least 68-71 feet bgs. The majority of exceedances appear to range from 40 to 63 feet bgs with the highest frequency of exceedances occurring between 60-63 feet bgs. Groundwater at these depths would not be directly available to wildlife. Groundwater investigations were conducted to address human health concerns, and the results are discussed in detail in the RIR.

4.3 Contaminant Migration Pathways

No surface water or wetlands exist within the investigation area, however, there are wetlands and surface waters down-gradient of the areas of known groundwater contamination. Groundwater would not be directly available to wildlife; therefore the only potential contaminant migration pathway from the contaminated groundwater to an environmentally sensitive resource is through groundwater recharge of nearby surface waters associated with Bear Swamp River or Bread and Cheese Run. Based on groundwater screenings discussed in the RIR, the spatial distribution of the groundwater analytical exceedances shows one large plume of chlorinated solvent contaminated groundwater emanating from the Site and flowing northeast, towards the Bear Swamp River headwaters. However, based on the results of the groundwater investigation, the contaminant plume is observed to be fairly deep with the majority of exceedances appearing to range from 40 to 63 feet bgs with the highest frequency of exceedances occurring between 60-63 feet bgs. Horizontally, no exceedances were identified in the monitoring wells and groundwater screening locations immediately west (upgradient) of the Bear Swamp River. Therefore, there is no contaminant migration pathway to surface water through groundwater recharge. Additionally, shallow groundwater samples collected south of Seneca High School further demonstrate that there is no impact to surface water.

Wetlands and surface waters associated with Bear Swamp River and Bread and Cheese Run were closely inspected and no signs of groundwater seeps were observed. Vegetation within the wetland appeared healthy and there were no discolored sediments.

The Site and the environmentally sensitive areas within the vicinity of the Site were inspected for evidence of ecological stress. There were no signs of ecological stress observed within or adjacent to the Site, and all vegetated areas investigated appeared healthy. No discolored soil, sediment, or water was observed on or adjacent to the Site or within the portions of the down-gradient sensitive areas that were investigated

5.0 CONCLUSIONS

Continued ecological investigations are only required whenever the baseline ecological evaluation indicates the co-occurrence of the following:

- Contaminants of ecological concern exist on-Site;
- An environmentally sensitive area exists on, or immediately adjacent to, the Site; and
- Potential contamination migration pathways to an environmentally sensitive area exist.

Based on the data collected during this investigation, there are no known contaminants of ecological concern within the Site boundaries. Contaminated groundwater identified within the investigation area was found at depths that are not directly accessible to wildlife.

Environmentally sensitive areas were identified down-gradient of the Site and include wetlands and surface waters associated with Bread and Cheese Run and Bear Swamp River.

The only potential contaminant migration pathways from Site contaminants to environmentally sensitive areas would be in the form of the recharging of down-gradient surface water features by Site-contaminated groundwater. However, as discussed in section 4.0 and throughout the RIR, exceedances within the plume have been found between 40-63 ft bgs, with the deepest contamination at 63' bgs. The depth of plume demonstrates that there is no potential impact to surface water through groundwater recharge.

No other pathways to environmentally sensitive areas, such as seeps or discharges, were identified. There was no evidence of stressed or dead vegetation within, adjacent to, or down-gradient of the Site. No discolored soil, sediment, or surface water was observed within, adjacent to, or down-gradient of the Site. Based on the results of this BEE, Berger does not recommend further ecological sampling or evaluation pursuant to N.J.A.C. 7:26E-4.7.

6.0 REFERENCES

New Jersey Department of Environmental Protection. June 2008. *Surface Water Quality Standards (N.J.A.C. 7:9B)*.

New Jersey Department of Environmental Protection, Orthophotography. 1997. NJDEP Wetlands.

New Jersey Department of Environmental Protection, *Technical Requirements for Site Remediation (N.J.A.C. 7:26E)*, Last Revised in February 2003.

New Jersey Department of Environmental Protection, Site Remediation Program. 1998. *Guidance for Sediment Quality Evaluations*.

U.S. Environmental Protection Agency. 1998. *Final Guidelines for Ecological Risk Assessment* (April 1998).

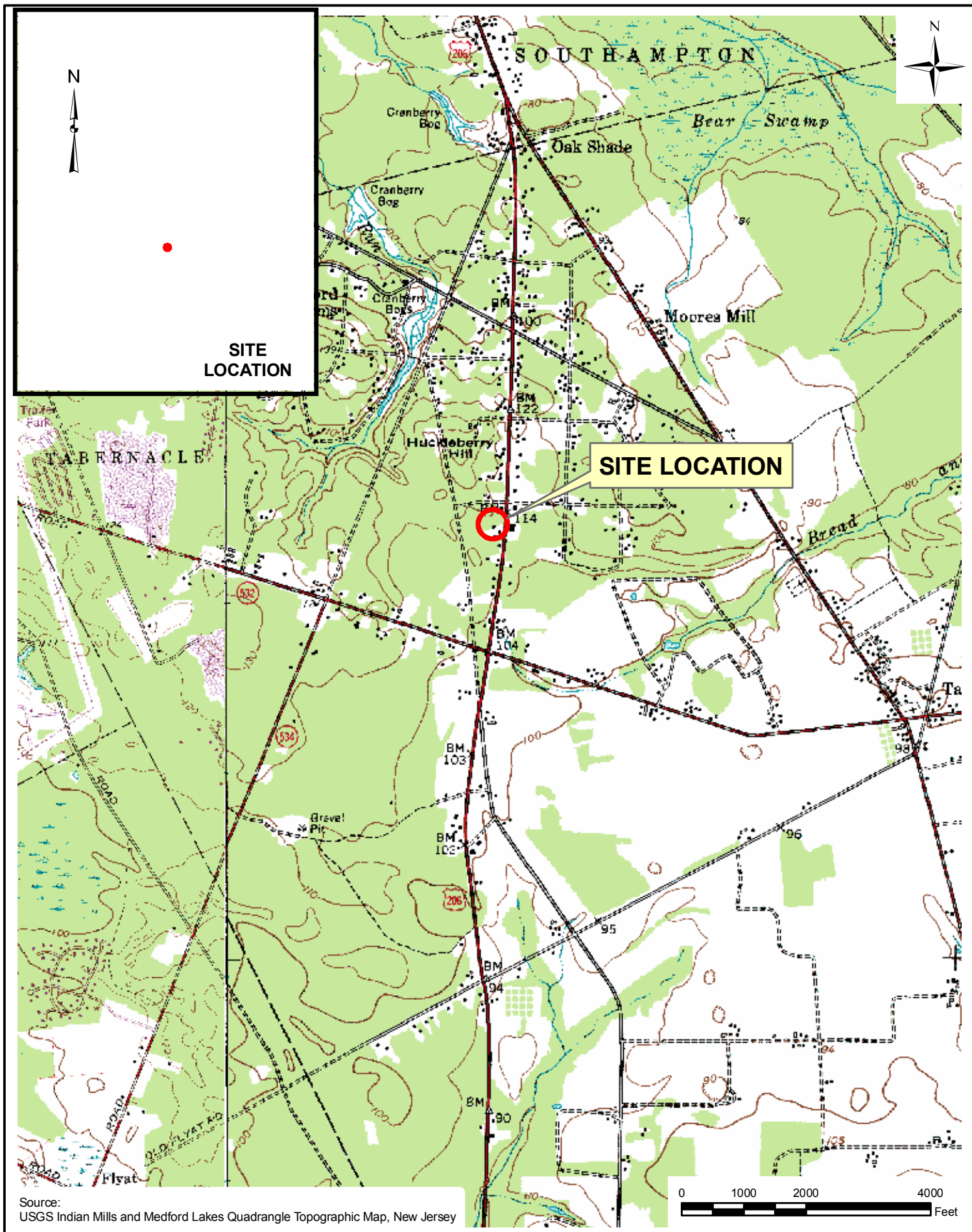
U.S. Environmental Protection Agency. 1992. *Framework for Ecological Risk Assessment* (February, 1992).

USGS (U. S. Geological Survey), 7.5-Minute Quadrangle Series, Indian Mills, NJ 1977 and Medford Lakes, NJ 1981NJ.

FIGURES

ATTACHMENT 1
SITE PHOTOGRAPHS

FIGURES



FIGIS_SERVICES\NJ\DEPUJOAN'S CLEANERS



N.J. Department of Environmental Protection

JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

SITE LOCATION MAP
NJDEP CONTRACT No. A-60243

The Louis Berger Group, Inc.
412 MT KEMBLE AVE
MORRISTOWN, NJ

FIGURE 1

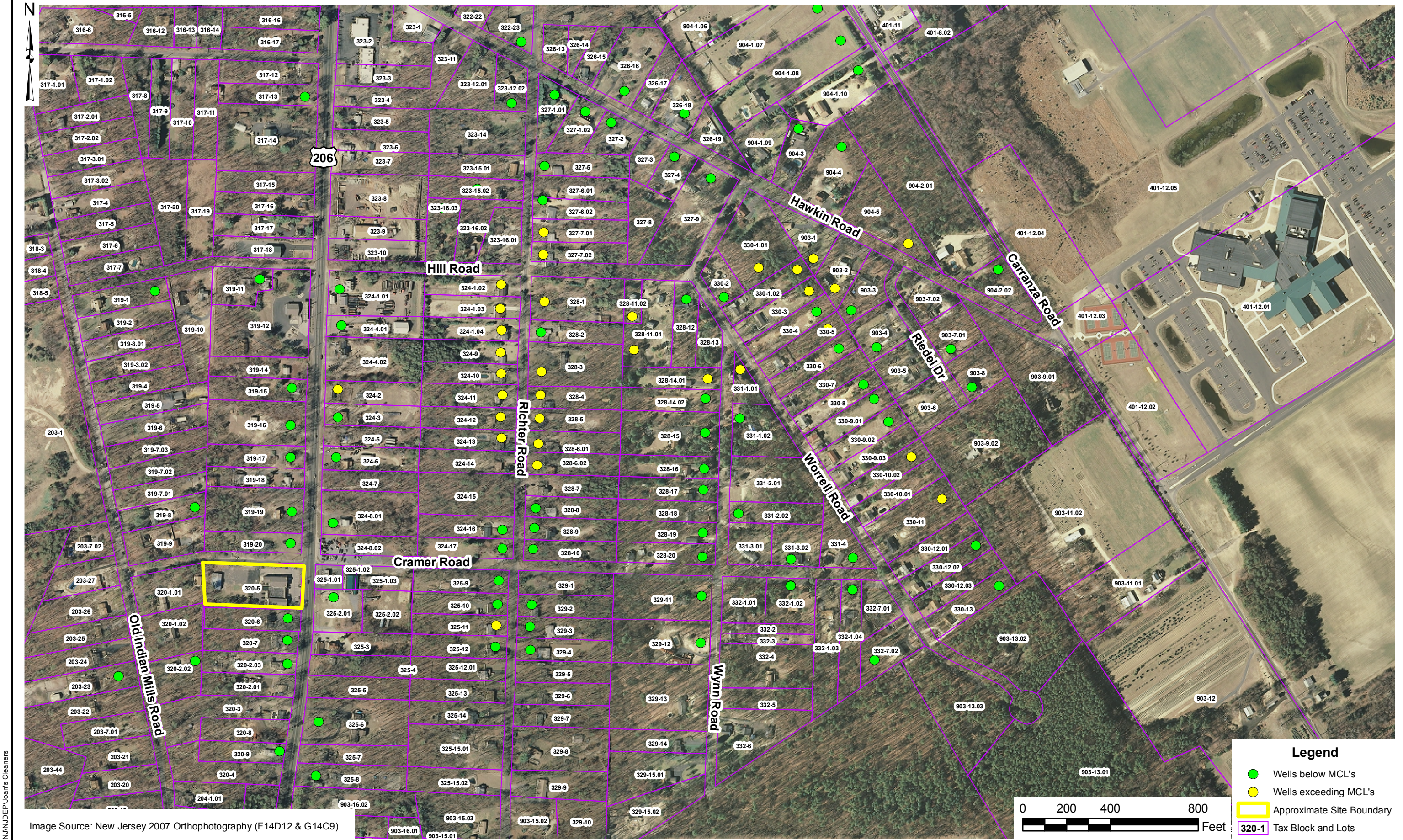
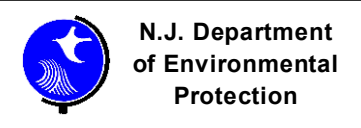


Image Source: New Jersey 2007 Orthophotography (F14D12 & G14C9)

Legend

- Wells below MCL's
- Wells exceeding MCL's
- Approximate Site Boundary
- Tax Block and Lots

I:\GIS_SERVICES\NJ\NJDEP\Joan's Cleaners



JOAN'S CLEANERS, TABERNAACLE TOWNSHIP, NEW JERSEY
SITE PLAN
 NJDEP CONTRACT No.A-60243

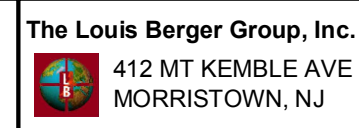


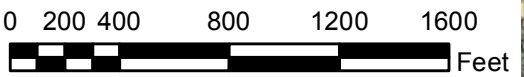
FIGURE 2



Legend

- Streams
 - Approximate Groundwater Contaminated Area
 - Approximate Site Boundary
 - NJ DEP Wetlands
- MODAg - Modified Wetlands, Agricultural Lands
 PEM1E - Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated
 PFO1B - Palustrine, Forested, Broad-Leaved Deciduous, Saturated
 PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
 PFO1E - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
 PFO4B - Palustrine, Forested, Needle-Leaved Evergreen, Saturated
 PFO4/1B - Palustrine, Forested, Needle-Leaved Evergreen/Broad-Leaved Deciduous, Saturated
 PFO8B - Palustrine, Forested, Atlantic White Cedar, Saturated
 PSS1B - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Saturated
 PSS1Cx - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded, Excavated

Image Source: New Jersey 2007 Orthophotography (F14D12 & G14C9)



JOAN'S CLEANERS, TABERNALE TOWNSHIP, NEW JERSEY

WETLANDS MAP

NJDEP CONTRACT No.A-60243

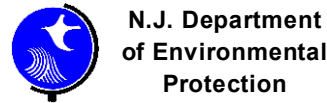


FIGURE 3

I:\GIS_SERVICES\NJ\NJDEP\Joan's Cleaners

ATTACHMENT 1
SITE PHOTOGRAPHS



Photograph 1: View of front of building from corner of Cramer Road; looking southwest.



Photograph 2: View of rear of building; looking east.



Photograph 3: Mowed lawn and wooded lot behind the Site; looking west.



Photograph 4: Pine-Oak upland forest; headwaters of Bread and Cheese Run in adjacent farm field; looking southeast.



Photograph 5: Palustrine forested wetlands associated with Bread and Cheese Run; looking north.



Photograph 6: Bread and Cheese Run and adjacent forested wetlands; view from Carranza Rd southeast of the Site, looking west.



Photograph 7: Bread and Cheese Run and adjacent forested wetlands; view from Carranza Rd southeast of the Site, looking east.



Photograph 8: Headwater of Bear Swamp River northeast of the site; looking southeast.



Photograph 9: Deciduous wooded wetlands northeast of the Site; looking east.



Photograph 10: Impoundment of Bear Swamp River northeast of the site; looking northwest.

APPENDIX J
CEA Document



New Jersey Department of Environmental Protection
Site Remediation Program

**CLASSIFICATION EXCEPTION AREA / WELL
RESTRICTION AREA (CEA/WRA) PERMIT FACT SHEET**

Non-LSRP (Existing Cases) LSRP Subsurface Evaluator

Date Stamp
(For Department use only)

SECTION A. CASE INFORMATION

Case Name: Joan's Cleaners

Case ID/Case Number: 00010544

Preferred ID (PI Number): 289711

CEA Component Information

1. **Contaminant(s):** This CEA/WRA applies only to the contaminants above the applicable numeric values established by Ground Water Quality Standards (GWQS), N.J.A.C. 7:9C, listed in the table below. List below the maximum value for all contaminants included in Exhibit A using any well or sampling point used to establish the CEA.

Contaminant	Concentration ⁽¹⁾	GWQS ⁽²⁾	SWQS ⁽³⁾	GWSL ⁽⁴⁾
Tetrachloroethene (PCE)	196	1	0.34	1
Trichloroethene (TCE)	6.3	1	1.0	1
1,1,2,2-Tetrachloroethane	1.1	1	4.7	4

Notes: ⁽¹⁾ Maximum concentration in Micrograms Per Liter

⁽²⁾ New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C

⁽³⁾ Surface Water Quality Standards, N.J.A.C. 7:9B - Applicable only where contaminants in the CEA may discharge to a surface water body.

⁽⁴⁾ Ground Water Screening Levels from most current NJDEP Vapor Intrusion Guidance

If attaching an Addendum to list additional contaminants and associated information.

Exhibit A: Monitor Well/Sampling Point Data – Per N.J.A.C 7:26E-8.3(b) submit a copy of a table that includes the most recent 24 months of ground water sampling.

2. CEA Boundaries:

Lot(s) and Block(s) included in the areal extent of the Classification Exception Area:

Year of tax map used: 2012

Block(s)	Lot(s)	Check if off-site
320	5	<input type="checkbox"/>
319	18, 19, 20	<input checked="" type="checkbox"/>
320	6	<input checked="" type="checkbox"/>
323	16.01	<input checked="" type="checkbox"/>
324	1.02, 1.03, 1.04	<input checked="" type="checkbox"/>

Block(s)	Lot(s)	Check if off-site
324	2, 3, 4.01, 4.02	<input checked="" type="checkbox"/>
324	5, 6, 7, 8.01, 8.02	<input checked="" type="checkbox"/>
324	9 through 17	<input checked="" type="checkbox"/>
325	1.01, 1.02, 1.03	<input checked="" type="checkbox"/>
325	2.01, 2.02	<input checked="" type="checkbox"/>

If attaching an Addendum to list additional Blocks/Lots and associated information.

Exhibit B: Site Location Maps – USGS Quadrangle Map and Tax Lot and Block Map (N.J.A.C. 7:26E-8.3(b)3i and ii)

Exhibit C: Site Map(s) and Cross Section – Including actual/predicted contaminant isopleths, ground water flow direction, CEA boundary, monitor well/sampling point/boring locations/IDs, area(s) of concern. N.J.A.C 7:26E-8.3(b)3iii through v.

Insert NAICS responsible for area(s) of concern, if known: _____

Narrative description of proposed CEA:

The areal limits of the proposed CEA are shown on the attached figure. Contamination exists at depths from approximately 30 feet below ground surface (bgs) to 70 feet bgs.

Name of the affected Geologic Formation/Unit: Kirkwood-Cohansey Aquifer

Direction of ground water flow: northeast

Ground Water Classification: Class I-PL

Vertical Depth of CEA (ft bgs and msl)	Horizontal Extent of CEA (acres or square ft)
70 feet bgs (feet msl not yet known)	160 acres

Exhibit D: Vertical Contaminant Data – A table, for the most recent 24 months of data, for each sampling point used to establish the CEA, or the subset of wells indicated in N.J.A.C. 7:26E-8.3(b)3iii, iv and v, that includes the following:

Depth (in feet bgs and msl elevation) to:

Water Table	Approximate Bottom of Plume ⁽⁵⁾	Top of Plume ⁽⁶⁾	Thickness of Clean Water Lens ⁽⁶⁾
-------------	--	-----------------------------	--

Notes: ⁽⁵⁾ Approximate maximum depth of contamination based on data included in Remedial Investigation Report (RIR);
⁽⁶⁾ Required only if plume is known to be below the water table based on vertical profiling or monitor well data in RIR.

Exhibit E: Fate and Transport Description and Model Documentation

- Historic Fill exemption
- All information required pursuant to N.J.A.C. 7:26E-8.3(b)2 and applicable guidance is included.

3. **Projected Term of CEA:** Based on modeling/calculations in Exhibit E

Proposed Duration in Years: Indeterminate at present

SECTION B. CURRENT AND PROJECTED GROUND WATER USE DOCUMENTATION

Exhibit F: Well Search Results – Include most recent well search per N.J.A.C. 7:26E-1.17. All area homes and businesses are serviced by wells.

Check each item where, pursuant to N.J.A.C. 7:26E-8.3(b)4, written documentation was obtained regarding future ground water use for a 25-year planning horizon based on:

- Municipal master plans
- Zoning plans
- Local water purveyor plans and planning data pertaining to the existence of water lines and proposed future installation of water lines
- Local planning officials
- County and local boards of health
- Local and/or county ordinances restricting installation of potable wells

SECTION C. WELL RESTRICTION INFORMATION

For Class II-A ground water and pursuant to the GWQS at N.J.A.C. 7:9C-1.6(d), where ground water quality data indicate contaminants exceed the values listed in the Primary Drinking Water Regulations, the Department shall restrict, or require the restriction of, potable ground water uses within any CEA. Therefore, the CEA established for this site is also a Well Restriction Area, the extent of which coincides with the boundaries of the CEA.

Well Restrictions set within the boundaries of the CEA:

- Double Case Wells
- Sample Potable Wells
- Evaluate Production Wells
- Other

SECTION D. PUBLIC NOTIFICATION REQUIREMENTS

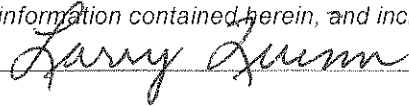
Notify Department that letters were sent per N.J.A.C. 7:26E-8.3(b)5 (check all applicable categories):

- Municipal and county clerk(s)
- Local, county or regional health department(s)
- Designated County Environmental Health Act agency (if applicable)
- County Planning Board
- Pinelands Commission (if applicable)
- Owners of real property overlying CEA foot print

Exhibit G: List of Names and Addresses – Include all persons notified pursuant to N.J.A.C. 7:26E-8.3(b) based on the proposed CEA extent.

Property Owner Name	Property Owner Address	Date Property Owner was notified	Property was evaluated for vapor impacts <input checked="" type="checkbox"/> if "Yes"
	See attached list of all Property Owners		<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

SECTION E. NON-LSRP SITE REMEDIATION PROFESSIONAL STATEMENT

First Name: Larry Last Name: Quinn
Phone Number: (609) 633-0766 Ext: _____ Fax: _____
Mailing Address: NJDEP, Mail Code 401-06H, P.O. Box 420
City/Town: Trenton State: NJ Zip Code: 08625
Email Address: larry.quinn@dep.state.nj.us
I believe that the information contained herein, and including all attached documents, is true, accurate and complete.
Signature:  Date: 3-30-12
Name/Title: _____ **No Changes Since Last Submittal**
Company Name: NJDEP - Site Remediation Program

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

ADDENDUM
Classification Exception Area / Well Restriction Area
Permit Fact Sheet Form

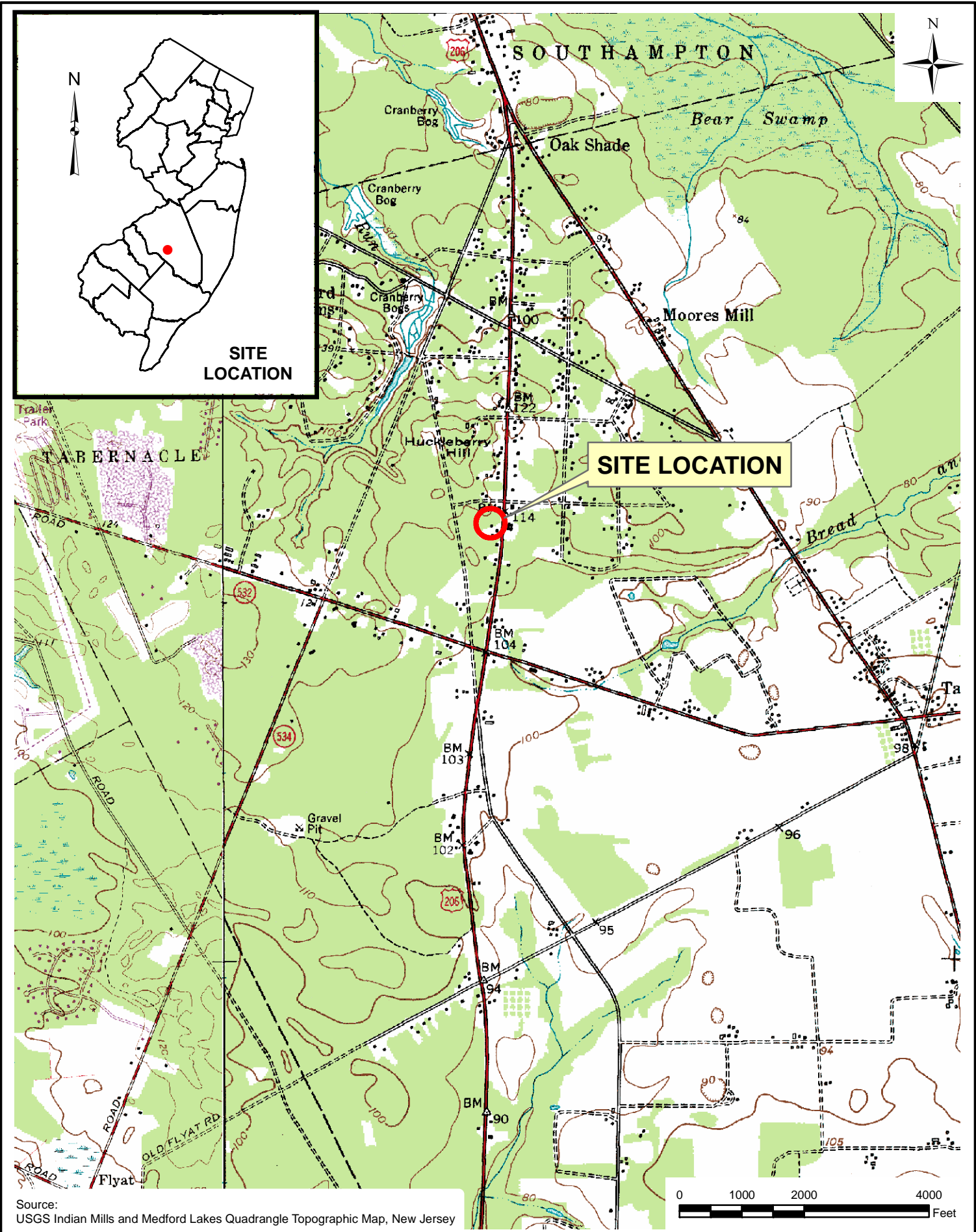
CEA FACT SHEET - JOAN'S CLEANERS SITE - TABERNACLE, NJ

Section 2 (continued from CEA Fact Sheet)

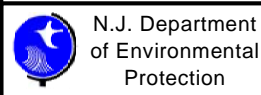
CEA Boundaries:

Lot(s) and Block(s) included in the areal extent of the Classification Exception Area:

Block(s)	Lot(s)	(All Lots listed are off-site)
325	9, 10, 11	
326	18, 19	
327	3, 4, 5, 6.01, 6.02, 7.01, 7.02, 8, 9	
328	1, 2, 3, 4, 5, 6.01, 6.02, 7, 8, 9, 10, 11.01, 11.02, 12, 13, 14.01, 14.02, 15, 16, 17, 18, 19, 20	
329	1, 2, 3, 11, 12	
330	1.01, 1.02, 2, 3, 4, 5, 6, 7, 8, 9.01, 9.02, 9.03, 10.01, 10.02, 11, 12.01, 12.02, 12.03, 13	
331	1.01, 1.02, 2.01, 2.02, 3.01, 3.02, 4	
332	1.01, 1.02, 1.03, 1.04, 2, 7.01, 7.02	
401	12.02, 12.03, 12.04	
403	6	
903	1, 2, 3, 4, 5, 6, 7.01, 7.02, 8, 9.01, 9.02, 11.01, 11.02, 13.02	
904	1.08, 1.09, 1.10, 2.01, 2.02, 3, 4, 5	

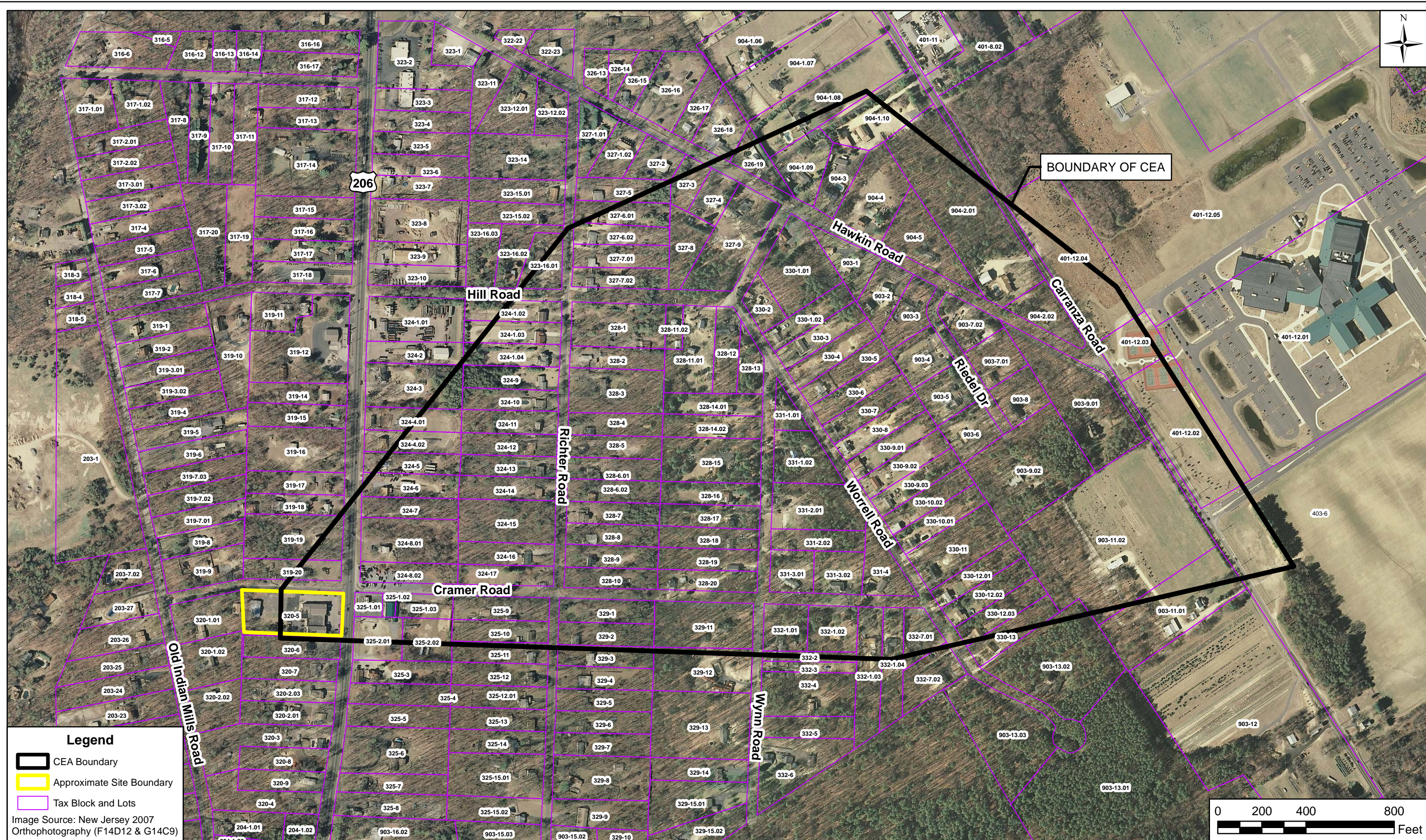


Source:
USGS Indian Mills and Medford Lakes Quadrangle Topographic Map, New Jersey



JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

SITE LOCATION MAP



BOUNDARY OF CEA

206

Hill Road

Hawkin Road

Caranza Road

Redel Dr

Richter Road

Worell Road

Cramer Road

Wynn Road

Old Indian Mills Road

Legend




-  CEA Boundary
-  Approximate Site Boundary
-  Tax Block and Lots

Image Source: New Jersey 2007
Orthophotography (F14D12 & G14C9)



JOAN'S CLEANERS, TABERNAACLE TOWNSHIP, NEW JERSEY
INTERIM CLASSIFICATION EXCEPTION AREA (CEA)
ESTABLISHED BY NJDEP

Submitted By:



THE **Louis Berger Group**, INC.

412 Mount Kemble Avenue
Morristown, New Jersey 07960

April 2013