

ATLANTIC COUNTY UTILITIES AUTHORITY

ACUA BID NO.: 2022-SW-07

REBID GEOTHERMAL WELLFIELD REPLACEMENT

ADDENDUM NO.: 1

6/29/2022

THOMAS R. GANARD, P.E.
N.J. LICENSE NO. 35261

To All Plan holders:

The Following changes, additions, and/or deletions are hereby made part of the Bid Documents for the Atlantic County Utilities Authority Bid Number 2022-SW-07 - Rebid Geothermal Wellfield Replacement, as fully and completely as if the same were set forth therein.

All Bidders shall acknowledge receipt and acceptance of the Addendum Number 1 by inserting its number, date, and bidder's initials on the Addenda Acknowledgment Form contained within the specifications. Bid packages submitted without the Addenda Acknowledgment Form will be considered unresponsive.

Bid Opening Date/Time:

The bid opening date is amended to **July 13th, 2022**, at 11:00AM prevailing time. The location remains the same.

The bid opening will be made available for viewing on Zoom at the following link:
<https://us06web.zoom.us/j/88183164819?pwd=b2dCWjINL0NoTWQ2Vis3cE5ld3B2QT09>

Passcode: 710107

Clarifications to the Contract Documents:

The Contractor shall notify and obtain approval from ACUA in advance of any removal of trees and/or shrubs or disturbance to the existing landscaped area during the installation of the proposed Geothermal Wellfield. The authorized disturbed area(s) will be restored by ACUA at no cost to the Contractor.

Bid Document Addendum Number 1 includes the following attachments:

Attachment 1 – Questions Received in Writing (2 pages)

Attachment 2 - Boring Logs B-4 and B-10, by Lippincott Engineering Associates (6 pages)
From ACUA Recycling Center

Attachment 3 – Geologic Logs and Location Map from TW-1 & OW-A15 (7 pages)

QUESTIONS RECEIVED IN WRITING

- 1: We respectfully request a one week bid extension to allow us to develop a more comprehensive and competitive bid.**

See page 2 for new time of bid opening. A new Zoom link is also provided.

- 2: Please provide representative soil borings that extend to depths required for installation of geothermal wells in order to properly evaluate drilling methods and production.**

Two separate project boring logs are attached to this Addendum for evaluation by Bidders. First, are boring logs B-4 and B-10, prepared by Lippincott Engineering Associates. Borings B-4 and B-10 were located approximately 500 ft west of the proposed geothermal wellfield. The logs were performed in December 1990 for the construction of ACUA's Recycling Center Building. Both borings were drilled to an approximate 60-ft depth. Second, are boring logs of a well located approximately 5 miles southeast of the project site. The logs are dated October 2002 and April 2003. In these logs, subface soils were depicted to 795 ft and 824 ft deep.

Both sets of boring logs have been provided to bidders to assist in their evaluation of local/regional soil conditions. The ACUA does not guarantee that soil conditions at the proposed geothermal wellfield site will match either of the borings provided.

- 3: Please advise if work of a similar nature performed prior to the last 5 years can be considered as relevant experience.**

Yes, work of a similar nature performed by the Contractor and/or their Subcontractor prior to the last 5 years can be considered as relevant experience.

- 4: Please advise if an alternate tie-in point would be considered, outside the limits of the existing concrete slab, in order to reduce impacts to the existing building.**

The tie-in point shall be located as shown on the construction plans.

- 5: Please advise on the intent of the 6-inch diameter surface casing; for example, is this intended to maintain borehole stability in the upper 50 feet or some other purpose?**

The 6-inch diameter steel casing is an if-and-where needed item for the purpose of preventing the walls of the boring from erosion, fracturing, breaking down, and undesirable water from entering the wells during the drilling and installation of the wells.

6: Please advise if ACUA can provide the electrical scope of the project.

The ACUA will perform all electrical portions of the scope, including disconnecting the existing pumps and re-connecting the new pumps. The contractor doesn't need to provide an electrician.

7: Please advise on the depth to groundwater from ground surface.

Per boring logs taken for the adjacent ACUA Recycling Center Building construction, the groundwater levels ranged from 26' to 32'-6" deep. The building is located approximately 500 ft west of the proposed geothermal wellfield. These boring logs were prepared by Lippincott Engineering Associates in December 1990 and are attached to this Addendum.

8: Please advise if drill cuttings and nominal amounts of drill fluid can be disposed at the landfill at no cost to the contractor.

Drill spoils can be disposed at the ACUA Landfill at no cost to the Contractor. The spoils shall be dewatered within the silt fence area prior to be transport off-site. Contractor shall provide the necessary equipment and manpower to transport the spoils to the active portion of the landfill. In addition, the materials must be weighed at the scale house prior to dumping and the transport container(s) shall be registered with NJDEP for waste disposal purposes.

LIPPINCOTT ENGINEERING ASSOCIATES

One Pavilion Avenue Riverside, New Jersey 08075

PROJECT NO. 6840.1/9

SHEET 3 OF 20

DATE December 10, 1990

SURFACE ELEV. 48+/-

PROJECT ACUA Materials Recovery Building

CLIENT Wehran Engineering

LOCATION Egg Harbor Township, New Jersey
BP/cmb

LOG OF BORING NUMBER B - 4

DEPTH	SAMPLE NO.	TYPE *	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-1	A	0/	1-3-4-6	Orange brown medium-fine SAND, trace silty clay.	
			2			
	S-2	A	2/	6-7-8-9	Orange brown medium-fine SAND, trace clayey silt, trace fine gravel.	
			4			
5	S-3	A	4/	9-8-8-9	Orange brown medium SAND, trace silt.	
			6			
	S-4	A	6/	8-7-8-10	Orange brown medium-fine SAND, trace silt, trace fine gravel.	
			8			
	S-5	A	8/	7-7-9-10	Orange brown coarse-fine SAND, little fine gravel.	
10			10			
	S-6	A	13/	6-6-7-10	Tan brown medium-fine SAND, trace silt.	
15			15			
	S-7	A	18/	8-8-8-9	SAME.	
20			20			
	S-8	A	23/	9-10-9-11	Tan brown medium-fine SAND, little clayey silt.	
25			25			

GROUNDWATER DATA

DEPTH: 26'5"
 TIME: EOB
 DATE: December 10, 1990

- * A. Standard Penetration Test (ASTM-D 1586)
- B. Standard Thin-walled 3" Tube (ASTM-D 1587)
- C. Core Drilling

Driller H. Doron Helper M. Shepherd Equipment B-40-L

LIPPINCOTT ENGINEERING ASSOCIATES

One Pavillon Avenue Riverside, New Jersey 08075

PROJECT NO. 6840.1/9

SHEET 4 OF 20

DATE December 10, 1990

SURFACE ELEV. 48+/-

PROJECT ACUA Materials Recovery Building

CLIENT Wehran Engineering

LOCATION Egg Harbor Township, New Jersey
BP/cmb

LOG OF BORING NUMBER B - 4

DEPTH	SAMPLE NO.	TYPE *	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-9	A	28/	8-7-17-21	Tan brown medium-fine SAND, little silt.	
30			30			
	S-10	A	33/	17-20-20-26	Tan medium SAND, trace silt.	
35			35			
	S-11	A	38/	10-10-13-18	SAME.	
40			40			
	S-12	A	43/	14-18-22-25	SAME.	
45			45			
	S-13	A	48/	24-24-31-42	Tan medium SAND, trace silt, trace gravel.	
50			50			
	S-14	A	53/	9-9-16-19	SAME.	
55			55			

GROUNDWATER DATA

DEPTH: 26'5"
 TIME: EOB
 DATE: December 10, 1990

- *
 A. Standard Penetration Test (ASTM-D 1586)
 B. Standard Thin-walled 3" Tube (ASTM-D 1587)
 C. Core Drilling

Driller H. Doron Helper M. Shepherd Equipment B-40-L

LIPPINCOTT ENGINEERING ASSOCIATES

One Pavilion Avenue Riverside, New Jersey 08075

PROJECT NO. 6840.1/9

SHEET 5 OF 20

DATE December 10, 1990

SURFACE ELEV. 48+/-

PROJECT ACJA Materials Recovery Building

CLIENT Wehran Engineering

LOCATION Egg Harbor Township, New Jersey
BP/cmb

LOG OF BORING NUMBER B - 4

DEPTH	SAMPLE NO.	TYPE *	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-15	A	58/	24-38-46-	Tan medium-fine SAND, trace silt, trace gravel.	
60			60	50/4"		
					EOB 59.8'	
65						
70						
75						
80						

GROUNDWATER DATA

DEPTH: 26'5"
 TIME: EOB
 DATE: December 10, 1990

- * A. Standard Penetration Test (ASTM-D 1586)
- B. Standard Thin-walled 3" Tube (ASTM-D 1587)
- C. Core Drilling

Driller H. Doron Helper M. Shepherd Equipment B-40-L

LIPPINCOTT ENGINEERING ASSOCIATES

One Pavilion Avenue Riverside, New Jersey 08075

PROJECT NO. 6840.1/9

SHEET 19 OF 20

DATE December 13, 1990

SURFACE ELEV. 50+/-

PROJECT ACJA Materials Recovery Building

CLIENT Wehran Engineering

LOCATION Egg Harbor Township, New Jersey
BP/cmb

LOG OF BORING NUMBER B - 10

DEPTH	SAMPLE NO.	TYPE*	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-9	A	28/	9-11-12-16	Tan brown coarse-fine SAND, trace silt.	
30			30			
	S-10	A	33/	7-7-13-18	SAME.	
35			35			
	S-11	A	38/	11-11-27-35	SAME.	
40			40			
	S-12	A	43/	11-7-12-16	Tan brown medium-fine SAND, trace silt.	
45			45			
	S-13	A	48/	11-13-17-23	Tan brown fine-coarse SAND, trace silt.	
50			50			
	S-14	A	53/	9-14-20-27	SAME.	
55			55			

GROUNDWATER DATA

DEPTH: 32'6"
 TIME: EOB
 DATE: December 13, 1990

- * A. Standard Penetration Test (ASTM-D 1586)
- B. Standard Thin-walled 3" Tube (ASTM-D 1587)
- C. Core Drilling

Driller H. Doron Helper M. Shepherd Equipment B-40-L

PROJECT NO. 6840.1/9

One Pavillon Avenue Riverside, New Jersey 08075

ENGINEERING ASSOCIATES

DATE December 13, 1990

SHEET 18 OF 20

PROJECT AQUA Materials Recovery Building

SURFACE ELEV. 50+/-

LOCATION Egg Harbor Township, New Jersey
BP/cmb

CLIENT Wehran Engineering

LOG OF BORING NUMBER B - 10

DEPTH	SAMPLE NO.	TYPE *	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-1	A	0/	2-3-3-6	Brown coarse-fine SAND, little clayey silt, little fine gravel.	
			2			
	S-2	A	2/	8-10-11-11	Brown coarse-fine SAND, trace silt, trace fine gravel.	
			4			
5	S-3	A	4/	8-9-8-11	SAME.	
			6			
	S-4	A	6/	10-12-12-14	Orange brown fine-coarse SAND, little clayey silt, trace fine gravel.	
			8			
	S-5	A	8/	10-11-11-11	SAME.	
10			10			
	S-6	A	13/	7-9-11-10	Brown fine-coarse SAND, trace silt.	
15			15			
	S-7	A	18/	6-8-8-11	SAME.	
20			20			
	S-8	A	23/	10-12-12-15	SAME.	
25			25			

GROUNDWATER DATA

DEPTH: 32'6"
 TIME: BOB
 DATE: December 13, 1990

- * A. Standard Penetration Test (ASTM-D 1586)
- B. Standard Thin-walled 3" Tube (ASTM-D 1587)
- C. Core Drilling

Driller H. Doron Helper M. Shepherd Equipment B-40-L

LIPPINCOTT ENGINEERING ASSOCIATES

One Pavillon Avenue Riverside, New Jersey 08075

PROJECT NO. 6840.1/9

SHEET 20 OF 20

DATE December 13, 1990

SURFACE ELEV. 50+/-

PROJECT ACUA Materials Recovery Building

CLIENT Wehran Engineering

LOCATION Egg Harbor Township, New Jersey
BP/cmb

LOG OF BORING NUMBER B - 10

DEPTH	SAMPLE NO.	TYPE*	SAMPLE DEPTH (ft)	BLOW COUNT (blows per 6 inches)	CLASSIFICATION OF MATERIALS	MOISTURE CONTENT
					(based on samples recovered plus observation of material returned between samples)	(% by wgt.)
	S-15	A	58/	4-6-8-12	Orange brown fine SAND, some clayey silt.	
60			60			
					EOB 60'	
65						
70						
75						
80						

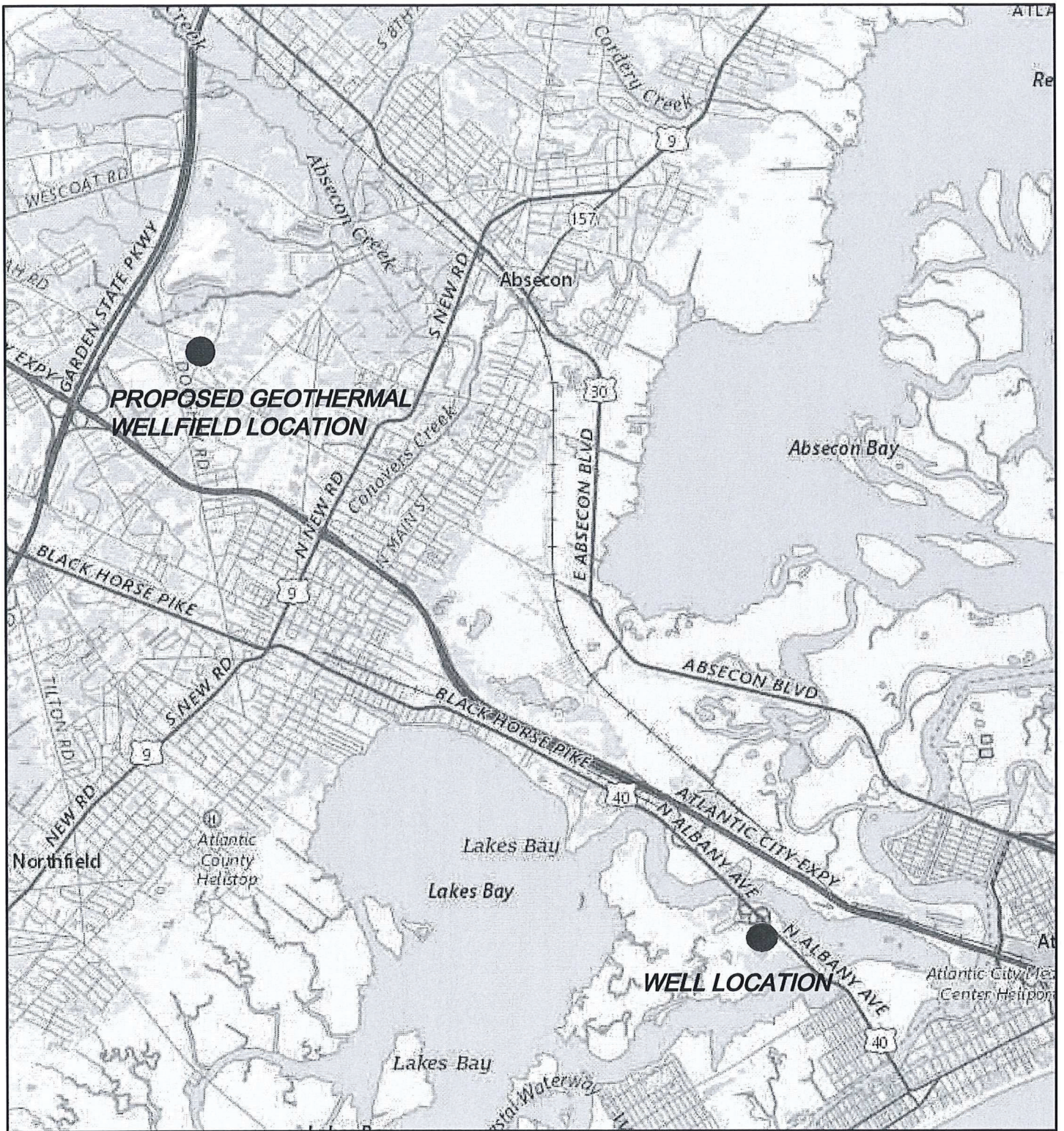
GROUNDWATER DATA

DEPTH: 32'6"
 TIME: EOB
 DATE: December 13, 1990

- * A. Standard Penetration Test (ASTM-D 1586)
- B. Standard Thin-walled 3" Tube (ASTM-D 1587)
- C. Core Drilling

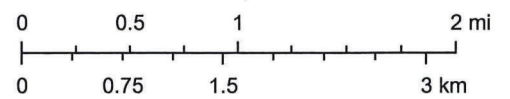
Driller H. Doron Helper M. Shepherd Equipment B-40-L

WELL LOCATION MAP






6/28/2022, 10:31:10 AM

1:72,224



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

USGS
2021 USGS

 GEOLOGIC LOG 	OWNER: 														
	WELL NO.: TW-1														
	PAGE: 1 of 2 PAGES														
SITE LOCATION: Atlantic City, New Jersey Department of Public Works (DPW) Highway 40/322 (Albany Ave.)	SCREEN TYPE: Stainless Steel (SS) DIAMETER: 10-inch														
	SLOT NO.: 60 SETTING: 722 to 772 ft bg STAINLESS STEEL SUMP SETTING: 772 to 777 ft bg														
DATE COMPLETED: April, 2003	SAND PACK SIZE: #3 Filpro														
DRILLING COMPANY: Unitech Drilling Co. (UTD)	SETTING: 710 to 777 ft bg														
	<table border="0"> <tr> <td>CASING TYPE:</td> <td>DIAMETER:</td> <td>SETTING:</td> </tr> <tr> <td>Carbon Steel Salt-Water</td> <td>24-inch</td> <td>grade to 150 ft bg</td> </tr> <tr> <td>Carbon Steel</td> <td>16-inch</td> <td>+ 2 to 720 ft bg</td> </tr> <tr> <td>Carbon Steel Backoff</td> <td>10-inch</td> <td>620 to 715 ft bg</td> </tr> <tr> <td>Stainless Steel Transition</td> <td>10-inch</td> <td>715 to 725 ft bg</td> </tr> </table>	CASING TYPE:	DIAMETER:	SETTING:	Carbon Steel Salt-Water	24-inch	grade to 150 ft bg	Carbon Steel	16-inch	+ 2 to 720 ft bg	Carbon Steel Backoff	10-inch	620 to 715 ft bg	Stainless Steel Transition	10-inch
CASING TYPE:	DIAMETER:	SETTING:													
Carbon Steel Salt-Water	24-inch	grade to 150 ft bg													
Carbon Steel	16-inch	+ 2 to 720 ft bg													
Carbon Steel Backoff	10-inch	620 to 715 ft bg													
Stainless Steel Transition	10-inch	715 to 725 ft bg													
DRILLING METHOD: Reverse Mud Rotary	SEAL TYPE: Portland Type II Cement														
SAMPLING METHOD: Wash & Split Spoon (from 15-ft observation well, OW-A15)	SETTING: grade to 150 ft bg & grade to 720 ft bg														
OBSERVER: Bill Kwitnicki	BACKFILL TYPE: Formation sands and clays														
REFERENCE POINT (RP): Ground Surface	STATIC WATER LEVEL: 86.1 DATE: 4/14/03														
ELEVATION OF RP: Approx. 7 ft above mean sea level	DEVELOPMENT METHOD: Turbine Pump w/ Rawhiding														
SURFACE COMPLETION: Stickup (~ 2-ft)	DURATION: 53 hours ETIMATED YIELD: 1,200 gpm														
COMMENTS: This generalized geologic log is based on the drilling & sampling of the 15-ft observation well, OW-A15. For a much more detailed geologic log, refer to the log for Well OW-A15.															



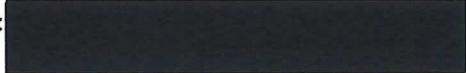
DEPTH (FEET)		FORMATION	DESCRIPTION
FROM	TO		
0	11	Fill Material	Grass/topsoil, asphalt/cement fragments, coarse fill material (gravel and sand)
11	16	Recent Organic Deposits	Black organic material, some peat, sulfide odor
16	144	Cohansey Formation (Fm.)	Interbedded micaceous, quartz SANDS some clays some silts
144	280	Kirkwood Fm. (Upper)	SILTY gray clay, some interbedded sands
280	334	Kirkwood Fm. (Belleplaine Member)	SANDY f,m,c, and trace to little clay lenses

334	655	Kirkwood Fm. (Wildwood Member)	Gray cohesive CLAY some silt and shell fragments (at 480 to 515 ft bg, "Rio Grande Water Bearing Zone" - SANDY some silt some clay)
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OWNER:	[REDACTED]
WELL NO.:	TW-1
PAGE: 2 OF 2 PAGES	

DEPTH (FEET)		FORMATION	DESCRIPTION
FROM	TO		
655	685	Kirkwood Fm. (AC 800-ft Sand, Upper)	Interbedded SAND c,m,f some silt some clay trace shell fragments
685	725	Kirkwood Fm. (AC 800-ft Sand, Thin Confining Unit)	Gray CLAY some sand some silt trace shell fragments
725	795	Kirkwood Fm. (AC 800-ft Sand, Lower)	SAND c,m,f with some pea-sized gravel and trace shell fragments
	795 EOB		

[REDACTED]

 GEOLOGIC LOG 	OWNER: 
	WELL NO.: OW-A15
	PAGE: 1 of 4 PAGES
SITE LOCATION: Atlantic City, New Jersey Department of Public Works (DPW) Highway 40/322 (Albany Ave.)	SCREEN TYPE: Stainless Steel DIAMETER: 4 inch
DATE COMPLETED: 10/7/02	SLOT NO.: 20 SETTING: 725 to 775 ft bg
DRILLING COMPANY: Unitech Drilling Co.	SAND PACK SIZE: #1 Filpro
DRILLING METHOD: Mud Rotary	SETTING: 705 to 775 ft bg
SAMPLING METHOD: Wash & Split Spoons	CASING TYPE: Steel DIAMETER: 4 inch
OBSERVER: Bill Kwitnicki	SETTING: 0 to 725 ft bg
REFERENCE POINT (RP): Ground Surface	SEAL TYPE: #00 Filpro & Portland Cement
ELEVATION OF RP: Approx. 7 ft above mean sea level	SETTING: 700 to 705 ft bg & 0 to 700 ft bg
SURFACE COMPLETION: Flush with ground	BACKFILL TYPE: Formation sands and clays
	STATIC WATER LEVEL: 87.2 DATE: 10/7/02
	DEVELOPMENT METHOD: Air Surge & Lift
	DURATION: 4 hours ETIMATED YIELD: 50 gpm
COMMENTS:	
ABBREVIATIONS: W = wash; SS = split spoon; EOB = end of boring; R = refusal; F = fine; M = medium; C = coarse	

DEPTH (FEET)		SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DESCRIPTION
FROM	TO				
0	11	W	-	-	Grass/topsoil, asphalt/cement fragments, coarse fill material
11	16	W	-	-	Black organic material, some peat, sulfide odor
16	20	W	-	-	Fine gray quartz (qtz) sand
20	40	W	-	-	Silty gray clay
40	64	W	-	-	FMC light (qtz) sandy clay
64	66	SS	18-19-50R	1	CMF gray (qtz) sandy gravel, micaceous
64	84	W	-	-	MF qtz & plagioclase sand
84	86	SS	22-45-50R	8 inches	FM qtz sand grading into C sandy gravel
84	104	W	-	-	FMC gray qtz sand, poorly sorted, small clay lenses
104	106	SS	21-50R	8 inches	Orange-tan FMC qtz sandy gravel

OWNER: [REDACTED]

WELL NO.: OW-A15

PAGE: 2 OF 4 PAGES

DEPTH (FEET)		SAMPLE TYPE	BLOW COUNT (6 inch)	RECOVERY (feet)	DESCRIPTION
FROM	TO				
104	124	W	-	-	Tan FM qtz sands with small clay lenses
124	126	SS	13-22-50R	2 inches	Rounded gravelly gray clay
124	144	W	-	-	MC sandy gravelly clay
144	146	SS	20-30-47-38	1.5	Gray cohesive clay with minor sand & gravel at top
144	164	W	-	-	Gray cohesive clay (144-154) MC sand with peat fragments (155-164)
164	166	SS	17-7-9-16	2	Gray clayey silty F sand
164	184	W	-	-	Gray silty clay
184	186	SS	7-6-9-8	2	Gray silty clay
184	204	W	-	-	Gray silty clay
204	206	SS	33-50R	7 inches	Gray F sandy clay
204	224	W	-	-	Gray F sandy clay, brownish clay at 220
224	226	SS	27-32-50R	3 inches	Brown clayey silty peat
224	244	W	-	-	CMF light qtz sands and gray clay
244	246	SS	17-50R	6 inches	Gray silty clay grading into MF light sands
244	264	W	-	-	CMF tan-gray sand, micaceous
264	266	SS	20-23-50R	1.25	CMF gray sandy silt
264	284	W	-	-	CMF gray sand with gray clay lenses
284	286	SS	50R	5 inches	MF brown-gray sand with gray clay on top
284	304	W	-	-	CMF brown-gray sand with minor clay lenses and peat
304	306	SS	50R	3 inches	MF brown-gray sand with gray clay lenses and gravel
304	324	W	-	-	CMF gray sand with gray clay lenses and peat
324	326	SS	50R	2 inches	MF gray sand with minor clay lenses
324	344	W	-	-	CMF gray sand (to 334) gray clay (to 344)
344	346	SS	8-6-22-12	2	Dark gray cohesive clay
344	364	W	-	-	Gray cohesive clay
364	366	SS	6-9-14	2	Gray cohesive clay with shell fragments
364	384	W	-	-	Gray cohesive clay with shell fragments
384	386	SS	5-22	1	Gray silty clay with shell fragments
384	404	W	-	-	Gray silty clay with shell fragments

OWNER: [REDACTED]

WELL NO.: OW-A15

PAGE: 3 OF 4 PAGES

DEPTH (FEET)		SAMPLE TYPE	BLOW COUNT (6 inch)	RECOVERY (feet)	DESCRIPTION
FROM	TO				
404	406	SS	7-13	2	Gray cohesive clay with shell fragments
404	424	W	-	-	Gray silty clay with shell fragments
424	426	SS	6-36	2	Gray cohesive clay with shell fragments
424	444	W	-	-	Gray cohesive clay with shell fragments
444	446	SS	20-16-22	1.75	Gray cohesive clay with shell fragments
444	464	W	-	-	Gray clayey silt with shell fragments
464	466	SS	23-21-24	1.5	Gray-brown cohesive clay
464	484	W	-	-	Gray clayey silt (to 480) F brown-gray sand (to 484)
484	486	SS	50R	1.25	F brown-gray sandy clay with shell fragments
484	504	W	-	-	FM brown-gray sandy clay with shell fragments
504	506	SS	50R	1 inch	Gray-brown F sandy silty clay with shell fragments
504	524	W	-	-	FM gray sandy clay
524	526	SS	77R	1 inch	F gray sandy silty clay
524	544	W	-	-	Thin (6 inch to 1 ft) alternating gray sand/clay layers
544	546	SS	67-50R	1.5	Dark gray clay
544	564	W	-	-	Dark gray clay
564	566	SS	37-31-44	1.5	Gray clay with shell fragments
564	584	W	-	-	Gray clay with shell fragments
584	586	SS	26-27	2	Brown-gray clay with shell fragments
584	604	W	-	-	Gray clay with shell fragments
604	606	SS	27-14	2	Dark gray laminated clay, micaceous
604	624	W	-	-	Dark gray clay
624	626	SS	15	1.5	Gray-brown clay with shell fragments
624	644	W	-	-	Gray-brown clay with shell fragments
644	646	SS	23-20	1.25	Gray clayey silt with shell fragments
644	664	W	-	-	Gray clay with shell fragments
664	666	SS	76R	0	No recovery, sed trap was broken
664	684	W	-	-	CMF light qtz sand with clay lenses and shell fragments
684	686	SS	24-38	2 inches	MF qtz gray sand

