



Waste Industry Experts

Joyce Engineering, Inc
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April 7, 2010

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Mr. Ervin Lane
Compliance Hydrogeologist
North Carolina Department of Environment and Natural Resources
Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646



**RE: Request for Background Well Replacement
Wilkes County – Roaring River Landfill
JEI Project No. 00356.0900.11, Task No. 01**

Dear Ervin:

On behalf of Wilkes County, Joyce Engineering, Inc. (JEI) is submitting this request to replace the background monitoring well at the Roaring River Landfill. Monitoring well MW-2R currently serves as the background well for the facility and is located northeast of Phase 3 of the facility as indicated in Drawing No. 1. This area is slated to be used as barrow material for the facility. The proposed background well (MW-13) was installed in January/February 2001 to serve as the background well for the proposed C&D landfill; however, no C&D has been constructed at this time. Monitoring well MW-13 is located to the northwest of the facility and is upgradient of the waste mass as shown in Drawing No. 1. A boring log/construction diagram has been included in the attachments. A JEI field technician evaluated the functionality and condition of monitoring well MW-13 on March 23, 2010. The monitoring well functioned as designed and appeared to be in good condition. Upon approval, MW-2R will continue to be monitored for water levels only and abandonment will commence prior to the jeopardy of well integrity from landfill activities.

Please feel free to contact me or Kim Benson at (336) 323-0092 if you have any questions regarding this submittal.

Sincerely,
JOYCE ENGINEERING, INC.

Jeremy J. Kerly, P.G.
Project Consultant

Mr. Ervin Lane
April 7, 2010
Page 2 of 2

Attachments:

Boring Log/Construction Diagram – MW-13
Drawing No. 1

Enclosures:

C: Kent Brandon - Wilkes County, Solid Waste Director
File



LOG OF BORING MW-13

(Page 1 of 2)

Wilkes County Landfill
C&D Permit Application
Wilkes County, NC

JEI Project No. 356.00, Task 13

Date Started : 01/24/01
Date Completed : 02/05/01
Hole Diameter : 8.25-inch
Drilling Method : Hollow Stem Auger/Air Rotary
Sampling Method : Split Spoons

Drilling Company : Bedford Drilling, Inc.
Northing Coord. : N 902307.85829
Easting Coord. : E 1412467.64216
Survey By : W. Carolina Surveyors
Logged By : John Sherrill, P.G.

Depth in Feet	Surf. Elev. 1064.95	Blow Count	USCS	DESCRIPTION	Well: MW-13 Elev.: TOC=1067.26 Cover	Well Construction Information
0	1064	5	CL	SILTY CLAY - reddish brown, moist, saprolite		<p>WELL CONSTRUCTION</p> <p>Date Compl. : 02/05/01 Hole Diameter(s) : 8.25-inch Drilling Method(s) : Hollow Stem Auger : Air Rotary Company Rep. : Kevin Kendrick : Ronald Stump</p> <p>WELL CASING</p> <p>Material : Schedule 40 PVC Diameter : 2-inch Joints : Threaded, flush-coupled Approx. Csg. Stickup : 2.8-feet</p> <p>WELL SCREEN</p> <p>Material : Schedule 40 PVC Diameter : 2-inch Joints : Thredded, flush-coupled Opening : 0.010 inch, slotted</p> <p>GRAVEL PACK</p> <p>Type : DSI # 2 Sand</p> <p>WELL SCREEN SEAL</p> <p>Type : 3/8" Bentonite chips</p> <p>ANNULUS SEAL</p> <p>Type : No. 1 Portland grout</p> <p>PROTECTIVE CSG.</p> <p>Type : 4" X 4" Steel, locking</p> <p>WELL PAD</p> <p>Type : 2' X 2' X 6" Concrete</p> <p>1. Drilling performed with an Acker 90 Soil Max drilling rig utilizing 4.25" ID hollow-stem augers. Boreholes were advanced in bedrock with a Reich Drill T650WII drilling rig utilizing a 6-inch air rotary hammer.</p> <p>2. Drilled to auger refusal at 52 feet in stiff saprolite. Coring was attempted but drill bit teeth in the hole prevented coring. Continued drilling with the air rotary rig to approximately 84 feet. Bedrock determination based on auger refusal.</p> <p>3. The well was dry at the time of construction. Open triangle represents water level 24 hours after well construction (56.5 feet below TOC).</p>
2	1062	8				
4	1060	9				
6	1058	5	ML	SILT - yellowish brown, moist, saprolite, manganese oxide stain		
8	1056	8				
10	1054	12				
12	1052	6				
14	1050	5	SM	broken quartz vein (10'-12')		
16	1048	6				
18	1046	8				
20	1044	9				
22	1042	15				
24	1040	22				
26	1038	14	SM	SILTY SAND - yellowish brown, moist, saprolite		
28	1036	17				
30	1034	20				
32	1032	25				
34	1030	50/3				
36	1028	50/2				
38	1026	50/1				
40	1024	50/1				
42				color change to yellowish gray (20'-22')		
				color change to olive gray, quartz vein (25'-27')		

03-29-2010



LOG OF BORING MW-13

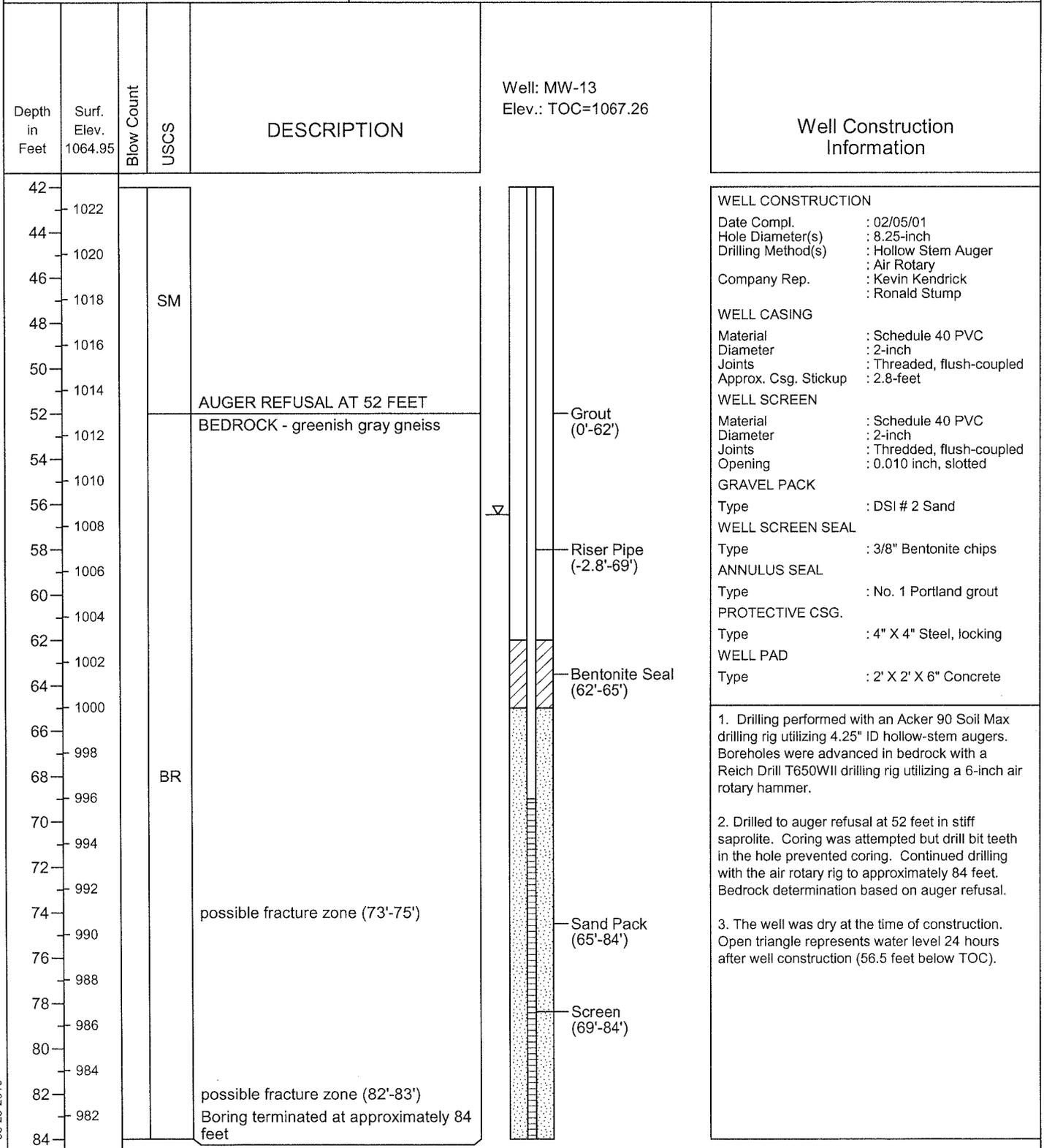
(Page 2 of 2)

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