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85-03

PROCUREMENT, CONSTRUCTION AND EH&S

Duke Power
EC11E / P.O. Box 1006
Charlotte, NC 28201-1006

db ID 14

December 9, 2004

Mr. Bobby Lutfy
North Carolina Department of Environment,
and Natural Resources
Division of Solid Waste Management
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: Duke Energy Corporation - Belews Creek Steam Station
Flyash Landfill Permit #85-03
Groundwater Monitoring Report

Dear Mr. Lutfy:

The Belews Creek Flyash Landfill was sampled on October 25-26, 2004. Attached please find a copy of the Ground Water Monitoring Report, Solid Waste Landfill Monitoring Well Locations and Chain of Custody Record.

All values for pH for this monitoring period were below the minimum groundwater standard of 6.5 pH units at all monitoring wells sampled. The low pH may be attributed to Piedmont soil characteristics.

Iron concentrations at monitoring wells MW-4 (0.38 mg/L), and MW-6 (0.75 mg/L) were above the NC groundwater standard of 0.30 mg/L.

All other parameters were below the NC groundwater standards. All values reported in the attached report are dependent on the accuracy of the approved analytical methods used to measure parameters.

The next semi-annual sampling of the landfill will occur in April 2005. If you have questions, please call me at (704) 382-4309.

Sincerely,

Allen Stowe

Allen Stowe
Scientist, Environmental Support

Attachments

cc: Mr. Robert Cheek – NC DENR Groundwater Section

Received
DEC 2004
Solid Waste Section

DUKE POWER COMPANY
GROUNDWATER MONITORING REPORT

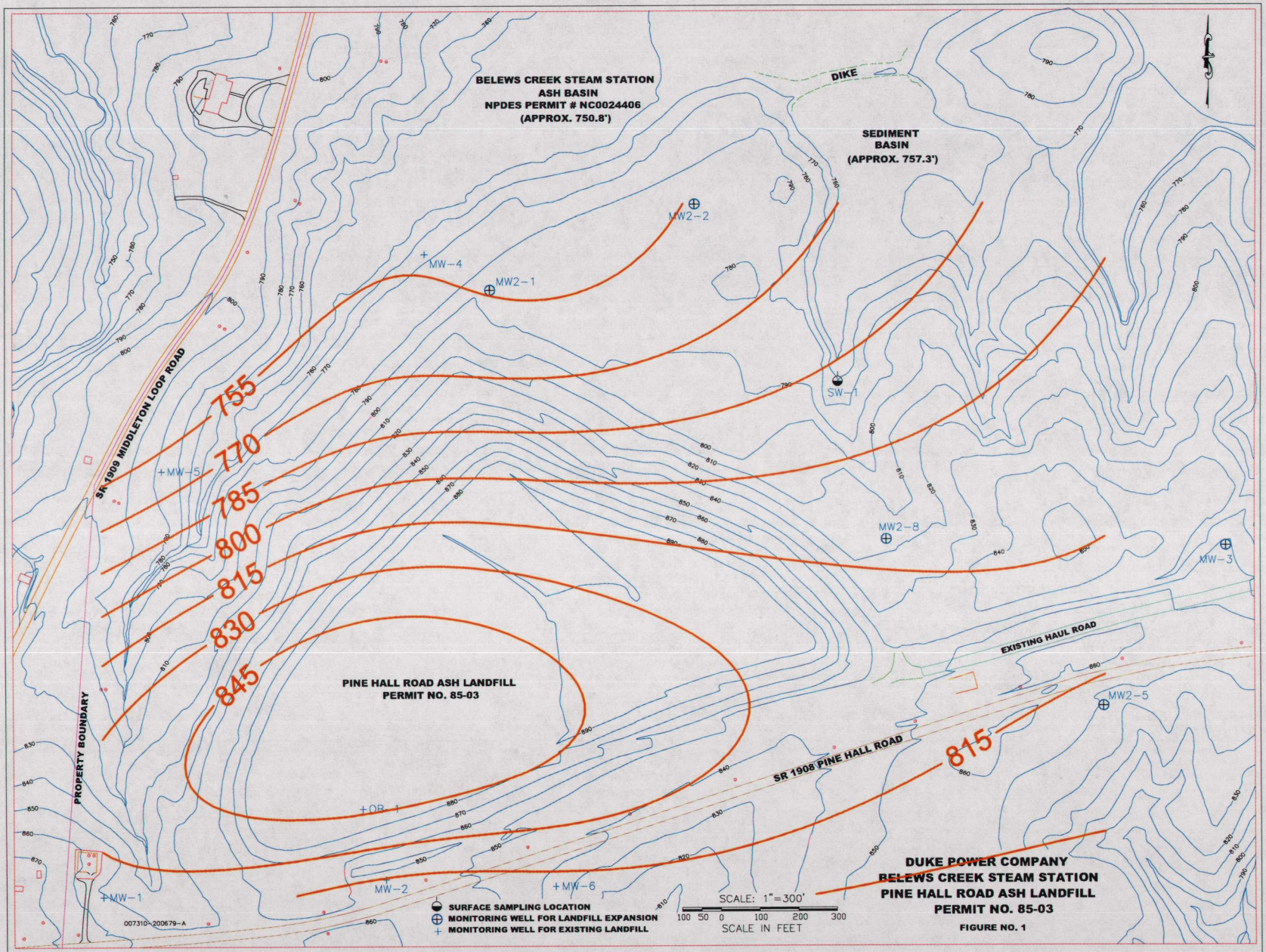
11/26/2004

Facility: Belews Creek Steam Station Fly-Ash Landfill #85-03
Sample Date: October 25 - 26, 2004 (Field and Geochemistry Data)

Parameter	Units	Parameter Codes	Monitoring Well Identification							FIELD BLANK	15A NCAC 2L MCL*
			MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	OB-1		
Field Certificate No.			5193	5193	5193	5193	5193	5193	5193	5193	
Lab Certificate No.		00008	248	248	248	248	248	248	248	248	
Field pH	Std. Units	00400	4.9	5.5	5.6	6.2	5.7	5.5			6.5-8.5
Field Spec. Conductance	umho/cm	00095	13	45	35	102	39	38			
Temperature	C	00010	15	15	14	14	14	14			
Top Casing	msl-feet		853.02	853.39	843.19	768.11	787.17	837.67	888.37		
Depth to Water	feet		30.61	39.32	38.27	14.87	26.08	28.53	41.36		
Water Elevation	msl-feet	82545	822.41	814.07	804.92	753.24	761.09	809.14	847.01		
Well Depth	feet		47.20	50.00	49.50	40.20	60.20	36.84	85.40		
Arsenic	mg/l	01002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	0.010
Barium	mg/l	01007	0.016	0.070	0.051	<0.0050	0.027	0.047		<0.0050	2.0
BOD	mg/l	00310	<2.3	<2.3	<2.3	<2.5	<2.5	<2.5			
Cadmium	mg/l	01027	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	0.0050
Chemical Oxygen Demand	mg/l	00340	<50	<50	<50	<50	<50	<50		<50	
Chloride	mg/l	00940	1.6	4.9	8.5	1.5	1.7	2.2		<0.10	250
Chromium	mg/l	01034	<0.0010	0.0018	0.0011	0.014	<0.0010	<0.0010		<0.0010	0.050
Copper	mg/l	01042	<0.0020	<0.0020	<0.0020	<0.0020	0.040	<0.0020		<0.0020	1.0
Fluoride	mg/l	00951	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	2.0
Iron	mg/l	01045	0.25	0.15	0.082	0.38	0.22	0.75		<0.010	0.30
Lab pH	Std. Units	00400	5.3	5.8	5.9	6.6	6.2	5.9			6.5-8.5
Lead	mg/l	01051	<0.0020	<0.0020	<0.0020	<0.0020	0.0035	<0.0020		<0.0020	0.015
Manganese	mg/l	01055	0.025	0.0060	0.0050	0.0080	0.0080	0.0090		<0.0050	0.050
Mercury	mg/l	71900	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	0.0011
Nitrate (as Nitrogen)	mg-N/l	00630	0.16	0.60	<0.020	0.49	1.0	<0.020		<0.020	10
Selenium	mg/l	01147	<0.0020	<0.0020	<0.0020	0.0024	<0.0020	<0.0020		<0.0020	0.050
Silver	mg/l	01077	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	0.018
Sulfate	mg/l	00945	2.7	<0.10	0.17	12	0.13	<0.10		<0.10	250
Total Dissolved Solids	mg/l	03613	26	58	58	120	54	64			500
Total Organic Carbon	mg/l	00680	0.23	0.26	0.24	0.22	0.15	0.26		0.10	
Total Organic Halogen	mg/l		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	
Zinc	mg/l	01092	<0.020	<0.020	<0.020	<0.020	0.024	<0.020		<0.020	2.1

*** Maximum Contaminant Level (MCL)**

Authorized Release By: Allen Stowe **Date:** 12-8-04



OCTOBER 2004 GROUNDWATER ELEVATION CONTOURS

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Duke Energy SM

For Detailed Instructions, see:
http://dewww/essenv/coc/

Duke Power Analytical Laboratory Services
Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(704) 875-5245
Fax: (704) 875-5038

Analytical Laboratory Use Only

LIMS # 04-OCT-0268 | Sample Class GWATER | Samples Originating From NC ✓ SC ___

Logged By My-K | Date & Time 10-13-04 1650 | SAMPLE PROGRAM Ground Water ✓ NPDES ___ Drinking Water ___ UST ___ RCRA Waste ___

Vendor PRISM | Cooler Temp (C) 3.1, 3.0, 2.8, 1.2

PO # MI2625 | [15]Preserv.: 1=HCl 2=H_2SO_4 3=HNO_3 4=Ice 5=None

MR #

[19]Page 1 of 1

DISTRIBUTION
ORIGINAL to LAB, CLIENT COPY to*

Customer must Complete

1) Project Name: BELEWS CRK LANDFILL | 2) Phone No: 875-5257
3) Client: C. Campbell / Allen Stowe | 4) Fax No: 875-5032
5) Business Unit: 20003 | 6) Process: ENVWS | 7) Resp. To: BC00
8) Project ID: | 9) Activity ID: | 10) Mail Code: MGO3A3

Customer to complete all appropriate NON-SHADED areas.

LAB USE ONLY

Customer to complete appropriate columns to right

[11]Lab ID	[12]Chem Desktop No.	[13]Sample Description or ID	[14]Collection Information Date	Time	Signature	[16]Analyses Required [17]Comp.	[18]Grab	NO3, Cl, F, SO4, ALK, LAB pH			TDS 4	BOD 4	Hg 3	MET - (As, Ba, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, K, Se, Ag, Na, Zn) 3	FILTERED MET (As, Ba, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, K, Se, Ag, Na, Zn) 3	TOX 2,4	TOC, COD 2,4	Chlorine (ppm)	[20]Total # of Containers
24035807																			
808		MW-1	10/25/04	1400	[signature]		X	1			1	1	1	1	1	1	1	0	8
809		MW-2	10/25/04	1045	[signature]		X	1			1	1	1	1	1	1	1	0	8
810		MW-3	10/25/04	0910	[signature]		X	1			1	1	1	1	1	1	1	0	8
811		MW-4	10/26/04	0930	[signature]		X	1			1	1	1	1	1	1	1	0	8
812		MW-5	10/26/04	0930	[signature]		X	1			1	1	1	1	1	1	1	0	8
813		MW-6	10/26/04	1055	[signature]		X	1			1	1	1	1	1	1	1	0	8
		FIELD BLANK	10/27/04	1040	[signature]		X	1					1	1		1	1	N/A	6

No Samples mg 3K 11/2/04

Customer to sign & date below

21) Relinquished By: [signature] Date/Time: 10/25/04 1630
Relinquished By: [signature] Date/Time: 10/26/04 1800
Relinquished By: [signature] Date/Time: 10/28/04 0715
23) Seal/Locked By: Date/Time:

Accepted By: [signature] Date/Time: 10/26/04 0930
Accepted By: [signature] Date/Time: 10/27/04 0830
Accepted By: [signature] Date/Time: 10/28/04 0720
Sealed/Lock Opened By: Date/Time:

24) Comments

Customer, important please indicate desired turnaround

[22]Requested Turnaround
14 Days ✓
*7 Days ___
*48 Hr ___
*Other ___
* Add. Cost Will Apply