

Permit No.	Scan Date	DIN
8505	March 26, 2012	16353



RECEIVED
March 23, 2012
Solid Waste Section
Asheville Regional Office

526 South Church Street
Charlotte, NC 28202p

Mailing Address:
Mail Code EC13K
P.O. Box 1006
Charlotte, NC 28201-1006

March 22, 2012

Mr. Larry Frost
North Carolina Department of Environment
and Natural Resources (NCDENR)
Division of Waste Management - Solid Waste Section
Asheville Regional Office
2090 U.S. Highway 70
Swannanoa, North Carolina 28778

Re: Belews Creek Steam Station FGD Landfill
NCDENR Permit # 85-05
Leachate System Modification

Dear Mr. Frost:

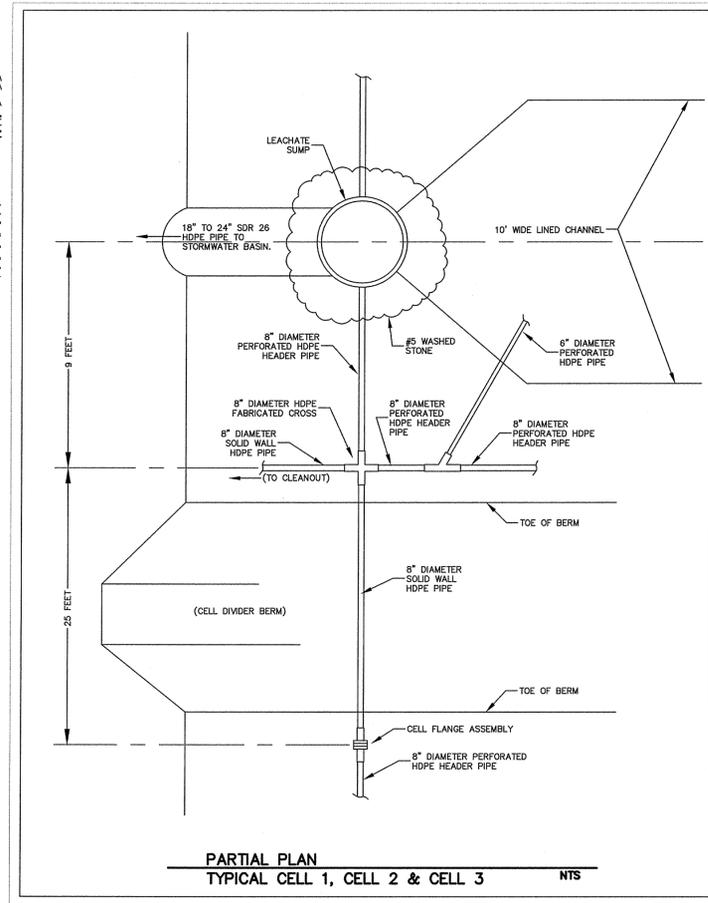
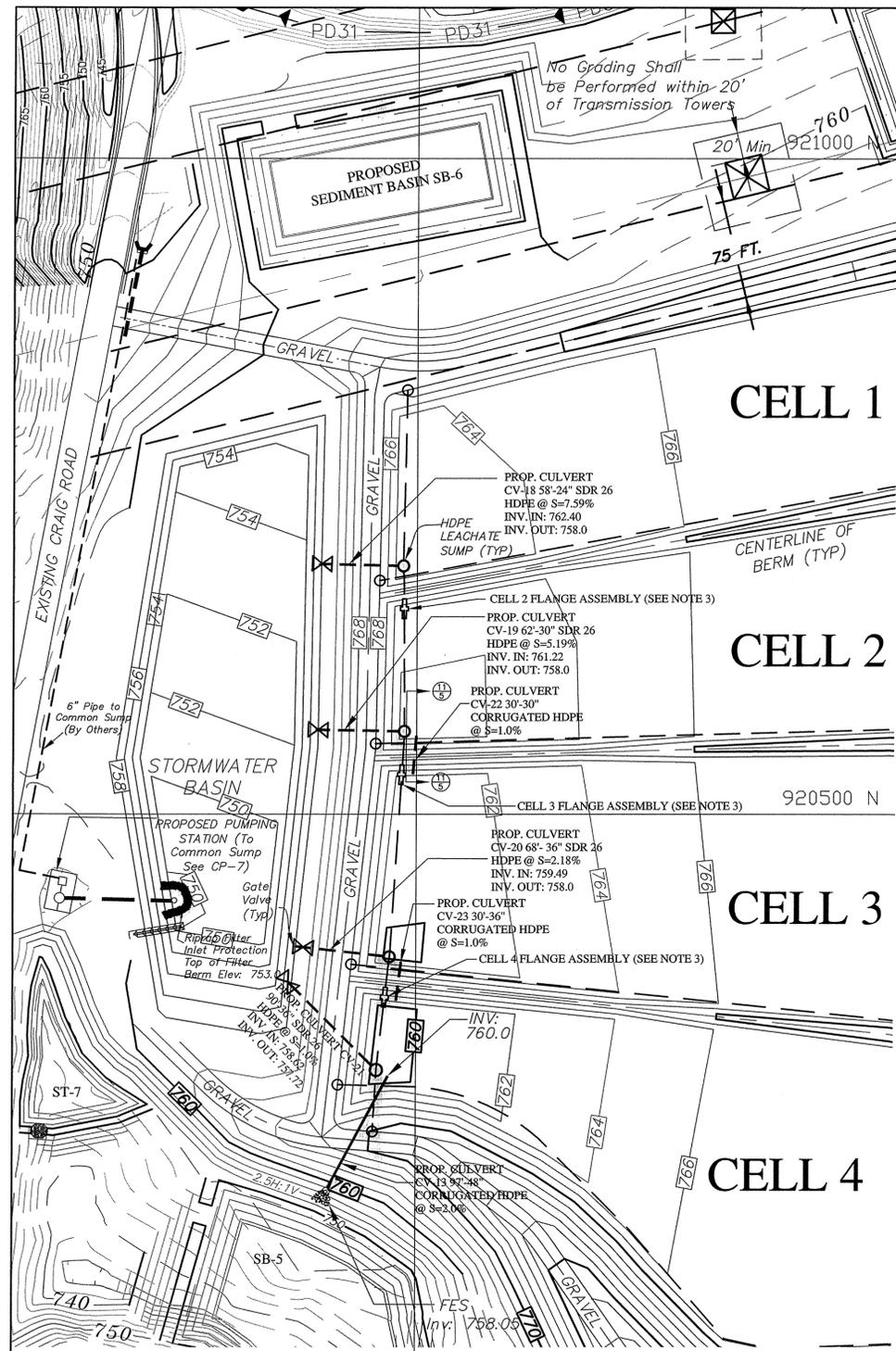
The purpose of this letter is to transmit a revised leachate system drawing for the FGD Landfill (NCDENR Permit #85-05) at the Belews Creek Steam Station in Walnut Cove, NC. As we discussed by telephone last week, Duke desires to modify the leachate system to keep all four of the leachate drain lines open (rather than closing three of them as prescribed in the original design). The attached drawing (OP-5) is the only drawing affected. In addition, we have conducted a review of the Operations Plan and determined that no revision is necessary.

If you have any questions concerning this site, please contact me at (980) 373-3719 or by e-mail at ed.sullivan@duke-energy.com.

Sincerely,

A handwritten signature in cursive script that reads 'D. Edwin M. Sullivan'.

D. Edwin M. Sullivan, P.E.
Waste Management & Remediation



CELL OPERATIONS – STORMWATER PIPING AND LEACHATE COLLECTION AND REMOVAL SYSTEM

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN ORDER TO PROPERLY ROUTE THE STORMWATER AND LEACHATE. THESE OPERATIONS SHALL BE PERFORMED PRIOR TO PLACEMENT OF WASTE IN A CELL.

CELL 1 INSTRUCTIONS:

- 1) Ensure gate valve at downstream end of CV-18 is open.

CELL 2 INSTRUCTIONS:

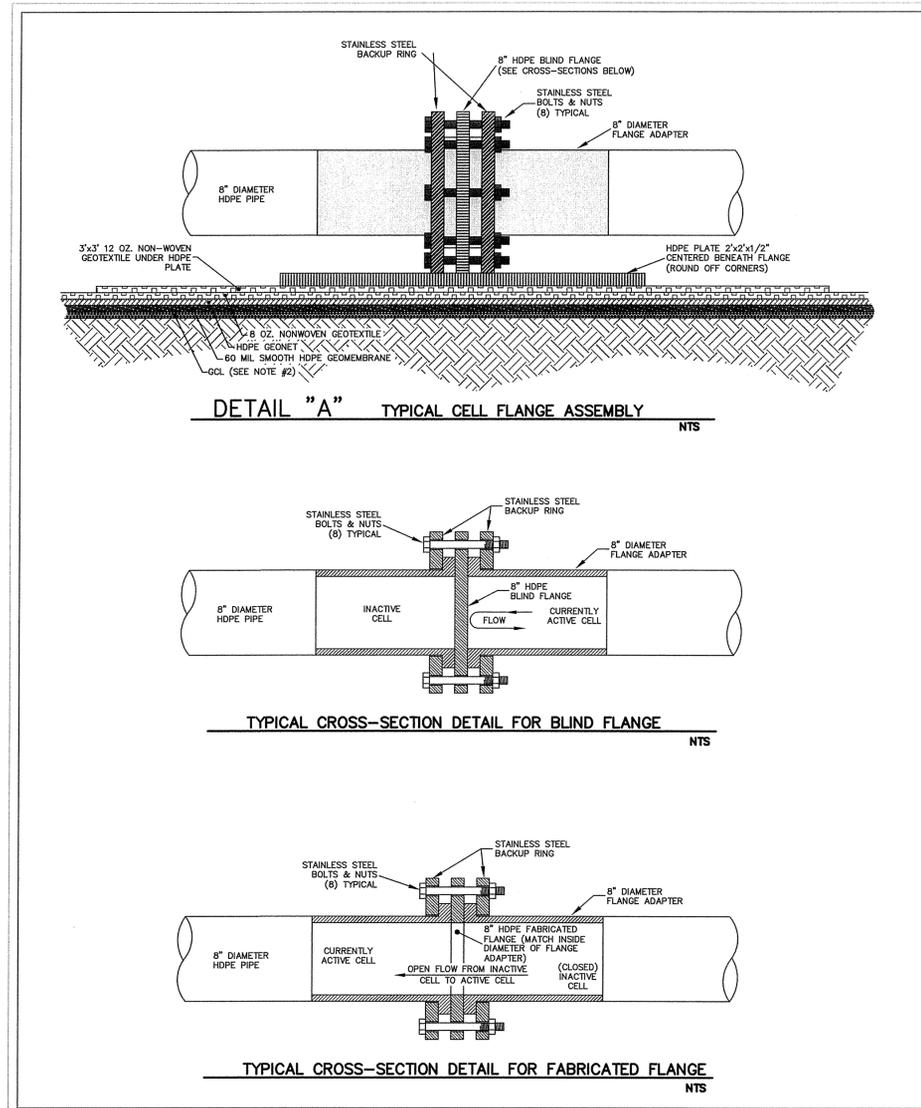
- 1) Ensure gate valve at end of CV-19 is in Open position.
- 2) Abandon CV-22 by grouting 5' from upstream end.
- 3) Remove 8" dia. Blind Flange at Cell 2 Flange Assembly and replace with fabricated 8" HDPE flange (modified to match inside diameter of 8" SDR 17 HDPE pipe). Replace #57 stone and geotextile over flange assembly.
- 4) Convert Cell 1 Active Leachate Collection Sump to Inactive Leachate Collection Sump.

CELL 3 INSTRUCTIONS:

- 1) Ensure gate valve at end of CV-20 is in Open position.
- 2) Abandon CV-23 by grouting 5' from upstream end.
- 3) Remove 8" dia. Blind Flange at Cell 3 Flange Assembly and replace with fabricated 8" HDPE flange (modified to match inside diameter of 8" SDR 17 HDPE pipe). Replace #57 stone and geotextile over flange assembly.
- 4) Convert Cell 2 Active Leachate Collection Sump to Inactive Leachate Collection Sump.

CELL 4 INSTRUCTIONS:

- 1) Ensure gate valve at end of CV-21 is in Open position.
- 2) Abandon CV-13 by grouting 5' from upstream end; install 60 mil HDPE patch over inlet.
- 3) Remove 8" dia. Blind Flange at Cell 4 Flange Assembly and replace with fabricated 8" HDPE flange (modified to match inside diameter of 8" SDR 17 HDPE pipe). Replace #57 stone and geotextile over flange assembly.
- 4) Convert Cell 3 Active Leachate Collection Sump to Inactive Leachate Collection Sump.
- 5) Prior to placement of waste over Cell 4 Leachate Sump, convert to Inactive Leachate Collection Sump.

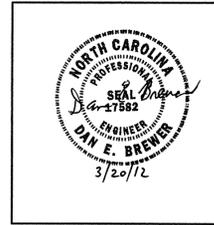


Instructions for Abandonment of Culvert CV-13.

- 1) Cut barrel of pipe at 12 inches from Leachate Sump Riser.
- 2) Install HDPE pipe cap on 12-inch stub to Leachate Sump Riser by double-butt fusion welding.
- 3) Cut and remove HDPE boot around barrel of pipe to expose concrete collar around barrel.
- 4) Cut HDPE pipe at or below concrete surface. Grind end of pipe flush with concrete surface.
- 5) Grout first 5 ft. of barrel.
- 6) Install stitch reinforced GCL (Bentomat DN or equivalent) patch over grouted pipe and concrete collar. Place a layer of granular bentonite over concrete collar and grouted pipe prior to installation of GCL patch.
- 7) Ensure a minimum of 12-inch overlap between GCL patch and the existing GCL on the side slope.
- 8) Install 60 mil textured HDPE patch over GCL patch. Patch must be circular and provide a minimum of 6-inch overlap to existing HDPE geomembrane.
- 9) HDPE patch should be installed and tested in accordance with Technical Specification Section 4.3.7.
- 10) Prepare report documenting process and retain in operating record.

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**BELEWS CREEK STEAM STATION
FGD RESIDUE LANDFILL**

STOKES COUNTY, NORTH CAROLINA

REVISIONS	
1	3/19/12 Rev. penetration abandonment notes
0	4/18/06 Issued for CPA
PROJECT #: 046119 DATE: 4/18/06	
DRAWN BY: DC CHECKED BY: DB	
TITLE	
Cell Operations - Leachate Collection And Removal System	
SHEET	OP-5