

North Carolina Department of Environmental Quality

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

October 30, 2015

Ms. Kimberlee Hutchinson, Environmental Services
Duke Energy Corporation
3195 Pine Hall Road
Belews Creek, North Carolina 27009

Subject: Permit to Construct Application, Technical Review
Duke Energy – Dan River Steam Station, Landfill
Rockingham County, DIN 25031

Dear Ms. Hutchinson:

On August 27, 2015 the Division of Waste Management, Solid Waste Section (Section) received Duke Energy's application for a permit to construct an industrial landfill at the Dan River Steam Station, located in Rockingham County. The application was entitled:

Construction Plan Application, Dan River Landfill, Dan River Steam Station, Eden, North Carolina, Amec Foster Wheeler Project No. 7810140065, August 26, 2015. Prepared for Duke Energy. Prepared by Amec Foster Wheeler. August 2015. DIN 24917.

The Section has performed a technical review of the application and the following concerns are provided for your response;

1. Leachate –
 - a. The application proposes the use of leachate for dust control on the lined landfill but the operations plan does not contain any plan or procedures. Duke Energy should revise the operations Plan to include the use of leachate for dust control on the lined landfill.
 - b. The application proposes the use of the local publicly owned wastewater collection system and treatment works for the disposal of leachate generated at the proposed landfill. Duke Energy must provide the Section copies of all agreements and permits regarding the discharge and disposal of leachate prior to issuance of any permit to operate for the proposed facility.
 - c. Engineering and Facility Plan 7.3.4 Leachate Removal – Additional consideration is needed for leachate management. The application as presented does not include any storage capacity nor a firm number on the discharge rate to the POTW. Some onsite management will be necessary as a contingency for disruption in the POTW service. Alternatively a wastewater NPDES discharge permit could be applied for from Division of Water Resources.
 - d. The application does not contain plans and specifications for leachate storage tanks. The required plans and specifications must be submitted for approval prior to commencement of their construction.

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- e. Operations Plan 2.3 Leachate Collections System (LCS) – More definitive answers to leachate management are required prior to a permit to construct, not the permit to operate as stated in the text.
 - f. Calculations Addressing the Leachate Collection and Removal System Appendix IV-1 Leachate Generation Calculations, does not include the “empty cell” scenario required by North Carolina General Statute NCGS 130A-295.6(h)(2). Appendix IV-1 requires updating to include the required scenario.
2. Engineering and Facility Plan 7.1.1.1 Waste Types and Estimated Disposal Rates – The Plan must specify the source of CCR’s to be placed in the proposed landfill. The Plan as currently written appears to include the possibility of other Duke facilities sending CCR’s to the proposed landfill.
 3. The application proposes five (5) feet of separation from the seasonal high ground water table in the landfill design. The 5 foot separation is allowable; however previous Duke Energy involved projects have specified 5.5 feet of separation. The Section requires an explanation regarding the change in the specification for this project.
 4. The application refers to the potential need for underdrains. Should the need for underdrains arise, Duke Energy must present plans and specifications for approval prior to their construction as this may constitute a permit modification. Duke Energy should also be aware that discharges from underdrains must be monitored and the facility’s water quality monitoring plan will require revision as well.
 5. The application does not contain the required legal property description for the proposed facility. Duke Energy must provide copies of the pertinent deed with Rockingham County Register of Deeds book and page numbers prior to issuance of the permit to construct.
 6. The Section requires a copy of Duke Energy’s contingency plan for spill prevention/emergency action for the transportation of coal ash off the Sutton property. Likewise, the Section requires notification from Duke Energy when coal ash begins to be moved off site, including mode of transportation and ultimate destination.
 7. Appendix II-1 Landfill Airspace Calculation 1.0 Discussion – Substantive changes to the permitted airspace, ie greater than or equal to 10% of the permitted capacity are a substantial change and require a permit modification or amendment.
 8. Operations Plan 2.1.6.3 Vacuum Truck Waste – Incidental waste from Vacuum truck can stay in the landfill but would be subject to daily cover, or other measures to reduce vectors and blowing trash. Its removal is a voluntary action and may be removed from the plan.
 9. Operations Plan 2.1.8.2 Interim Cover- Interim cover is required on areas where waste placement will be inactive for 12 months or more.
 10. In accordance with 15A NCAC 13B .1633(b), four independent samples from each background and downgradient groundwater monitoring well shall be collected and analyzed for the Appendix I constituents in addition to mercury, sulfate and total dissolved solids during the first semi-annual sampling event. At least one sample from each groundwater monitoring well shall be sampled prior to waste placement.

October 30, 2015

11. In accordance with the EPA CCR Rule 257.94(b), eight independent samples for each background well must be collected and analyzed for constituents listed in Appendix III and IV of Part 257 during the first six months of sampling. There is no mention of this in the Water Quality Monitoring Plan. The Section requires an explanation regarding the exclusion of the requirement.

12. The application contains the required financial assurance cost estimates for closure and post-closure activities. Prior to issuance of the permit to operate the proposed facility the required financial assurance mechanism must be established.

This letter in no way restricts the ability of the Section to request additional information or clarification. Should you have any questions regarding this matter contact Mr. Larry Frost at (828) 296-4704 larry.frost@ncdenr.gov or Mrs. Elizabeth Werner at (919) 707-8253 elizabeth.werner@ncdenr.gov.

Sincerely,

Edward F. Mussler, III, P.E., Supervisor
Permitting Branch, Solid Waste Section
Division of Waste Management, NCDENR

ec: Cedric Rulh – Amec Foster Wheeler
Ellen Lorscheider – SWS/RCO
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