



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

Solid Waste Section

October 08, 2010

Mr. Tim Rogers, Solid Waste Director
460 B South Landfill Road
Dudley, NC 28333

Re: Additional Comments on Permit Application for Continued Operation (Application)
Wayne County Construction and Demolition Debris Landfill (C&DLF)
Wayne County, North Carolina
Permit No. 96-01, Document ID No. (Doc ID) 11748

Dear Mr. Rogers:

On September 17, 2010, the Division of Waste Management (DWM), Solid Waste Section received the letter dated September 9, 2010 and the revised Application (Doc ID 11747), submitted by Municipal Engineering Services Co., Inc. (MESCO), on behalf of Wayne County, to respond the DWM's comments (Doc ID 11170) dated July 19, 2010. A hydrogeologist with the Solid Waste Section will review the water quality monitoring plan and hydro-geologic data of the landfill facility; upon completion of the review, he or she may request any additional information in a separate letter. I conducted a review on the engineering portions of the revised Application. Based on the technical review, additional comments on the new submittal are stated below, and your responses to the following comments will expedite the review of the Application:

Section 1 – Operation Plan

1. (Section 1.1) The descriptions of the facility history are incomplete. Please address the following concerns: (refer the "Introduction" section of the approved Corrective Action Plan for the facility)
 - i. The closed unlined MSWLF consists of two units that have been constructed and operated at different periods. Please describe the date of each unit started receiving MSW and the date of closure of each unit.
 - ii. Provide the descriptions of the cover system of each closed MSW unit.
 - iii. Provide the in-place MSW waste volume or tonnage of the each closed unlined MSWLF from the date starting receiving wastes (1981?) to the closure date.
2. (Section 1.2.1, Paragraph h.) Is there a miscellaneous waste unit -"Yard Waste Area" located within the permit landfill property? The "Yard Waste Area" is not shown on any Engineering/Operation drawings. Additionally, the Paragraph l in this subsection reports that

all recyclable material will be processed and treated at the off-site facilities contracted with Wayne County. Please clarify the inconsistent information.

3. To respond the Comment No. 2, if the “Yard Waste Area” is operating inside the landfill property, then please address the following concerns:
 - i. Please describe the facility size (how many acres) and the maximum volume in cubic yards will be allowed to store at the unit at any time.
 - ii. Please define the classification of the unit and operation requirements according to Rules .1400 et seq.
 - iii. Please show the location of Yard Waste Area on all related drawings.
4. (Section 1.2.2) Please propose the cover thickness when the condition described in Subparagraph (b) is encountered.
5. (Section 1.2.8) On August 3, 2010, the Solid Waste Section received the “Impounded Water and Leachate Removal Plan” (the Plan) which was submitted by MESCO, on behalf of Wayne County to this office via an e-mail. Several concerns on the Plan are stated below:
 - i. The actions described in the plan to prevent or mitigate the recurrence of the leachate breakouts at the C&D unit must be incorporated to the Paragraph e. of Section 1.2.8. Additionally, the records of actions must be placed in the operating record. Please add the requirements to the Operations Plan.
 - ii. Provide figures to show the details, profiles, and plan view of the installed well point and perforated drainage lines and the swale, which are located in the southwest corner of the landfill and the north center of the landfill, respectively. The figure needs to provide the information including, but not limited to, the swale configurations and the profile relative to C&D wastes and closed MSW landfill, the well point completion log (the well depth - depth in the C&D waste and depth in the MSW), the penetration depth of the closed cover of the MSW unit, the installed well material and thickness (SDR or schedule), and the layout, size and length perforated drainage lines.
 - iii. Wayne County constructed a swale to collect leachate flowing in the interfaces between the C&D wastes and the closure cover of the MSW unit which is overlain by C&D unit. Because this swale will perpetually be placed in the landfill, although it has be or will be filled with C&D wastes, Wayne County must implement the requirements stated in Rule .1626(9)(a)(ii) and the Source Control Measures in the Section 2.3 of the approved Corrective Action Plan for remediation of the impacted groundwater underneath the Wayne County landfill facility; therefore, leachate flowing into the swale shall not be drained into or percolated downward to the closed MSW unit. What provisions or measures are there to ensure that the constructed swale will not become a downward drainage/percolation path? How is the swale constructed? Has the swale been lined by a durable impermeable material such as HDPE liner? Please clarify.
6. (Section 1.3, on Page 11) Please address the following concerns:
 - i. Please add the constituent tetrahydrofuran (THF) to the constituents lists. A memorandum was sent out on June 15, 2010 from the NC Solid Waste Section to every

- C&D landfill owner and operator in North Carolina requiring groundwater and surface water samples collected after January 1, 2011 to be analyzed for THF.
- ii. (2nd sentence, 2nd paragraph) Please add “Appendix II” right after the Appendix I in the sentence – “In addition to the Appendix I constituents monitoring well....”
 - iii. What the status of the monitoring wells MW-9, MW-10, and MW-11, which are installed for the Assessment Monitoring Program? If the wells are properly abandoned please provide the well abandonment records (GW-30 form); otherwise, please describe the functions or roles that these three wells will be played to the site wide monitoring program (such as water table measurements, the field MNA index/ parameter measurements).
7. The DWM has significant concerns regarding the responses to Comment 13 dated July 19, 2010. Wayne County must address the following concerns associated with the constructed landfill gas collection and control system (LFGCCs) coordination with the operations of the C&DLF:
- i. Please describe the condensate/leachate handling and management plan including, but not limited to, condensate/leachate hauling and disposal, sump/lockout inspection, spill prevention. Pursuant to .1626(9)(a)(ii), gas condensate derived from the closed MSWLF unit can not be placed in the unit because the unit is designed without a composite liner.
 - ii. The attached Air Quality Permit issued by the NC Division of Air Quality is expired on April 10, 2010. Please provide the valid Air Quality Permit.
 - iii. Because the LFGCCs is operated during the active-life span of the C&DLF, the Operations Plan needs to describe the routine inspection, repair, and maintenance requirements for the LFGCCs, the LFGCCs operator qualification and training (such as SWANA’s “Landfill Gas System Operation and Maintenance” training courses), and fire prevention.
 - iv. Please describe how the operation of LFGCCs is coordinated with daily operations of C&DLF such as prevention measures from gas wells being damaged by operating equipment, which may result in air intrusion to the LFGCCs and in landfill fires; the construction plan of extending the gas well casings and header/lateral piping to coordinate with C&D landfill vertical expansions.

Section 2 – Closure Plan

8. (Section 2.4) Please confirm the thickness of the Erosive Layer. The Section 2.4 proposes the thickness of the Erosive Layer is 2 feet which is not consistent with the data in the cost estimates.
9. (Section 2.5) Please address the following concerns:
 - i. The passive vent is normally installed at a frequency of 1 vent per acre, so 40 vents are required for the 40-acre closed areas. However, the cost estimate for closure indicates that nine (9) vents will be installed over 40-acre final cover. Please explain why this number of vents is acceptable.

- ii. If County intends to convert the existing 22 landfill gas extraction wells into passive gas vents in the post-closure period as shown in the post-closure cost estimates, please clarify this intention in the Section 2.5.
 - iii. Even though the proposal in item ii is acceptable, the number of new passive vents needs to be 18, not 9, plus the 22 converted extraction wells to meet the frequency criterion of 1 vent per acre. Please correct the cost estimates for the closure activities in Section 2.7.
10. (Section 2.6) The CQA report must be certified, signed, dated, and sealed by a professional engineer registered in the State of North Carolina. Please add this requirement to this subsection.

Appendix A - Figures

- i. (Drawing No. CD1/ Sheet 3 of 9) Please add the wells MW-9, MW-10, and MW-11 on the figure.
- ii. (Drawing No. CL3/ Sheet 5 of 6) In the "Permanent Methane Trench Detail" the stone size shall be NC DOT # 5, which is consistent with that described in the Section 2.5 of the Closure Plan. Please make necessary correction.

Appendix E – Facility Plan

11. (General , on Page 46) Please address the following concerns:
- i. The introduction of facility history is incomplete (see Comment 1).
 - ii. Is there a drainage layer in the proposed final cover system? The descriptions of the final cover system in this section are inconsistent with those in the Closure Plan and "Cap Cover Detail" on Drawing No. CL3/ Sheet 5 of 6. Please clarify.
 - iii. The discrepant information of "Years of Life" for Phases 5 and 6 is presented in this section (5.05 years & 5.32 years in the Facility Plan) and on the Drawings No. F5/ Sheet 7 of 9 and No. F6/ Sheet 8 of 9 (5.23 years & 5.14 years). Please clarify.
12. Please address the concerns associated with the attached slope stability analysis:
- i. The factor safety resulting from the slope stability analysis under the static condition is 1.4, which is less than the factor safety 1.5, the minimum value can be normally accepted in the waste industries and by the regulatory agencies. Please explain why the rectified side slopes (3 to 1) is acceptable?
 - ii. Has the slope stability analysis considered the influence of the groundwater table location? Please clarify.
 - iii. Provide the drawing on which the critical slope is selected for the slope analysis.
 - iv. Please confirm the maximum waste height of the landfill (both C&D unit and its underlain MSW unit) is 150 feet above the ground surface. Based on the contours on the Drawing No. F7/ Sheet 9 of 9 and considering the worst scenario, the ground elevation is 130 feet msl, and the final grade of the landfill is at elevation of 318 feet msl. The maximum waste height of the landfill is 188 feet. Please re-run the slope stability under this waste loading condition to see if the 3 (horizontal) to 1 (vertical) can safely stand.

- v. Should the revision of the side slope or the maximum waste height result in a factor safety that equals to or greater than 1.5, please make sure the changes have been properly reflected in the incrementally phased developments and gross capacity for each phase stated in the Facility Plan.

13. Please provide information of the facility property deed document, which has not been placed in Appendix A as described in the September 9 2010 response letter to the DWM Comment No. 35. This information will be incorporated to the facility operation permit condition as below.

Property	Book	Page	Acreage	Grantor	Grantee
Total Site Acreage:					

Please timely respond the above-referenced comments and submit the Solid Waste Section a revised portions of the Application (one hard copy and an electronic copy), which incorporates the requested information.

Additionally, the Solid Waste Section has not received the "Compliance Review Form" which has been sent to you on January 15, 2009 and August 3, 2010. I am enclosing the January 15 2009 letter and the "Compliance Review Form" for you to complete. Please be advised that under N.C.G.S. 130A-294(b)(3), the permit decision of this C&DLF will not be determined until the compliance history review is completed by this office. The Solid Waste Section appreciates your efforts and cooperation in this matter. If you have any permitting questions, please contact me at (919) 508- 8507.

Sincerely,



Ming-Tai Chao, P.E.
Environmental Engineer II
Permitting Branch, Solid Waste Section

Enclosure: Compliance History Review

cc:

Wayne Sullivan, MESCO
Donna Wilson, DWM
Wes Hare, DWM
Zinith Barbee, DWM

Ed Mussler, Permitting Branch Supervisor
Dennis Shackelford, DWM
Donald Herndon, DWM
Central File



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

January 15, 2009

Tim Rogers, Solid Waste Director
Wayne County
460 B South Landfill Road
Dudley, NC 28333

Re: Compliance History Review, Wayne County C&D Landfill, Permit #96-01

Dear Mr. Rogers:

The agency received your application on June 30, 2006, for the amendment of Permit #96-01. Under N.C.G.S. § 130A-294 (b2)(2), the agency will be conducting a review to determine your past compliance with federal and state laws, regulations, and rules for the protection of the environment. Enclosed is a preliminary questionnaire for you to complete. Additional follow-up information may be requested. Please be advised that under subsection N.C.G.S. § 130A-294(b3), the agency is not required to review your application until you have satisfied the agency that you have met the requirements of subsection (b2). The agency will also conduct a compliance review under N.C.G.S. § 130A-309.06(b), which pertains to the applicant's violations of statutes, rules, orders, or permit terms or conditions relating to any solid waste management facility in this State.

Sincerely,

Donald Herndon
Compliance Officer
Solid Waste Section

cc: Paul Crissman, Solid Waste Section Chief
Ed Mussler, Permitting Branch Head
Mark Poindexter, Field Operations Branch Head
Agyemang Adu-Poko, Permitting Engineer
Dennis Shackelford, Eastern District Supervisor
Ben Barnes, Environmental Senior Specialist
Central File



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

Compliance Review

The applicant, Wayne County, is requested to provide the following information. For purposes of the questions below, the phrase "within the past five years," means five years prior to the date of this request.

A. The following question applies to all the applicant's solid waste management activities.

1. With respect to the applicant's solid waste management activities, check whether the applicant has been a party to or received any of the following within the past five years:

- a. Compliance Order with a penalty
- b. Compliance order without a penalty
- c. Order to cease operating
- d. Order to abate public health nuisance [130A-19];
- e. Order to abate imminent hazard [130A-20];
- f. Order to abate nuisance scrap tire site [130A-309.60]).
- g. Administrative Consent Agreement or Settlement Agreement (e.g., may involve revised permit conditions)
- h. Revocation or suspension of a permit
- i. Denial of a permit application for a solid waste management facility
- j. Penalty Collection lawsuit (lawsuit to collect an unpaid penalty)
- k. Confession of Judgment (for the payment and collection of an unpaid penalty or other monies owed to a special account, such as the scrap tire account or white goods account)
- l. Injunctive relief or law suit for injunctive relief
- m. Lawsuit for forfeiture of gain (N.C.G.S. §130A-28)
- n. Lawsuit for recovery of money (N.C.G.S. §130A-27)
- o. State Criminal action- misdemeanor or felony (N.C.G.S. 130A-25; 130A-26.2; 14-399]
- p. Federal criminal action-misdemeanor or felony

B. **[Note: Questions 2 and 3 cover any type of environmental violation.]**

Check all applicable boxes.

Within the past five years:

2. The applicant has been convicted of, or pled guilty or no contest to, a criminal violation of a statute, regulation, or rule for the protection of the environment.

- a. in state court
- b. in federal court
- c. not applicable

3. A monetary penalty (whether denominated as a civil penalty, an administrative penalty, a judicial penalty, or by some other designation), has been assessed against the applicant for the violation of a state or federal statute, rule, or regulation for the protection of the environment.
- a. in a state forum
 - b. in a federal forum
 - c. not applicable

[Note: Questions 4 and 5 will encompass those situations where a solid waste management facility operated in violation of solid waste management statutes/regulations, as well as groundwater, surface water, water quality, and air quality statutes/regulations, among others.]

4. With respect to any solid waste management facility owned or operated by the applicant, a lawsuit for injunctive relief has been filed against the applicant for the violation of a statute, regulation or rule for the protection of the environment.
- a. in state court
 - b. in federal court
 - c. not applicable
5. With respect to any solid waste management facility owned or operated by the applicant, a judgment, or consent judgment, for injunctive relief has been entered against the applicant for the violation of any statute, regulation or rule for the protection of the environment.
- a. in state court
 - b. in federal court
 - c. not applicable
6. A permit for a solid waste management facility owned or operated by the applicant has been revoked or suspended.
- a. in a state forum
 - b. in a federal forum
 - c. not applicable
7. The applicant submitted a permit application for the proposed ownership or operation of a solid waste management facility that has been denied.
- a. in a state forum
 - b. in a federal forum
 - c. not applicable
8. A governmental agency or unit has notified the applicant in writing that the applicant has operated or is operating a solid waste management facility without the requisite permit.

- a. yes
- b. not applicable

9. A governmental agency or unit has notified the applicant in writing that the applicant has operated or is operating a solid waste management facility outside the scope of the permitted activity.

- a. yes
- b. not applicable

For each question that has been marked with an answer other than “not applicable,” please provide a written, detailed explanation, including how or if the matter has been resolved.

The applicant may be requested to provide a written, sworn statement certifying the status of the matter. Possible certification statements are as follows:

The applicant is now in compliance with all civil and criminal penalty provisions of any administrative order, consent agreement, settlement agreement, or court order.

The applicant is in compliance with the payment schedule for any assessed administrative penalties.

The applicant has filed and is presently pursuing, in good faith, a direct administrative or judicial appeal to contest the validity of the violation.

If the applicant certifies that the applicant is now in compliance, the applicant may be asked to submit proof from the agency having jurisdiction over the violation that the applicant is in the process of correcting or has corrected the violation to the satisfaction of the agency.

The applicant will be asked to certify the truth and accuracy of the answers provided to these compliance review questions.

I, _____, hereby certify on behalf of Wayne County, as Solid Waste Director, that I have read the foregoing answers provided to the Compliance Review, that the information and answers contained in the responses to the Compliance review are true and accurate based on my own knowledge and my review of documents and that I have not omitted any material information or falsified any information contained in the foregoing answers. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Signature/printed name and title too

State of _____
County of _____

Sworn and subscribed to before me this the _____ day of _____, 200_.

notary public

My Commission expires:
SEAL