

**MUNICIPAL ENGINEERING SERVICES CO., P.A.**

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**TRANSMITTAL**

TO **Ed Mussler**  
**NCDENR-Solid Waste Section**  
**401 Oberlin Road**  
**Raleigh, NC 27605**

DATE	6/9/09	PROJ. NO.	G07058
ATTENTION	Mr. Mussler		
RE:	<b>Wayne County Landfill</b>		
	<b>Application for Continued Operation</b>		

Please find enclosed:

COPIES	DATE	NO.	DESCRIPTION
2	6/9/09	book	Revised Application Book

If you have any questions or need any additional info please give us a call.

TRANSMITTED BY: Lisa Hampton for Wayne Sullivan , Garner Office

Fac/Perm/Co ID #	Date	Doc ID#
9601	6/19/09	DIN 7803



*Cheryl Mc Carder*

# Municipal Services



# Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS

SUBSURFACE UTILITY ENGINEERING (SUE)

June 8, 2009

Agyemang Adu-Poku  
Environmental Engineer II  
NCDENR – Solid Waste Section  
401 Oberlin Rd.  
Raleigh, NC 27605

Re: Application for Permit to Continue Operation  
Wayne County C & D Landfill, Permit No. 9601-CDLF-1997

Dear Mr. Adu-Poku:

In response to your December 23, 2008 letter, we submit the following:

### Cover Sheet

- ***In accordance with 15A NCAC 13B .0533(b), the cover sheet of all applications should have the following critical components: project title, location, applicant's name and address, engineer's name, address, signature, date of signature. Cover page needs to be revised.***

The cover sheet has been revised in the plans and the text.

- ***A statement defining the purpose of the application signed and dated by the applicant is also needed.***

The statement of purpose signed by the applicant will be forwarded as soon as we receive it from the owner.

### Operation Plan

- 1. The operation plan proposes a program at the landfill for detecting and preventing the disposal of hazardous and liquid wastes. Explain the details of the proposed program. And what action will the County take if hazardous waste delivery is detected?***

The text has been revised in Section 1.1 paragraph 5.

- 2. What cover material will the County use in the cap system and where is the material coming from? What volume of material is currently available on-site?***

The text has been revised in Section 1.2 (2)(b).

- 3. Please provide an updated engineering plan. Reference slopes and drawings in the engineering plan. Indicate slopes on the drawings.***

The slopes have been added to the drawings.



**4. An updated CQA plan is needed. Reference the drawings wherever necessary to link the drawings to the CQA plan.**

A Construction Quality Assurance plan is not needed in the Operation Plan. This has been addressed in the text of the Closure Plan, Section 2.1.

**Closure Plan**

**1. Section 2.1, paragraph one states that the County will cap landfill within 180 days after the final receipt of solid waste, however, paragraph two of the same section states that the County shall begin closure activities no later than 30 days after the date on which the landfill receives the final waste. Please clarify the two statements.**

As stated, the cap closure will begin within 30 days of the final waste received and will be completed within 180 days of final waste received.

**2. The plan states 33 acres as the largest surface area that will need closure but 40 acres was used in the closure cost estimate. Please clarify. An estimate of the maximum inventory of wastes on-site over the active life of the landfill is needed.**

The text has been revised in Section 2.1, to show 40 acres as largest area to be closed. The estimate of maximum inventory of wastes has also been added to this section.

**3. Is there sufficient volume of soil from the site borrow pit for constructing final soil cover? If not, has an off-site soil borrow source been identified? Please clarify. The plan proposed the use of Wyoming bentonite as an erosion protection layer. The plan should demonstrate how vegetation will be grown on the bentonite.**

The text has been revised in Section 1.2 (2)(b) to address available soil cover. "Wyoming bentonite or an approved equivalent may be blended with the soil to lower the soil's permeability.", this statement is found in the 18" Cohesive Soil Cap section, not in the 18" erosive layer. Vegetation will be established in the erosive layer not the cohesive soil cap, see detail shown on Closure drawings sheet 4 of 4.

**4. What are the post-settlement surface slopes and side slopes of the proposed final soil cap system? The plan should demonstrate the post-settlement slope of the proposed soil cover stability and safety during post-closure period. Please provide slope stability analysis data to support the final cap design. If the above requested data are not available an alternative soil cap system consisting of geosynthetic material and earthen material may be warranted in the Closure Plan.**

ECS, Limited has done a slope stability analysis. This report has been included in Appendix A.

**5. The Rule .0543(b)(1) requires a closure plan to contain a CQA plan which must be prepared in accordance with Rule .0541(b). Please revise the Closure Plan.**

The text has been revised in Section 2.1 to address construction quality assurance.

**6. Does the cost estimate item 2.6 for closure factor in the following cost items:**

- Survey, as-builts drawings
- Recordation/notation fees
- Machine/equipment costs
- Fuel costs
- Construction administrative fee
- 10% contingency reserve
- Surface preparation
- Construction document and bidding
- CQA field monitoring and lab testing
- CQA reporting and certification

The text has been revised in Section 2.6.

**Post-Closure Plan**

**1. Indicate a grass mowing frequency in the Post-Closure Plan. The cost estimate for post-closure care did not include costs for maintaining the vegetation by mowing, re-sod, and fertilization. Please revise the plan accordingly.**

The text has been revised in Section 3.1.

**2. Amend the plan to include a statement that post-closure use of the property must not disturb the integrity of the cap system, base line system or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the rules.**

The text has been revised in Section 3.1.

**3. Post-closure care must include maintenance of gates, fencing, access roads, and signs. Please revise the plan accordingly.**

The text has been revised in Section 3.1.

**4. Does the cost estimate item 3.2 for post-closure factor in the following cost items:**

- Mowing
- Revegetation
- Administrative and record keeping
- 10% contingency reserve
- Construction document and bidding
- Access road, fence, sign and gate maintenance

The text has been revised in Section 3.2.

**Electronic Copy**

**Please submit electronic copies of the application and all drawings.**

A CD has been included with an electronic copy of the application and drawings.

Please find enclosed two (2) copies of the revised plans, text and a CD containing the electronic copy. If you have any questions or need additional information please don't hesitate to give us a call.

Sincerely,  
MUNICIPAL ENGINEERING SERVICES CO., PA

  
Lisa C. Hampton  
Designer

LCH:lch  
Enclosures  
cc: Tim Rogers, Solid Waste Director