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ISSUED  
April 13, 2011 via an e-mail  
Solid Waste Section  
Raleigh Central Office

## Chao, Ming-tai

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**From:** Chao, Ming-tai  
**Sent:** Wednesday, April 13, 2011 4:06 PM  
**To:** 'Tim.Rogers@waynegov.com'  
**Cc:** 'Joan C. Snider'; 'Wayne Sullivan'; Hare, Wes; Mussler, Ed; Herndon, Donald  
**Subject:** Additional Comments on PTC -Phase 3, Wayne County MSWLF, 96-06  
**Attachments:** ADC.Guidance.Draft.pdf; Compliance History Review-Wayne County.pdf

Dear Mr. Rogers:

I have completed the another round review of the engineering portions of the permit application for Phase 3. Below are the questions or comments that need your inputs:

### Facility Plan

1. (Section 1.1.2) This Section describes that the facility is open 4 days per week, but according to the Wayne County website, the landfill opens for public four and half days per week, closed on Sunday & Wednesday. Please provide the correct info of operation hours and days in Section 1.1.2..
2. (Section 1.1.2) The waste disposal rate stated in this Section is 402 ton per day (tpd) which is less than the existing permit-approved 450 tpd. Does the County intend to reduce the waste disposal rate? Additionally, the annual disposal rate and tpd are normally calculated from the projected air space of the 5-year phase (cy) converting to tonnage according the historical compaction effort & density and operation day per year. So please provide me the final annual disposal tonnage and the tonnage per day for the next 5 years.
3. The Section 1.1.1 describes the facility has a permitted total capacity of 5,004,195 cy. However, the total capacity in Section 1.2 is 5,365,695 cy (including 3,825,935 cy from Phase 2 (unused) through Phase 8 plus the maximum inventory waste of 1,539,760 cy from Phases 1 &2). I believed the capacity of 5,004,195 cy, approved in 1997 is the air space of the landfill excluding volume consists of the final cover system because the 1600 Rule does not require report the total gross capacity (later 500 Rule requires the total gross capacity & so does the DWM's annual report). The way to straight out this matter, I suggest that "Soli needed for closure" of 398,066 cy in Section 1.2 is replaced with the value of 361,500 cy, the difference between 5,365,695 cy & 5,004,195 cy. Additionally, to be consistent through the Facility Plan, in Section 1.1.1, please rephrase the last sentence in the first paragraph that "The facility has a permitted air space of 5,004,195 cubic yards. The approved gross capacity that is the measured volume between the top of the protective cover and the top of final cover is 5,365,695 cubic yards". If you agree with my suggestion please revise these Sections accordingly.

### Operations Plan

4. The Division Audit Report dated January 25, 2011 indicated that ponding water and leachate outbreaks occurred at the landfill. To properly manage and control the runoff and prevent from recurrence of the similar situation in the future, County must modify the Operations Plan to address the provisions for inspecting, preventing, and repairing leachate breakout on the side slopes and standing water at landfill.
5. The Division Audit Report dated January 25, 2011 indicated that tarps are being used as an alternative daily cover (ADC). I went through the DWM file system and couldn't locate any application that has been submitted by County to request for using tarp as an ADC. I can't find approval documents including existing permit to allow County use tarp as an ADC in lieu of 6-inch earthen material, either. Therefore, please provide me the document of approving use of the trap as an ADC issued by DWM; **otherwise, Wayne County must cease applying ADC immediately and use earthen material as daily**

cover according to Rule 15A NCAC 13B .1626(2) and the existing permit condition. If County wants to use an ADC, please submit an application according to the attached guidance document and modify the Operations Plan.

In addition to the responses to the above-mentioned comments, County must complete the following conditions (It is advised that the issuance of the permit [PTO- Phase 1 & 2 /PTC- Phase 3] for Wayne County MSWLF is contingent on the DWM approval of these conditions):

1. The approved Compliance History Review. The permit shall not be issued to County until the compliance review is completed and approved by DWM. **The questionnaire form has been sent over to your attention twice last year.** Up to now the Solid Waste Section has not received the completed form yet. Again, I am attaching the form in this e-mail for you to complete the processes. This process will cover both landfill facilities – C&DLF (96-01) & MSWLF (96-06). Please complete the form ASAP, if you have any question please contact Mr. Donald Herndon, the Compliance Officer at 919-508-8502 or ask Mr. Wayne Sullivan for assistance.
2. The approved financial assurance (FA). Pursuant to NCGS 130A-295.2(h), effective August 1, 2009, Wayne County must also provide financial assurance sufficient to cover a minimum required amount of three million dollars (\$3,000,000.00) for potential assessment and corrective action at the MSWLF facility and costs of closure and post-closure care at Phases 1 & 2 areas. The Solid Waste Section agrees to allow environmental monitoring costs and maintenance costs being removed out of post-closure costs and rolling into costs for potential assessment and corrective action. The approaches for cost adjustments and final costs for closure, post-closure, and potential assessment and corrective action are shown below:

The process for recalculating Post Closure Costs is pretty straight forward. The costs that can be transferred to the \$3 million are ground water and surface water monitoring, landfill gas monitoring and the maintenance of these monitoring networks.

In the case of Wayne County:

2003 Post Closure Estimates = \$1,291,600

(subtract)

2003 Groundwater and Surface water Monitoring Estimate = \$705,600

2003 Methane Gas Monitoring Estimate = \$72,000

2003 Monitoring Network Maintenance = \$60,000

(equals)

2003 Reduced Post Closure Cost Estimates = \$454,000

Post Closure Costs adjusted for inflation (2% each year) for 2011 dollars = \$532,000

2003 Closure Costs = 4,060,466

Closure Costs adjusted for inflation (2% each year) for 2011 dollars = \$4,757,000

2011 Potential Assessment and Corrective Action = \$3,000,000

Total Financial Assurance in 2011 dollars = \$8,289,000

If you have any questions of the above-mentioned matters, please feel free to contact me.

Best regards,

Ming-Tai Chao, P.E.  
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