

## Chao, Ming-tai

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**From:** Chao, Ming-tai  
**Sent:** Friday, September 09, 2016 2:07 PM  
**To:** 'BSmith@paramounte-eng.com'  
**Cc:** Hare, Wes; 'lynn@ecandg.com'  
**Subject:** Everett's LCIDLF, P1303, DIN 26720

Dear Mr. Smith:

The Solid Waste Section (SWS) completed a review of the revised Permit Application (DIN 26704) and has two comments stated below:

1. (Operations Plan, Waste Disposal Plan, on Page 2 of 6) Pursuant to the Solid Waste Management Rules (Rule) 15A NCAC 13B .0566(5) & (7), the soil cap, at minimum of one foot thickness, shall be installed over the disposal area at the landfill no later than 120 calendar days [not one year, proposed in Item (t)] after completion of any phase of disposal operations. The soil cap must be revegetated at the specified time frame as well. The Item (t) must be revised accordingly.
2. (Drawing Nos. LCID-2 & LCID-3) A 24-inch-diameter aluminum pipe is added to the revised plan drawings to drain the surface runoff in the ditch along the east side of the landfill into the stormwater holding area, which is located on the west side of the landfill. And this transverse aluminum pipe is to be installed underneath the landfill. The SWS has strong concerns of this design because the buried pipe, if it is damaged or leaks for any reason, will potentially provide a least-resistant path for leachate migration to the on-site surface-water body (stormwater holding area) and consequently to the groundwater underneath the landfill. (Don't forget what causes the coal ash spill into the Dan River.) Leachate is defined as any liquid, including any suspended components in liquid, that has percolated through or drained from solid waste according to Rule 15A NCAC 13B .0101(24). Please noted that the landfill will be perpetually located at the property, but the pipe has a limited service life. Mr. Everett who owns and operates this landfill will be legally and financially responsible for any environment damages to surface water and groundwater resulting from leachate migration via the damaged pipe. Consequently, this design has a potential violation of the Rule 15A NCAC 13B .0566(14) - leachate shall be properly managed on site through the use of current best management practices.

Additionally, the Permit Application must properly address the following concerns, if Mr. Everett insists to use this approach to manage the on-site stormwater/drainage system:

- i. According to the "LCID Full-Build Out Cross-Section" on Drawing No. LCID-3, the pipe intake (daylight) is placed on the grade without any backfill cover, and approximately 50% of the pipe is covered by less than 1-foot thick cover.
  - a. Will this pipe be able to resist waste loads (static) and live loads, generated from the movements of dump truck and earth-moving equipment with an acceptable factor of safety? Please provide the detailed calculation to demonstrate the selected pipe has adequate strength to support the maximum static and live loads in construction and operation of the landfill.
  - b. Provide a typical detail and cross section of the pipe trench which must meet the assumptions/concepts of pipe-soil system used in the calculations mentioned in the above-mentioned item (a) including, but not limit to, trench width & depth, specifications for backfill materials and compaction efforts, thickness of cover and bedding, etc.

- ii. If the pipe trench and installation will be constructed after the minimum 4-foot-thick landfill base is completely constructed, the trench safety requirements must be clearly specified on the drawing.
- iii. Will the aluminum pipe have chemical compatibility and corrosion resistance to the potentially exposed environmental media such as leachate, waste, standing water, or backfill material? Shall the pipe be protected by a suitable coating or applying cathodic protection? Please clarify.
- iv. What is the service life of the pipe? Please provide detailed references and calculations.
- v. Is there an inspection and maintenance plan for the drainage pipe to be conducted during the landfill operation period? Should the pipe be damaged for any reason, how you plan to repair the pipe? Please clarify.

Please contact myself if you have any questions to the above-mentioned comments. Thanks and have a wonderful weekend.

*Ming Chao*

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**From:** Chao, Ming-tai  
**Sent:** Tuesday, September 06, 2016 11:33 AM  
**To:** 'BSmith@paramounte-eng.com' <BSmith@paramounte-eng.com>  
**Cc:** Rice, Sarah M <sarah.rice@ncdenr.gov>; Hare, Wes <wes.hare@ncdenr.gov>; Hammonds, Andrew <andrew.hammonds@ncdenr.gov>  
**Subject:** Everett's LCIDLF, P1303

Dear Mr. Smith: Good morning. On August 29, 2016 the Solid Waste Section (the SWS) received the hard copy of the responses to the July 11, 2016 comments (DIN 26446) and the revised Operations Plan and supporting documents associated to the proposed new landfill. The above-mentioned documents are scanned, logged and uploaded to the document tracking system with a DIN 26704. The SWS will review the revised operations plan and responses shortly.

*Ming Chao*

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