



Ms. Jaclynne Drummond
Solid Waste Section - Compliance
Division of Waste Management
North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

August 10, 2010

Re: **Response to Notice of Violation and CAP Modification Request**
Alexander County C&D over MSW Landfill,
Taylorsville, Alexander County, NC
Permit #02-01
MESCO Project No. G10059.0

Dear Ms. Drummond:

Municipal Engineering Services Co., P.A. (MESCO), on behalf of Alexander County, appreciates the opportunity to respond to your *Notice of Violation* (NOV) issued to Alexander County (the County) on August 3, 2010 for issues associated with implementation of the *Corrective Action Plan for the Alexander County Landfill, Taylorsville, Alexander County, NC* (CAP) approved by the Solid Waste Section (SWS) on February 19, 2009. Thank you for meeting with us at the SWS offices on August 5, 2010 to discuss the issues presented in the NOV. In this response, we present our plan addressing the issues listed in the NOV. We also want permission to modify the referenced CAP (and portions of the implementation timetable) based on new information, some of which was discussed during our August 5th meeting.

The approved CAP proposed implementation of the following remedies:

- Monitored Natural Attenuation (MNA)
- Phytoremediation
- Enhanced Bioremediation using Hydrogen Release Compound (HRC)
- Active Methane Extraction System
- Acquisition of Property

Since CAP approval, MNA analysis has been implemented as proposed and groundwater and surface water sampling and analysis have been performed in accordance with the *Groundwater and Surfacewater Monitoring Plan* presented in the CAP Section 4. The active methane extraction system is being designed and acquisition of the adjacent property has been affected by conditions attributed to the recent "economic downturn." Additionally, recent groundwater analytical results have indicated that contaminant concentrations and subsurface geochemical

conditions that were considered when selecting HRC as the injection product have changed, persuading us to re-assess the potential success of our selected remedy.

In February 2010, MESCO personnel began assessing the ability of HRC to successfully reduce contaminant concentrations in the plume areas listed in Section 1.3 of the CAP and determined that, due to the low concentrations of chlorinated solvents reported in the plume areas identified as the “MW-26 Area” and the “MW-16 Area”, HRC might not successfully reduce the target contaminants to desired concentrations. MESCO personnel began contacting other remediation contractors and product vendors to discuss the success of their products in situations with contaminant concentrations, geology, geochemistry and hydrogeology similar to conditions reported on the site. We also analyzed groundwater samples collected from monitor wells MW-26 and MW-16 to ascertain the current levels of *dehalococcoides* (DHC) bacteria, which are instrumental in determining bioremediation probabilities. Along with our associates, we were able to surmise injecting edible oil substrate (EOS) might be more successful meeting the goals proposed in the CAP. **As a result, in accordance with Section 6.3 of the CAP (Revisions), we want to:**

- **Inform you of our desire to modify (amend) portions of the current CAP, and**
- **Request a modification (extension) to the implementation schedule.**

Additionally, we want to respond to several issues listed on Pages 2 and 3 in the NOV. Below we have reproduced the issues raised in the NOV (paraphrased in italics) and presented our corresponding response (indented).

On Page 2 you stated,

“Within 30 days of receipt of this letter, install the seven sentinel wells (MW-28 through MW-34) as indicated with the approved February 6, 2009 Corrective Action Plan and which were scheduled to be completed May 2009.”

MESCO plans to begin installation of monitor wells MW-30, MW-31 and MW-32 within the timeframe given. Monitor wells MW-33 and MW-34 are located on an adjacent property, which will require negotiation and permission prior to installation. It is our understanding that the County plans to contact the property owners immediately to discuss access and will continue to negotiate “...property acquisition as outlined in the County’s approved *February 6, 2009 Corrective Action Plan.*” MESCO plans to install monitor wells MW-28 and MW-29 in the event the contamination plume extends to existing monitoring wells MW 24 and MW-25, which are currently un-impacted.

“Within 10 days of receipt of this letter, submit an application for an injection permit that is required by the NCDENR Underground Injection Control (UIC) Section for the HRC injections.”

With the SWS’s approval, MESCO plans to submit an application permit to the UIC within the required timeframe requesting injection with EOS instead of HRC.

“Within 90 days of receipt of the UIC Permit, conduct the first HRC injections near MW-16 and MW-26 that were to be conducted in April 2009.”

With the SWS’s approval, MESCO plans to submit an application permit to the UIC within the timeframe given requesting injection with EOS instead of HRC.

“Within 120 days of receipt of this letter, install the ten active methane wells along the periphery and outside of the current waste limits near MW-1B as outlined within the approved February 6, 2009 Corrective Action Plan”.

MESCO is evaluating methane remediation options and intends to begin active methane well installation within the timeframe given.

On Page 3 you stated:

“Within 30 days of receipt of this letter, submit documentation that the protective fencing has been installed, the pressure transducer data loggers were installed in MW-12 and MW-24, and water level data has been collected on a monthly basis from MW-12 and MW-24”.

As discussed in our August 5th meeting, the pressure transducers were on back order and were recently received. MESCO plans to install the transducers in MW-7 and MW-12 within 10 business days and will begin recording daily water level data. Protective fencing will be installed for existing trees within the proposed schedule.

“Within 30 days of receipt of this letter, please submit a schedule to plant the remaining trees as indicated in the County’s approved February 6, 2009 Corrective Action Plan”.

MESCO plans to submit a planting schedule in the early spring 2011 after assessing the existing tree condition.

“Please re-initiate Appendix II water quality monitoring during the next semi-annual water quality sampling event at the facility scheduled for December 2010. Within 30 days after re-initiating Appendix II water quality monitoring, please update the Ground and Surface Water Sampling and Analysis Plan located in the February 6, 2009 Corrective Action Plan to account for the addition of Appendix II water quality monitoring as required by 15A NCAC 13B .1637 (a)(1).”

MESCO plans to conduct Appendix II sampling and update the Ground and Surface Water Sampling and Analysis Plan within the timeframe given.

“Within 90 days of receipt of this letter, Alexander County is instructed to properly abandon the on-site water supply well located next to the scale house using the methods outlined in 15A NCAC 2C .0113.

MESCO personnel plan to assist the County in properly abandoning the referenced water supply well within the timeframe given.

Municipal Engineering Services Co., P.A., on behalf of the Alexander County, appreciates the opportunity to submit this brief response to the Solid Waste Section. We acknowledge the seriousness of the NOV and will respond immediately to meet your requests and requirements.

As shown above, even though we plan on implementing several of the tasks listed in the February 6, 2009 Corrective Action Plan, we, again, request your approval to modify (amend) portions of the referenced CAP, including an extension to the implementation schedule.

Please contact us at (919) 772-5393, mbrown@mesco.com, or wsullivan@mesco.com if you have any questions or comments regarding this response.

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



Mark Brown, LG, PG
Senior Professional Geologist



Wayne Sullivan, PLS, Supervisor
Solid Waste Services Section

Enclosure:
Notice of Violation dated August 3, 2010

cc: Mr. Josh Mitchell, Alexander County