

6300-06-0012

January 26, 2009

Mr. Raymond Frigon
Remediation Division
Bureau of Water Protection and Land Reuse
State of Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: Draft TCLP Characterization Plan – Response to CTDEP Comments

Dear Mr. Frigon:

The Draft TCLP Characterization Plan for the Non-Public Properties in the Newhall Street Neighborhood of Hamden, Connecticut was submitted to you on October 21, 2008. The plan proposes a study of the site-specific correlation between fill SPLP and TCLP results. If such a correlation is of sufficiently high statistical significance, the existing SPLP data may be used as an indicator of the acceptability of site-wide fill material to be used as fill material at the Tire Pond Landfill site.

The general approach for this study will be to collect approximately 45 fill samples from the zero to four foot below ground surface (bgs) interval and analyze these samples for total lead, TCLP lead and SPLP-lead. The sample locations have been selected at random from a stratified grouping of the existing SPLP sample locations. Correlations between SPLP and TCLP extract concentrations would be evaluated and determined from the collected data.

During a conference call between CTDEP and Olin representatives on December 3, 2008, CTDEP presented several verbal comments/questions regarding the plan. At the December 17, 2008 meeting attended by Olin and CTDEP representatives in Hartford, Connecticut, CTDEP requested that this letter be prepared to address the December 3, 2008 conference call comments/questions, as well as additional comments/questions raised during the meeting. These comments/questions, and their corresponding responses from Olin, are presented below.

CTDEP Question: *How was the number of 45 samples selected for TCLP analysis?*

Olin Response: 20-25 samples are required to be comfortable that the statistical central limit theory would apply and that certain normal approximations would be in effect. To allow for more certainty and to account for outliers or samples with concentrations outside expected range, that number was doubled resulting in 45 samples selected for analyses.

CTDEP Question: *What will be the course of action if correlation between TCLP and SPLP data proves to be low?*

Olin Response: If the correlation between TCLP and SPLP data is unacceptable, then additional TCLP sampling of in-situ fill material may be required to demonstrate compliance with the Tire Pond Material Acceptability Protocol. The Material Acceptability Protocol requires one sample per 1,000 cubic yards of fill, or approximately 110 samples total for the estimated 110,000 cubic yards of fill material to be excavated from the Newhall Street Neighborhood. Therefore, an additional 65 to 70 samples would be collected for TCLP lead analyses.

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CTDEP Comment: Incorporate TCLP data from CTDEP and USEPA investigations into the Plan.

Olin Response: CTDEP data provided to MACTEC via e-mail on December 9, 2008 contains only 3 TCLP sample results with no corresponding SPLP results. MACTEC has attempted contact with the USEPA, but there has been no response.

MACTEC presented the possible outcomes of the proposed study at the December 17, 2008 meeting in Hartford, Connecticut:

- If there is acceptable correlation of TCLP-SPLP lead results, then the 90% UCL of SPLP Lead will be calculated to determine acceptability for acceptance of fill at the Tire Pond. This evaluation will be similar to the evaluation already performed for total lead concentration used to demonstrate that portions of the fill met the lead mass concentration standard.
- If there is unacceptable correlation of TCLP-SPLP lead results, then an additional 65-70 fill samples would be collected and analyzed to meet the Material Acceptability Protocol requirement of one sample per 1,000 cubic yards.

Following analysis of the initial 45 proposed samples, the data will be assessed for TCLP-SPLP lead correlation, and a brief letter report provided to CTDEP for review.

We hope that these responses adequately address CTDEP concerns regarding the Draft TCLP Characterization Plan. Please do not hesitate to contact me at (207) 775-5401 should you have any questions or concerns.

Sincerely,

MACTEC Engineering and Consulting, Inc.



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Project Manager

cc: David Share (Olin)
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