TWO MINUTE TRAINING

TO: *CENTRAL PLATEAU CLEANUP COMPANY*

FROM: *PAUL W. MARTIN, RCRA Subject Matter Expert*
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SUBJECT: *METHOD DETECTION LIMITS AND HAZARDOUS WASTE DETERMINATIONS II*

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TWO MINUTE TRAINING

SUBJECT: Method Detection Limits and Hazardous Waste Determinations II

Q: In last week's 2MT, we learned that if the analytical method detection limit (MDL) is higher than the regulatory level of a waste constituent, the generator must re-test the waste at a lab that can achieve an appropriate MDL; or use generator knowledge to determine if the waste is regulated as hazardous waste; or assume the waste is hazardous and manage accordingly. Can a pseudo-real-life example be given that is semi-related to the above concept? And while at it, throw in a land disposal restriction (LDR) and a Toxic Characteristic Leachate Procedure (TCLP) vs. Totals analysis twist.

A: OK!

A customer has a nonwastewater waste that contains 2, 4 Dinitrotoluene (2, 4, D) which is the constituent for the characteristic hazardous waste code D030. The customer has the waste analyzed and the result is indicated as "less than the MDL of 160 mg/kg totals". The MDL is high due to interferences caused by radioactivity which is another story. According to WAC 173-303-090, the regulatory level for D030 is 0.13 mg/l TCLP and according to 40 CFR 268.40, the LDR treatment standard is 140 mg/kg totals (nonwastewater).

To determine applicable waste management regulations, the customer must first determine if this waste is regulated as a characteristic hazardous waste. The customer is aware of the three options when the MDL is higher than the regulatory level and the customer assumes that the MDL of 160 mg/kg totals is the analytical result for the 2, 4, D constituent. Also, having recently had training in hazardous waste determinations with emphasis on TCLP and totals analysis, the customer knows that this totals result can be divided by 20 (the dilution factor for TCLP analysis) to get a conservative estimate of whether the waste exceeds the TCLP regulatory level of 0.13 mg/l. Dividing the totals result of 160 by 20 gives an estimated TCLP result of 8 mg/l, which exceeds the regulatory level of 0.13 mg/l TCLP. Therefore, the customer can use generator knowledge to conservatively designate this waste as a characteristic hazardous waste D030.

Next since the waste is regulated as a hazardous waste it is subject to LDR determinations. The MDL of 160 mg/kg is assumed to be the analytical result for the 2, 4, D constituent. Per 40 CFR 268.40, the LDR treatment standard for 2, 4, D is 140 mg/kg and meet 40 CFR 268.48 for underlying hazardous constituents. Since the customer is assuming the MDL of 160 mg/kg is the analytical result, the 2, 4, D exceeds the LDR treatment standard of 140 mg/kg. Therefore, the waste must be treated prior to land disposal.

SUMMARY:

- Since the MDL is higher than the regulatory level, the generator can assume the MDL is the analytical result in making the hazardous waste and LDR determinations.
- And since the MDL result is in totals analysis, the generator can in this case, divide the totals result by 20 to get an estimate of the TCLP analytical result and the applicability of the D030 characteristic waste code.
- Once determined to be a hazardous waste, LDR determinations can be made and since the MDL is higher than the LDR treatment standard, the waste must be treated per the LDR standards prior to land disposal.

Nothing is attached to the e-mail. If you have any questions, contact me at Paul_W_Martin@rl.gov or at (509) 376-6620.