

From: Ken Ebbott <kebbott@fehr-graham.com>
Sent: Friday, December 9, 2016 4:29 PM
To: DuFresne, Kristin I - DNR
Cc: Ken Ebbott; Gallo, Donald P. DPG (6224); Heidenreich, Daniel (dheidenr@wm.com); Ben Dahlby (bdahlby@wm.com); John Butz
Subject: Bay Towel Treated Soil and Letter indicating OK to Landfill in Subtitle D facility
Importance: High

Kristin,

We have received the lab results on the treated soil. I've asked Waste Management for the green light to discard some of the soil, and will have to retreat / retest at least one 30 CY box of soil (Q1). WMI has indicated they need a letter from the WDNR that clarifies that the soil is acceptable to discard at a licensed subtitle D facility - specifically their landfill in Whitelaw.

As you know, we treated the contaminated soil with Fenton's reagent and BAM (carbon and nutrients) and placed it in seven 30 CY drop boxes. There were three mix areas that were identified as Areas I, K, and Q. Some of the soil from these mix areas had really high concentrations of PCE - levels as high as 2,380 mg/kg, 2,780 mg/kg, 7,710 mg/kg, and 11,000 mg/kg.

After treatment, we obtained six soil samples from the various mix and treat areas, two from Area K (K1 and K2) two from Area I (I1 and I2) and two from Area Q (Q1 and Q2). The lab report is summarized below- can be provided if you need it - already provided it to WMI.

The relevant results and sample ID numbers are:

Treated Soil I1 Total PCE 248 mg/kg TCLP PCE 0.23 mg/l; Total TCE 1.87 mg/kg, TCLP TCE 0.0038 mg/l

Treated Soil I2 Total PCE 36.3 mg/kg TCLP PCE 0.025 mg/l; Total TCE 1.03 mg/kg TCLP TCE 0.025 mg/l

Treated Soil K1 Total PCE 184 mg/kg TCLP PCE 0.061 mg/l; Total TCE 4.14 mg/kg TCLP TCE 0.0044 mg/l TCLP VC 0.0024 mg/l

Treated Soil K2 Total PCE 25.3 mg/kg TCLP PCE 0.0093 mg/l; Total TCE 0.496 mg/kg TCLP TCE ND

Treated Soil Q1 Total PCE 436 mg/kg TCLP PCE 5.5 mg/l; Total TCE 2.86 mg/kg TCLP TCE 0.028 mg/l

Treated Soil Q2 Total PCE 224 mg/kg TCLP PCE 0.25 mg/l; Total TCE ND TCLP TCE ND TCLP VC 0.0042 mg/l

So - we need to get the OK to landfill the soil. My interpretation:

- 1) All Treated soil samples except soil from Q1 passes TCLP, so the material other than Q1 is not Characteristically hazardous.
- 2) Treated Soil from Box Q1 failed TCLP, and further mixing and retesting will be completed to demonstrate it can meet the TCLP criteria and not be considered characteristically hazardous.
- 3) Treated Soil from I2 and K2 falls below all applicable limits and, combined with being not characteristically hazardous, can be landfilled at Subtitle D facility.
- 4) Treated Soil from I1, K1, and Q2 shows 90% reduction from the highly elevated pre-treatment concentrations documented as present at the site, and combined with being not characteristically hazardous (via passing of TCLP), can be landfilled at subtitle D facility.

Please send a letter being specific, that treated soil represented by samples I1, I2, K1, K2, and Q2 is acceptable for disposal at a subtitle D landfill in Wisconsin. If you only feel some samples represent acceptable material at this time, please indicate which samples are acceptable, so we can remove some of the treated soil, and take steps to address the others.

Thanks for looking at this promptly...we have already paid the \$700 review fee, and with the weather this coming week will make it impossible to dig the soil if we don't get on it Monday or Tuesday at the latest.

I'll give you a call Monday AM -

Thanks,

Ken

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