

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Hazardous Waste & Radiation Management
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[REDACTED]
Project Manager/Environmental Engineer
United States Army Corp of Engineers
1776 Niagara Street
Buffalo, New York 14207

Dear [REDACTED]:

Re: Town of Tonawanda Landfill Statement of Work (June 2009)

The New York State Department of Environmental Conservation (DEC), on August 18, 2009 received the Town of Tonawanda Landfill's Statement of Work (SOW) for review. Our comments are enclosed.

We want to thank you for the opportunity to comment on this SOW. More importantly we want to thank the Corp for recognizing that additional investigation activities were necessary at the landfill so that an accurate portrait of radiological contamination can be visualized. This characterization will be important in determining the extent of contamination within the areas the Town has to perform solid waste removal/relocation, and if necessary, provide a beginning point for future discussions between the Town, the Corp and DEC.

If you have any questions or need further information, please contact [REDACTED], of this Bureau, at (518) 402-8579.

Sincerely,

[REDACTED]

Acting Director
Bureau of Hazardous Waste & Radiation Management

Enclosure

TON_00228

NYSDEC Comments
On
Scope of Work RI Addendum
Tonawanda Landfill Operable Unit

- 1) In Section 2.1, Project Objectives, it is stated that the additional field sampling will be conducted “to verify whether the contaminant levels detected by the DOE still persist on the site.” Additionally, it is indicated that based on the sampling results obtained from this investigation, the contaminant fate and transport and associated risk to human health shall be re-evaluated using “only data that verifies the current nature and extent of radioactive contamination” at the site. These stated objectives indicate the intent to discount as no longer valid, any of the historical data collected in the previous site investigations, in particular the results of the DOE studies in the early 1990’s. The problem with this approach is that it ignores valid historical data simply because the exact location and associated analytical results are not duplicated in the follow-up investigation activities. Since we are dealing with radioactive contaminants, there would be no appreciable decay or reduction in the concentrations detected less than 20 years ago. Therefore, the historical data remains valid and should be considered in any health risk assessment for the site.
- 2) One of the stated data quality objectives (Section 2.2) is to “evaluate the potential for migration of MED material into residents’ back yards *and/or* (emphasis added) presence of material in yards due to historic disposal operations and haul ways.” It is the Divisions position that this objective can only be fully attained by further sampling or investigative activities actually being conducted in the residential yards.
- 3) In Section 3.3, Task 3 involves extensive site clearing in study areas IA-1 through IA-6 in order to conduct the gamma walkover survey. This covers a significant portion of the landfill site, and some offsite areas, including locations where landfill related construction activities have been, and continue to be conducted. It will be very important for the Corps’ contractor to coordinate, and work closely with the Town of Tonawanda and their engineer/contractor in order to effectively accomplish the site clearing and investigation work. Additionally, regarding the placement of chipped vegetation and other land clearing material, the Town currently operates a wood chip processing/aging facility onsite. The Corps may want to discuss with the Town the possible use of this area for shredded land clearing material placement.
- 4) In Section 3.5.3 Drilling Method, it is stated: “As each segment of core is withdrawn, the contractor shall scan the core with a 2-inch by 2-inch sodium iodide (NaI) scintillation detector (Ludlum 2360 or equivalent). USACE will then scan the dried soil core with a portable X-Ray Fluorescence (XRF) spectrometer.” There should be a discussion as to where the scanning of the core is going to take place. Preferably on a table removed from any higher background area. In addition, this section should also include a discussion on how the USACE going to “dry” the core?

- 5) In addition, within the same section, from the experience within this Division a pancake probe would be the preferred probe for scanning the core length.
- 6) In Section 3.5.4 Surface/Subsurface Sampling Protocols, it states: "For these borings, each sample acquired for analysis at the off-site analytical laboratory shall include a one foot segment of the 2" boring at the following locations:

1. The core surface, i.e. the top 6 inches of the boring"

Then the list goes on to list four more sample depth locations. The Division recommends that all of the samples consist of 6 inches of material, including the top interval. We understand this may have been a function of having enough material to perform all of the analysis. If this is the case then perhaps a 3" diameter core needs to be utilized. Contamination standards are based on a 6 inch interval and including more material will lead to misinformation due to dilution.

- 7) Also in Section 3.5.4 the second paragraph goes on to discuss borings in areas with low probability of contamination. It states, "For areas with low probability of contamination, the borings shall extend to twelve feet (12') below ground surface (bgs), and shall extend deeper only if a positive result is obtained in the bottom interval of the soil core during core scanning" Recent work performed by the Town's contractor may mean that cores deeper than 12 feet below ground surface may need to be collected as much of the grading material may have been brought into the IA-4 and IA-6 areas. A review of near term historic site elevation changes, if they exist, needs to be considered.
- 8) In Section 3.5.5 Sample Quantities, the first sentence should read: "Twenty two systematic borings shall....." to match wording in table 3.
- 9) In Section 3.6 Task 6 (Optional) Groundwater Sampling From Temporary Wellpoints, the work plan states that the groundwater sampling is optional. What will be the determining factors in whether groundwater sampling will be performed? Since one of the objectives of this Scope of Work is to evaluate the characteristics of soil and groundwater for waste disposal, how will this be determined if the well points are not sampled? Sampling would also aid in fulfilling the Corps stated objective of determining the likelihood and pathways of contaminant migration.
- 10) The proposed work plan should include reference that the sand pack gradation should be fine enough to prohibit the entry of soil fines into the temporary wells.
- 11) The use of bentonite chips instead of cement-bentonite grout to the surface is proposed due to the temporary nature of these wells. However, the length of time they will be in existence is not clear in the work plan. The work plan must also discuss proper removal of these wells once the investigation is complete. This would involve removal of all well materials by overboring or other means, and filling the borehole with a cement-bentonite grout using a tremie pipe to five feet below the ground surface.

- 12) It is stated that the PVC riser will be capped and locked. It is unclear from this description whether a protective casing would be utilized to protect the PVC. There has been past vandalism at the landfill and these wells could be a target unless they are adequately protected

- 13) The wells are proposed to be sampled for radiological parameters, metals, anions, TDS, and alkalinity, according to the table in Section 3.6.1. The Scope of Work needs to provide a discussion as to how the USACE's derived the list of parameters. In addition, in the first paragraph of Section 3.6.2 the discussion of appropriate tubing materials for low-flow sampling refers to combined organic and radiological testing. Is the reference to organic testing meant to refer to volatile and/or semi-volatile organics, which are being tested for in the soils, but are not listed in Section 3.6.1? In Attachment 4, Practical Quantitation Limits are presented for volatiles, semi-volatiles and PCBs/pesticides for both soil/sediment/solids and water. What water samples are being referred to in Attachment 4?

- 14) It is stated that analyses will be performed on filtered and unfiltered samples. Will field filtering be performed? A description of the filtering procedure should be provided in the work plan.

- 15) In Figure 3, the proposed well points appear to be concentrated in the areas of high likelihood of contamination, based on previous sampling results. One well point is proposed just south of the Wadsworth Court cul de sac, but none further west of this point, where there is, according to the work plan, a moderate likelihood of contamination. It is stated that the temporary well points will be placed within soil sample boreholes, so it is assumed that data on the soil characteristics and analytical results from these boreholes will likely be available prior to the installation of the well points, and would aid in determining the location of the temporary well points for further sampling. Data that indicates FUSRAP type waste in areas other than the areas targeted in Figure 3 may warrant installation of temporary well points in other areas.