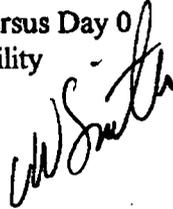


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Date: November 17, 1998

Subject: Sampling In-Situ versus Day 0
Bioremediation Facility

From: Carol Witt-Smith
U.S.EPA, WMB



To: Christine Freeman
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Chris-

This is to follow up on what Allen Debus, you and I spoke about on Monday, November 16, 1998, concerning sampling of soil for the Bioremediation Facility. This stems from the Navy Field Clarification Request (FCR) to reduce or delete sampling at Day 0 of the compost windrows. I approved the FCR only allowing for the reduction of PETN sampling since PETN was not found in any of the samples to date for Mine Fill A and B. The Navy really wanted to eliminate all Day 0 sampling since in-situ samples were being taken at the Solid Waste Management Unit (SWMU) excavation grids. But, during our review of the 30% soil pilot-scale report, we found that the contractor was not tracking in any manner the soil from grids that were excavated, placed in storage, and then windrows created. Essentially, there was a loss of connection between the original SWMU soil and which windrow it was treated in.

You, Al, and I went through the approved Quality Assurance Plan (QAP) and the Operational Plan (OP), to try and see where this was originally discussed. Al had remembered there was specific language in the documents concerning this. And there was. One was discussed in February 1998, and the other ended up being the choice of everyone and approved in the plan in March 1998. The approval was done while I was on maternity leave, that's why there was a little confusion about some of this.

So, here is basically the two ideas discussed:

1. In the approved QAP, Table 1-8, and the March 4, 1998 response to comments, it was approved to use Day 0 and Day last analytical data to do the comparison of reaching the 90-99% reduction efficiency. This was chosen because it eliminated the dilution factor, and the matrix comparison is the same (compost to compost). In order to meet the goal comparison, the pre-excavation samples would not be used. Pre-excavation samples would be used to characterize the soil for regulatory concerns and parameters to be tested (SWMU-specific), and the extent of excavation only.

Since this is approved in the current plans, the tracking issue should not be a problem from excavation into storage and then into the windrow for treatment. Tracking is still required after treatment, into storage, and to the final disposal area for meeting Institutional Control requirements.

2. The other issue was discussed prior to the QAP approval, in the February 9, 1998 comments from AI, and the March 1998 response to comments (number 2). This issue was not chosen. It would have allowed for comparing the pre-excitation soil samples to be compared to the Day last compost samples (pre-excitation soil to compost), for meeting the reduction goals. Because of the issue comparing apples to oranges, a comfort level mathematic calculation was proposed to account for the dilution factor of the amendments. The pre-excitation soil would have to be sampled with field test kits and at least 10-20% by Method 8330, and any other explosive tests required. This would then be used for the incoming value of the soil into the windrow. After treatment Day last would be used to compare to that value. But, our problem with tracking would occur.

So, the Navy can continue with the approved plan, or they can request a modification to the plan for review and approval to delete Day 0 sampling. Field testing would still be needed for monitoring the performance of the pile, but the off-site analytical testing would be deleted. But, the Navy MUST carefully track which excavation grids the soil is coming from. Piles in storage prior to treatment must only contain the volume of soil to be placed in an individual windrow, and these piles need to remain segregated and tracked in some manner (i.e., a form and field map of the storage location. We would consider the possibility of storing screened soil at the SWMU if proper containment to prevent erosion and wind blowing were used, sand clean soil areas are not used. Day 0 sampling, except for PETN at Mine Fills A and B, must continue until the request is approved and tracking is in place.

The last issue we discussed was the screening reject pile material. We understand that this will be a mixture of grids possibly, but the contractor should be trying to track where the soil is from, since if it has to be dried out, it supposed to go back onto the excavation area for drying, and then removed again and reprocessed, according to the approved plan. The worst case values would be used for a mixture from these areas.

This summarizes our interpretation of what is currently approved, and what the Navy should evaluate if they choose to propose a change to the plan. Both AI and I agree that "real life" data from the excavation or piles should be used and not "worst case" scenarios when performing these comparisons. Otherwise we would have to re-look at if we have sufficiently defined the "worst case" with the approved grid system. If you have any questions regarding this matter, please feel free to call me at (312) 886-6146.

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