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O.U. 5 TREATABILITY

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OEPA/DOE
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LETTER
OU5

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George V. Voinovich
Governor

April 7, 1992 RE: O.U. 5 TREATABILITY 3093

Mr. Jack R. Craig
Project Manager
U.S. DOE FEMP
P. O. Box 398705
Cincinnati, Ohio 45239

Dear Mr. Craig:

Attached are Ohio EPA's Comments on the Revised OU 5 Soil Washing Treatability Study Work Plan. Ohio EPA feels that it is critical that the issues raised in General Comment #1 be addressed. We need to know the technical limits of a treatment alternative and how much it will cost. An adequate Feasibility Study cannot be prepared without this information.

If you have any questions about these comments please call Tom Schneider or me.

Sincerely,

Graham E. Mitchell
Project Manager

GEM/bjb

cc: Jennifer Kwasniewski, DERR
Tom Schneider, DERR
Jim Saric, U.S. EPA
Dennis Carr, WEMCO
Lisa August, GeoTrans
Tom Hahne, PRC
Robert Owen, ODH

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OHIO EPA COMMENTS
ON
OU5 SOIL WASHING TREATABILITY STUDY WORK PLAN

3093 [redacted]

GENERAL COMMENTS

1. It is unclear from Ohio EPA's review of this document, if information which is essential to development of the Feasibility Study will be obtained through this work plan. DOE needs to fill two very important data gaps in this work plan or in an additional stage of treatability study. The first data gap is, What is the lowest uranium concentration to which FEMP soils can be treated? This is important, since risk based cleanup levels will likely be below 35 pCi/g and may well be below technical feasibility, thus we need to know the technical limits to cleanup. The second data gap appears to be a determination of cost. DOE needs to determine the incremental increase in cost associated with a given decrease in uranium concentration through treatment. This information will be useful not only in determining cleanup levels but also in whether disposal will be cheaper than treatment at a particular concentration of uranium and volume of soil.

   These two issues are critical to the development of a complete and acceptable Feasibility Study for Operable Unit 5 and it appears they are not being specifically addressed in this work plan. DOE needs to detail how these two data needs will be met in this work plan or in an additional phase of the treatability study.

2. Ohio EPA suggests, if physical separation produces an early successful result showing a significant portion of soil can be cleaned, that DOE consider developing an EE/CA for soil treatment and initiate treatment of soils as part of a non-time critical removal action. The stockpiling of soils at the FEMP is becoming an overburdensome problem and it would appear that treatment prior to the issuance of a ROD is justified.

SPECIFIC COMMENTS

1. Section 1.3.4, pg. 17, line 16: The volume of wash water and washing reagents that require disposal should be included.

2. Section 1.3.4, pg. 17, bullets: Another bullet should also include the ability of soil washing to reduce the toxicity, mobility, or volume of contaminated waste to the predetermined levels.

3. Section 2.1, pg. 1, Figure 2-1: Any disposal of waste water, residues, or solvents should have predefined clean levels explained. If they are going to a waste treatment system, include the acceptable influent levels for the waste treatment system.

4. Sections 2.2 and 2.3, pg. 3: References should be made in these sections specifying that this phase is explained in more detail in other sections.

5. Section 3.0, pg. 2, Table 3-1: PRGs should be developed in accordance with USEPA document "Risk Assessment Guidance for Superfund Part B" (1991). DOE needs to justify using proposed Corrective Actions guidelines.

6. Section 3.1, pg. 9, bullets: Another bullet should include the ability of soil washing to reduce toxicity, mobility, or volume of contaminated waste to predetermined levels.

7. Section 3.2, pg. 19, Table 3-10: DOE should provide the detection limits for uranium by IC and for the metals by ICP.

8. Section 4.2.2, pg. 4, line 22: Be consistent and specify the size of the aliquot.

9. Section 4.3.1, pg. 9, lines 14-16: A description of the M.L. Jackson (1975) procedure should be include in the appendix.

10. Section 4.5.1, pg. 29, Figure 4-6: Is it the intention of this diagram that the treatment process would produce a uranium product suitable for use within the DOE complex? If this is the intention of the study, is there a market for such a product, especially in light of the fact that DOE cannot get rid of the uranium metal stored at the FEMP?

11. Section 4.7, pg. 32: See general comment #1 above.

12. Section 6.4, pg. 8, line 23: Typo: "<" should be ">".

13. Section 6.4, pg. 11, lines 5-15: This walkover should incorporate data such as temperature, air moisture content (humidity), and wind speed. Also parameters for the day of the walkover should be defined such as, the soil should be free of ponded water and free of rain. Rain could cause lower HNu readings and ponded water could cause lower radiological readings.

14. Section 6.4, pg. 11, line 19: Elaborate on this sentence.

What will be the future analysis of the soil that does not pass the 3/4 mesh, and what will be the storage/disposal status of this waste?

15. Section 6.5, pg. 14, lines 18-27: Recording and observing of HNu readings while excavating and tilling should be carried out.

16. Section 6.5, pg. 15, line 7: Be specific, address the number and quantity of the aliquots of soil.

17. Section 12, pg. 2: Pg. 2 of 2 was missing from Ohio EPA's copy. Please include in revision.

18. Section 13: DOE should work to expedite and compress the OU5 Treatability Study in hopes of initiating a soil washing removal action. The early submission of this work plan was a good example of how the process can be moved along.

19. Appendix B, Generic Uranium by Ion Chromatograph with Post-Column ...: This SOP should in detail explain the operating procedure for Generic Uranium by Ion Chromatography, not just a synopsis of the procedures. A step by step detail explanation is needed.