January 3, 1997

Mr. Henry Springer, Director
Compliance and Engineering
c/o Mills Service, Inc.
R. D. #1
Box 135-A
Yukon, Pennsylvania 15698

Dear Mr. Springer,

This letter is in regard to the site visit that was coordinated between members of my staff and personnel at your Mills Service facility located in Yukon, Pennsylvania.

Attached, please find a copy of the site visit report. The Agency is requesting that you please review and comment our site visit report for verification that we have accurately represented your facility.

The Agency is requesting your response by January 22, 1997. If any clarifications or changes are needed, or if discrepancies exist, please contact Anita Cummings, of my staff. Ms. Cummings can be reached on (703) 308-8303.

Respectfully,

Michael Petruska, Chief
Waste Treatment Branch

attachment enclosed

**SUBJECT:** Final Draft Site Visit Report for the September 13th Site Visit to Mill Service's Commercial Waste Treatment Facility Located in Yukon, Pennsylvania

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Mill Service owns and operates a commercial waste treatment and disposal facility located in Yukon, Pennsylvania, approximately 30 miles south east of Pittsburgh. The Yukon facility began operations in 1963. According to Mr. Springer, the Director of Compliance and Engineering at Mill Service, the facility is land-locked and steadily running out of disposal capacity. Although the site is located in a remote area, there were several visible residences located just outside of the facility.

**Overview of Operations**

The Yukon facility is a commercial waste treatment and disposal facility that receives various solid and liquid metal-bearing wastes (D002, D-listed metals, and K062) from clients generally located in the eastern United States. The facility consists of an administration building, truck scale, office/laboratory complex, truck sampling station, maintenance facility, solid waste treatment area, liquid waste treatment area and truck washing pad, lined surface impoundment with leachate collection system, two storage areas for roll-off containers, an above ground tank farm, and several closed disposal areas.

Although the facility is permitted to treat up to 37 truck loads per day (or ~400 tons/day), Mill Service is operating at only 20 to 30 percent of capacity (approximately 10 loads per day). Mr. Springer, however, indicated that treatment at the Yukon facility occasionally approaches 50 percent of capacity.

Mill Service uses TSP (or trisodium phosphate) to immobilize the inorganics by forming metallic phosphates (e.g., lead phosphate) and lime to buffer the pH of the treatment residue. Mill Service's treatment regime follows the state module (Module 1) for treatment. The process begins when prospective generators send Mill Service a sample of their waste. Mill Service conducts a treatability study at its on-site laboratory. As part of the treatability study, Mill Service splits the waste sample to produce two sub-samples. One sub-sample is treated with 5 percent TSP and some lime and the second sub-sample is treated with 10 percent TSP and some lime. Mill Service does not "fine tune" the treatability study by selecting any other percent addition of TSP/lime.

The laboratory treated samples are sent off-site for both total constituent and leachable analyses and the results are submitted to the state for review and approval. If the data show that Mill Service is able to reduce the leachable metals to below the applicable standards (i.e., TC levels), the State authorizes Mill Service to accept and treat that specific generator's waste. The State also uses the results of the total constituent analysis to identify hazardous constituents of concern (i.e., those constituents that have total constituent concentrations in excess of 20 times the TC level).

Mill Service also records the pH, and collects visual information on the preacceptance sample, including: appearance, phase separation, odor, and color. These observations are used as a "fingerprint" to verify that the incoming wastes are the same as the ones initially submitted for the treatability studies. Mr. Springer noted that wastes derived from soil investigations and remedial actions generally are more completely characterized by the generator than are other routine process-derived wastes.

Upon arrival at the Yukon facility, the characteristics of the incoming wastes are checked for conformance to the "fingerprint" sample. Once the fingerprint analysis is completed and the waste shipment is accepted for treatment, the truck is instructed to transport its cargo at either the solid waste treatment area or the liquid waste area. Solid wastes are trucked to the solid waste stabilization and solidification (SWSS) unit. Mill Service does not employ any particle size reduction operations; all wastes are minus one inch diameter.

The SWSS unit was built four years ago and is an outdoor unit with no protection from the elements (rain water is only a problem when wastes are shipped off-site for disposal because of the added weight of the rain). The SWSS unit consists of three mixing pits that are each approximately 15 feet wide by 30 feet long and 12 feet deep. The walls and floor of each mixing pit are constructed out of 18 inches of concrete and 3/4 inch steel, with a leak detection system between the concrete and steel layers. Each pit can hold a maximum of 90 tons (or 75-80 cyds). Mill Service defined a batch as the residue from three pits (or 220-240 cyds). At full capacity, Mill Service can process four batches per day (or 12 pits of waste). Mr. Springer stated that based on the operational experience of the facility operators, a TSP dosage of approximately 2 percent is placed in to the empty mixing pit (untreated wastes that exhibit TCLP concentrations of <10 mg/L of lead generally receive less than 2 percent TSP). The solid waste is then off-loaded into the mixing pit. A small dosage of lime is then added for pH buffering. No weighing of reagents -- other than number of excavator buckets -- is used for measuring reagent additions.

Workers then use an excavator with a 65 foot reach to physically mix the contents of pit. It takes approximately 20 to 30 minutes to add the reagents and between 30 and 60 minutes to completely mix the contents of the mixing pit. Mr. Springer noted that Mill Service currently treats General Battery Corporation's (GBC) battery slag by mixing one ton of the TC-hazardous slag with one ton of GBC's non-hazardous scrubber sludge. This process results in reducing the TCLP concentration of lead exhibited by the treatment residue to below the proposed UTS level of 0.37 mg/L 90 percent of the time.