9433.1986(22)

SAMPLING REQUIREMENTS FOR ESTIMATING VARIABILITY OF WASTES FOR DELISTING

18 DEC 1986

Jack H. Luckhardt
Manager, Corporate Safety and
Health/Environmental Affairs
Keller Industries
18000 State Road 9
Miami, Florida 33162

Re: Delisting Petition #650

Dear Mr. Luckhardt:

I am responding to a letter dated September 30, 1986, in which you outline several reasons why Keller Industries should not have to submit additional test results (besides the single organic analysis already performed) for the impoundment subsoils at Keller's Milford, Virginia facility. I believe that the information requested in the letter sent to you by Technical Resources, Inc. (TRI), date September 9, 1986, is necessary for the further review of the petition, and so the remaining three quadrants of the impoundment subsoils must also be evaluated for organics.

The first point you raise, that no organics would be expected in the other three quadrants if none were detected in the first quadrant sample, is fallacious. Such a procedure may not allow the evaluation of the waste in terms of prior management, accidental spills, of "hot spots," and certainly does not allow for evaluation of laboratory error. The Agency's experience is that predictions of waste consistency cannot be made on the basis of a single composite sample. Such a value is not statistically defensible and will not allow a valid estimate to be made of the variability of the waste. The federal regulations also require a minimum of four samples to be evaluated in a delisting petition (see 40 CFR §260.22(h)). The fact that the impoundment is no longer active does not excuse Keller from meeting the same delisting standards that all waste managers must meet in order to receive exclusions

for their wastes.

The agency has provided guidance on numerous occasions to petitioners to indicate how many samples must be evaluated in a petition. The Agency's method of dividing impoundments and landfills into equal-sized quadrants (a minimum of four)

of no greater than 10,000 ft2 each, selecting sampling points at random, and collecting complete-depth core samples has been in active us for several years. The Agency's guidance document, "Petitioners to Delist Hazardous Wastes," was published in April 1985, and also describes this same method for sampling solid wastes. The requirement of four samples does not subject Keller Industries to a sampling program any more rigorous than that routinely performed by any other facility.

In response to your point that Keller's treatment system was designed to create a homogeneous waste, I wish to point out that the delisting evaluation must include an appraisal of the uniformity or variability manifested by the waste. Process variability has been found in the past to be quite substantial at a number of different facilities, as seen in test data (on file at the Agency) submitted in support of other delisting petitions. Homogeneity of a waste cannot be assumed but must be proven in a delisting petition.

You have established the presence of substantial quantities of natural vegetation in the impoundments, and have cited this vegetation as the cause of the elevated TOC levels exhibited by the subsoils. I agree that this occurrence is very likely in Keller's impoundment, and also believe that the TOC results may not accurately depict potential concentrations of toxic organic compounds. I do not believe that use of the TOC test as a screening procedure for the presence of toxic organic compounds in Keller's impoundment subsoils is effective, and do not believe that TOC levels should serve in any was as a basis for limiting sample size. My office will adhere to its previously published guidance, namely the requirement for a minimum of four representative samples.

The Agency affirms the previous information request that was forwarded to Keller Industries by TRI. In order to ensure the timely review of the petition, the information should be forwarded to this office as soon as possible. If you have

additional questions concerning the review process, please contact me at (202) 382-4783.

Sincerely,

Scott J. Maid
Environmental Protection Specialist
Permits and State Programs Division

cc: A. McLaughlin, TRI
Joel Karmazyn, Region III