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 Los Alamos, New Mexico 87544

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HAZARDOUS WASTE SECTION

TA-50

Mr. C. Kelley Crossman  
 Hazardous Waste Bureau  
 Environmental Improvement Division  
 1190 St. Francis Drive  
 Harold Runnels Building  
 Santa Fe, New Mexico 87503

Dear Mr. Crossman:

Thank you for your letter dated March 21, 1989, regarding the disposition of effluent from the Batch Treatment System (BTS) at Los Alamos National Laboratory (Laboratory). Further discussions between you and Alice Barr of HSE-8 of the Laboratory indicate that some level of understanding has been reached regarding the handling of this effluent. This letter is intended to confirm some of the issues in question.

One of the main points in your letter was that because the effluent resulted from treatment of hazardous waste it would be considered a treatment residue rather than a wastewater as referenced in the New Mexico Hazardous Waste Management Regulations (HWMR-5), Part II, Section 261.3(c)(2)(i). (Wastewater described under this regulation is excluded from the definition of hazardous waste.) While it is true that the effluent is from a treatment process, the wastewater contained volatile organic constituents prior to such treatment. These constituents would not undergo treatment in the BTS and would not necessarily be considered a "treatment residue" per se. It follows that it would be appropriate to apply the exclusion from the definition of hazardous waste as referenced above.

A concern raised during your discussions with Ms. Barr was the source of these organic constituents. Specifically, you implied that the source might indicate that the waste stream should be considered hazardous waste listed for organic constituents as well as for that which it was originally determined hazardous. These organics may also be present in the original process chemicals prior to use. Telephone conversations with two chemical manufacturing companies indicated that it is possible the raw chemicals might contain such compounds.

In any case, the preamble to the November 17, 1981, Federal Register final rule discussing the above-referenced exclusion suggests that the Environmental Protection Agency does not consider the presence of small quantities of these constituents in wastewaters received by wastewater treatment plants worthy of regulation as a hazardous waste, regardless of their source. In other words, the concentrations would not imply that the wastewater should be regulated as hazardous.

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Another concern expressed in your letter was the method of determining the volume of solvents in the wastewater. As you have discussed with Ms. Barr, I understand that the enclosed description would be acceptable to the Environmental Improvement Division for this determination. It would also be appropriate to sample the wastewater after the treatment process rather than before, provided the constituents in question were not expected to undergo treatment in the BTS.

In conclusion, it appears that the discharge of BTS effluent containing minute quantities of organic constituents to the Laboratory's Industrial Wastewater Treatment Plant would not be considered the discharge of hazardous waste as long as the analytical requirements of the exclusion can be met. If further discussion of this matter is warranted, please call James Phoenix at 667-5288 as soon as possible.

Sincerely,



Harold E. Valencia  
Area Manager

Enclosure

cc:

B. Hamilton, Hazardous Waste Bureau, EID  
A. Tiedman, ADS, LANL, MS A120  
K. Hargis, (HSE8-89-254-1, 4/27), HSE-8, LANL, MS K490  
R. Koenig, HSE-7, LANL, MS E518

METHOD FOR THE VOLUME DETERMINATION  
 HWMR-5, PART II, SECTION 261.3(a)(1)(iv)

In those instances when knowledge of process cannot be used to document absence of listed hazardous waste solvents in the effluent from the Batch Treatment System (BTS), we propose to use the exclusion described in HWMR-5, Part II, Section 261.3(a)(1)(iv). A weekly composite sample will be analyzed from the headworks of the radioactive liquid waste treatment plant at TA-50-1 for the constituents cited in parts (A) and (B) of the above-mentioned regulation. The average concentration of each category ((A) and (B)) will then be computed from the analytical results and the volume of flow at the headworks will be calculated. In an effort to ensure consistency, an average of the composite samples from the most recent 3 week period will be established to be compared with each weekly average concentration from the BTS.

A sample from the BTS effluent will also be taken and analyzed for the same constituents referenced in this exclusion. This sample will be taken from the known volume of effluent present in the BTS prior to discharge. Effluent will then be temporarily stored in tuff tanks while awaiting analytical results. The combination of the TA-50-1 average and the weekly average of the BTS effluent samples will be evaluated to determine if the cited exclusion can be achieved.

In order to obtain the final concentration of solvents entering the headworks, the weight of solvents in each respective category ((A) and (B)) for both the BTS and the TA-50-1 plant will be individually totaled. The cumulative solvent weight for each category will then be divided by the total volume of liquid to be entered into the TA-50-1 plant. This value would then represent the resultant mixture's concentration (A or B) as it enters TA-50-1 (see equation below). No effluent from the BTS will be discharged to the TA-50-1 plant if the conditions necessary for the exclusion cannot be satisfied.

The waste generator will document that process knowledge of the individual waste streams indicates either the absence or presence of spent solvents. If process knowledge confirms the absence of such compounds, the wastes will be discharged without composite weekly samples being collected from the BTS.

V = volume (l)

C = concentration (mg/l)

$$(V \text{ (BTS)} \times C \text{ (BTS)}) + (V \text{ (TA-50)} \times C \text{ (TA-50)})$$

C (final) =

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$$V \text{ (BTS)} + V \text{ (TA-50)}$$