

MARCH 28, 1989

Mrs. S. S. Sule  
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P. O. Box 93  
Thane-400 601 India

Dear Mrs. Sule:

This letter is in response to your letter dated December 13, 1988, in which you requested information on wastes generated from the production of electrolytic manganese dioxide.

As I understand the situation, Electrolytic Manganese Company (EMC) generates a waste in India that contains 30-40% siliceous matter, 10-15% oxides of manganese, 10-15% oxides or hydroxides of iron, 4-5% manganese sulfate, and various other constituents including sulfates of barium, calcium and aluminum oxide.

Specifically, you asked four questions: 1) What are the United States Environmental Protection Agency's views on the disposal of wastes generated during the production of electrolytic manganese dioxide? 2) Is it advisable to dump wastes generated from this process in marshy lands near sea coasts? 3) What experiences have electrolytic manganese dioxide manufacturers had with disposal of their wastes? 4) What are the liquid effluent and solid waste disposal standards in the United States with respect to soluble manganese and sulphate? I will answer each as best I can in the following paragraphs.

In response to your first question, Title 40 of the Code of Federal Regulations (CFR), Parts 240-271, include our regulations on waste disposal in the United States. A copy of this document is enclosed for your information.

In response to the second question, under the Resource Conservation and Recovery Act of 1976, as amended, it is not permissible to open dump waste materials into the environment. Furthermore, Section 404 of the Clean Water Act specifically protects wetlands (as well as other surface waters) from this type of disposal. Section 402 of the Clean Water Act prohibits open dumping into surface waters without first obtaining a National Pollution Discharge Elimination Systems (NPDES) permit. In short, open dumping electrolytic manganese dioxide wastes (or any wastes) into marshy lands would not be advisable in the United States. A copy of 40 CFR Parts 100-149, which contains the regulations pertaining to the Clean Water Act, is enclosed.

Your third question, related to experiences in the United States with disposal of electrolytic manganese dioxide wastes, is the hardest to address. I did not find any specific information on the waste disposal practices in the U. S. I did speak with Charles Rouf of J. G. Baker in New Jersey. J. G. Baker manufactured manganese dioxide at their facility until approximately 1974. Mr. Rouf informed me that he understood the manganese dioxide production process and yet he had not heard of an electrolytic manganese dioxide production process. In fact, Mr. Rouf suggested that U. S. facilities may be phasing out manganese dioxide production due to the evolution of a more cost efficient process. In any event, if manufacturers in the U. S. generated a solid waste, they are required to comply with 40 CFR Parts 240-271.

The answer to your fourth question is that solid waste disposal (which includes liquids) in the U. S. is regulated the Resource Conservation and Recovery Act of 1976, as amended. This law is codified in regulations which are contained in the enclosed CFR. Disposal of liquid effluents is regulated by Section 402 of the Clean Water Act (see 40 CFR Parts 104-140).

Finally, you asked for information on devices used to measure gas flows during isokinetic sampling of stack gases. Specific test methods can be found in 40 CFR Part 60, Appendix A, a copy of which is enclosed.

I hope this information will be useful to you. If I can be of further assistance, please let me know.

Sincerely,

Stephen L. Cochran  
Environmental Protection Specialist  
Waste Characterization Branch