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TITLE: Status of Spent Pickle Liquor Used in Production
of Ferric Chloride

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Regulations: 40 CFR 261.2

Subject: Status of Spent Pickle Liquor Used in Production of Ferric Chloride

Addressee: Harry Seraydarian, Director, Toxics and Waste Management Division,
Region IX

Originator: John H. Skinner, Director, Office of Solid Waste

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Summary:

The memo clarifies the status of spent pickle liquor used in the production of ferrous and ferric chloride at two chemical companies.

JUL 16 1985

SUBJECT: Status of Spent Pickle Liquor Used in the
Production of Ferric Chloride

FROM: [Redacted] Skinner, Director
Office of Solid Waste (WH-562)

TO: Harry Seraydarian, Director
Toxics and Waste Management Division
Region IX (T-1)

This memorandum responds to your inquiry of June 18, 1985, regarding the status of spent pickle liquor used in the production of ferrous and ferric chloride at Chem West Industries, Inc. (Fontana, CA) and Imperial West Chemical Company (Pittsburg, CA).

The information attached to your memorandum indicates the Chem West Industries, Inc. receives spent pickle liquor (by pipeline) from Kaiser Steel Corp. The spent material is piped into tanks containing steel scrap to neutralize the free hydrochloric acid to below a certain percentage. The material is then discharged to lined surface impoundments to concentrate (recover) the ferrous chloride. After neutralization of the acid and concentration of the iron, the material is chlorinated and sold as technical grade ferric chloride.

A similar situation exists at the Imperial West Chemical Company. Spent pickle liquor received at this facility is treated with ferric oxide and lime to decrease its acidity; this treatment also has the effect of increasing the concentration of ferrous chloride.^{1/} The material is concentrated (recovered) in a surface impoundment and sold directly as ferrous chloride or further processed to produce ferric chloride.

^{1/} For both Chem West Industries, Inc. and Imperial West Chemical Company, the process of mixing the spent pickle liquor with scrap iron or ferric oxide produces ferrous chloride. Thus, it could be argued that this material is used as an ingredient. However, based on our understanding of the process, the primary purpose of the mixing is to reduce the acidity in the spent pickle liquor. In addition, if the acidity (HCl concentration) is below the level of concern, this activity would probably not be conducted. Thus, we believe that any ferrous chloride that is generated is incidental and not a major purpose of this particular activity.

The process conducted at these facilities in which useable ferrous chloride is first recovered from the spent pickle liquor before it is used to produce ferric chloride is considered a reclamation activity. According to the revised definition of solid waste, "spent materials, listed sludges, and listed by-products that are processed to recover usable products, or that are regenerated... are solid waste..." (50 FR at 633-634, January 4, 1985). As such, these materials are subject to regulation under RCRA prior to the reclamation operation. Once the ferrous chloride is recovered, the material would no longer be a waste. Although it may appear that the exclusion for secondary materials used as ingredients to make new products would apply in this case, it is clearly stated in the preamble that if the material is to be put to use after it has been reclaimed, the material is still a solid waste until reclamation is completed. Thus, the fact that wastes may be used after being reclaimed does not affect their status as wastes before and while being reclaimed.

Consequently, in the case of Chem West Industries, Inc., and Imperial West Chemical Company, the spent pickle liquor used in the production of ferrous and ferric chlorides at these facilities is regulated under RCRA prior to the reclamation operation. Thus, the generators of the spent pickle liquor must comply with Part 262 and both Imperial West Chemical Company and Chem West Industries, Inc. must comply with Parts 264 and 265 for any storage of the pickle liquor prior to recycling. The recycling activity itself (i.e., the reclamation operation), however, is exempt from regulation; thus, the tanks and surface impoundments used as part of their recycling process are currently exempt from regulations. If, however, the material were to escape from the unit used in the recycling process (i.e., leach from the waste in the surface impoundment and contaminate ground water), this action would constitute disposal and would be subject to regulation under RCRA. (See 50 FR 642, January 4, 1985.)

I hope that this memorandum adequately responds to your inquiry. If you have questions or require additional information, please call Matthew Straus or Jacqueline Sales, of my staff, at (202) 576-5511.