

Totally Enclosed Treatment Exemption For Scrap Metal Recycler

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OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive # [REDACTED]

MEMORANDUM

SUBJECT: Totally Enclosed Treatment
FROM: Marcia Williams, Director *Marcia Williams*
Office of Solid Waste (WH-562)
TO: David Stringham, Chief.
Solid Waste Branch, Region V
SHS-JCK-13

This is the regulatory clarification you requested on December 30, 1985 for the application of the totally enclosed treatment facility exemption to a tank treating emission control dusts at a scrap metal recycler. The system you describe is not totally enclosed because of the reasons given below.

Your description of the Grede foundry indicates that it heats scrap in a cupola. Emissions from the cupola rise into a hood which is connected to a baghouse via ducts. Ms. Randi Kim of your staff pointed out that hazardous waste is not generated prior to the baghouse unit, and the hood is not directly connected to the cupola. The emission control sludge captured in the baghouse is EP toxic for lead, and possibly chromium, according to Jim Roberts of the Michigan Department of Natural Resources. Grede Foundries proposes to directly connect a mixing tank to the baghouse by pipeline where the dust will be rendered nonhazardous by mixing with nonhazardous foundry waste sands and dusts containing bentonite clay. Since the mixing tank does not exist, we cannot determine whether the tank can technically prevent release of hazardous waste into the environment during treatment through use of traps, recycle lines, etc. Therefore, the central issue you raise is whether the mixing tank can be considered directly connected to the industrial production process, satisfying one condition of a totally enclosed treatment facility as defined in §260.10.

The definition in §260.10 of totally enclosed treatment facilities specifies that the treatment must be directly connected to an industrial production process. In your foundry example,

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the cupola is part of the industrial production process, since it produces reusable metal; and the baghouse is part of the waste treatment process, since the sludge is not associated with product or raw materials, i.e., the sludge is disposed of, not recovered for further recycling. Therefore, the treatment that occurs downstream of the baghouse cannot qualify for a totally enclosed treatment exemption, since the cupola is open to the air before the hood collects the dust.

Although our preliminary information indicates that adsorption to clay can be an acceptable treatment method, you should pursue the question of whether the specific clay adsorption process proposed for this facility will provide the effective treatment that would allow it to be permitted as a treatment facility. Carlton Wiles, ORD/Cincinnati, FTS 684-7871, may be able to provide you with further guidance on clay adsorption treatment standards that should be incorporated into the treatment permit to assure effective treatment.

With alternate management practices, the emission control sludge would not be defined as a solid waste, and, therefore, would not be a RCRA hazardous waste. If the fines were returned to the cupola for metal recovery, the entire process would be viewed as closed loop recycling, and the baghouse sludge would not be considered to be a solid waste according to §261.2(e)(1)(iii). If the sludge were reclaimed elsewhere, it also would not be considered to be a solid waste, according to §261.2(c)(3). Sludges being reclaimed are not considered to be solid waste unless specifically listed by EPA, and this particular sludge is not so listed.

Alternatively, the system could be engineered differently. By connecting the hood directly to the cupola, the system could then meet the criteria for being directly connected to an industrial production process. The system may then qualify as a totally enclosed treatment system if the treatment met the technical standards for being closed to the environment.

Since mixing the baghouse dust with bentonite clay as described would require a RCRA permit for treatment, Grede Foundries may wish to pursue one of these other approaches that are not regulated under RCRA. According to data from the 1981 mail survey, many waste streams of K061 and K069 sludge are recycled both on and off site, so Grede may find that recycling is a cost effective management strategy. If you have any questions about this matter, you can contact Irene Horner of my staff at FTS 382-2550.

cc: Solid Waste Branch Chiefs
Regions I-IV and VI-X
Jim Roberts, Michigan DNR