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TOTALLY ENCLOSED TREATMENT EXEMPTION FOR WET-AIR OXIDATION UNIT (VERTECH)

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OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

Mr. Ridgeway M. Hall, Jr., Esq.
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1100 Connecticut Ave, N.W.
Washington, D.C. 20036

Dear Mr. Hall:

This is in response to your letter of August 2, 1985, and our meeting with you and your client, VerTech, on September 13, 1985, asking our opinion on whether the VerTech wet-air oxidation system could be considered a totally enclosed treatment system and thus exempt from the regulatory requirements of the Resource Conservation and Recovery Act (RCRA) Subtitle C. You provided the Environmental Protection Agency (EPA) with the generic plans for a wet air oxidation process that could be directly connected to a hazardous waste generator's process equipment. Since the meeting in September, Jack Binning and Gerry Rappe provided additional details on the nature of the gaseous phase and above ground treatment unites in the process in order to support your contention that the process could be considered a totally enclosed treatment facility.

After reviewing the information provided on the process blueprints, written descriptions of the treatment process, and data on treatment of a synthetic waste stream, it is our opinion that the VerTech process is not totally enclosed under RCRA. The definition in §260.10 is:

> "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized (45 FR 33076).

The May 19, 1980, Federal Register elaborated on the intent of the totally enclosed exclusion:

> Commenters pointed out that in some production processes, wastes (particularly acid and alkaline solutions) are treated in-pipe, often resulting in a non-hazardous discharge. EPA agrees that to classify "totally enclosed treatment systems," such as pipes, as hazardous waste treatment facilities...would not make a great deal of sense. These facilities by definition do not release wastes or waste constituents into the environment.... The key characteristic of such a facility is that it does not release any hazardous waste or constituent into the environment during treatment. Thus, if a facility leaks, spills, or discharges wastes or waste constituents into the air during treatment, it is not a "totally enclosed treatment facility" within the meaning of these regulations (45 FR 33218).

A review of the regulation and preamble demonstrates that the totally enclosed treatment exemption was intended to exclude from regulation a very narrow subset of treatment facilities. The regulation provides only one example: neutralization in pipes. The preamble emphasizes that a facility that discharges wastes or waste constituents to the air during treatment cannot be considered totally enclosed. Your wet-air oxidation unit, like may other types of thermal treatment unites (defined in 40 CFR 260.10), does emit constituents to the air during treatment. The totally enclosed treatment exemption was not intended to exclude such units.

The enclosed regulatory clarification, prepared in July 1981, in response to an inquiry from Travenol Labs, limits totally enclosed treatment "to pipelines, tanks, and to other chemical, physical, and biological treatment operations which are carried out in tank-like equipment...." While the clarification does recognize some situations in which minor releases to the air would not preclude eligibility for the exclusion, continuous gaseous by-products emitted during treatment represent an open system that interacts significantly with the environment. In our opinion, extension of the exclusion to thermal treatment units would be inappropriate and unjustified by the rationale for the exclusion as expressed in the preamble language quoted above. We

believe that thermal treatment units, like incinerators, should be subject to regulatory control to assure that they are designed, maintained, and operated at all times in a manner that protects human health and the environment.

The Agency does not have 40 CFR 264 Subpart P standards to establish a permit for VerTech's thermal treatment unit. There are, however, other types of standards that might be used to permit an underground wet-air oxidation unit and the associated aboveground treatment processes.

Section 270.65 research, development, and demonstration permits allow short-term, limited operation for processes that have no applicable permitting standards. These RD&D permits are currently being issued for innovative technologies and would allow experimental operation of wet-air oxidation with actual RCRA wastes. A copy of the draft guidance manual for RD&D permits is being sent to you under separate cover.

Part 264 Subpart X Miscellaneous facilities regulations are currently undergoing accelerated rulemaking development. Currently, promulgation is anticipated in December 1986. Subpart X will provide EPA with permitting standards that could be applied to thermal treatment processes.

You also may be required to meet the requirements for treatment tanks. The tank regulations proposed on June 26, 1985, 50 FR 26444, would allow treatment in underground tanks that cannot be entered for inspection, and, based on our preliminary review, the VerTech process may meet the proposed standards for secondary containment. These proposed tank regulations are scheduled for promulgation in June 1986. Presently, tank regulations do not allow permitting of an underground tank that cannot be entered for inspection.

In any case, thermal treatment that occurs one mile underground present unique permitting requirements not specified for any RCRA unit. Section 3005(c)(3) of the Act and 40 CFR 270.65(a)(3) allow EPA or the State to add terms and conditions to permits when necessary to protect human health or the environment. Therefore, when a permit is issued under a particular subpart of 40 CFR part 264, additional permitting standards my apply, such as the operating conditions of a thermal unit and conditions from the Safe Drinking Water Act covering aspects of

construction and operation of injection wells (e.g., sealing, cementing, location, pressures, size and grade of casing, log, and reporting). The underground injection standards that may apply can be found in 40 CFR 146.12(b)(1)-(7), §146.12(d)(d), §146.12(e), §146.13(b)(1)-(4), §146.13(c)(1) & (2), and §146.14. Specific standards will be specified during the permitting process.

I appreciate your patience while we addressed the difficult policy issues created by your request. EPA welcomes the opportunity to work with you to develop wet air oxidation as an environmentally acceptable alternative to incineration and other types of chemical/ physical and biological wastewater treatment systems.

Sincerely yours,

Original Document signed

J. Winston Porter
Assistant Administrator

Enclosure