UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

Certified Mail - Return Receipt Requested

October 14, 1992

James W. Baker, President and CEO
Dayton Water Systems, Inc.
1288 McCook Avenue
Dayton, OH 45404

Dear Mr. Baker:

Pursuant to our meeting on October 1, 1992, the United States Environmental Protection Agency (EPA), Region I, has evaluated your information and other information regarding the status of spent ion exchange resins used to treat metal contaminated rinsewaters from electroplating operations, and has determined that these resins are F006 hazardous wastes. This interpretation was based on a review the process information submitted by you, and other information obtained by EPA.

To understand the basis for the determination above, a brief discussion of the regulatory status is as follows:

Dayton Water Systems has developed an ion exchange unit designed to remove heavy metals from contaminated rinsewaters from electroplating operations. This process, as described by yourself during our meeting on October 1, 1992, and in the literature provided to EPA during that meeting, collects rinsewaters contaminated with heavy metals from electroplating rinse tanks, feeds these contaminated rinsewaters through ion exchange resin columns to remove the heavy metals, and returns the treated water to the rinse baths.

The process, as described above, alters the chemical composition of the contaminated rinsewaters by removing the heavy metals, and is defined as treatment pursuant to 40 C.F.R. § 260.10 of the regulations. The ion exchange system, based on the literature and your description of the process, is also a totally enclosed treatment system as defined at 40 C.F.R. § 260.10 because the unit is directly connected to an industrial production process, and constructed in a manner which prevents the release of hazardous wastes or constituents into the environment during treatment.

The only wastes generated by this system are the spent ion exchange resins that become contaminated over time due to the removal of heavy metals and sludges generated by the ion exchange unit. Upon removal from the treatment system, the ion exchange

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resins and the associated sludges are no longer part of the "closed loop" process and require a waste determination.

The ion exchange resins fall into several categories for waste classification purposes. First, upon removal, the contaminated ion exchange resins can no longer serve the purpose for which they were produced (metals removal) without further processing and are classified as spent materials pursuant to 40 C.F.R. § 261.1(c)(1). The contaminated ion exchange resins would be further classified as a sludge pursuant to 40 C.F.R. § 260.10 because they are solid, semi-solid, or liquid wastes generated from an industrial wastewater treatment system.

The source of these sludges are the contaminated rinsewaters produced by electroplating operations. Sludges generated from the treatment of contaminated rinsewaters (wastewaters) from electroplating operations are classified as EPA hazardous waste code F006 pursuant to 40 C.F.R. § 261.31(a) [A letter enclosed dated on May 5, 1987 from EPA Headquarters in Washington, D.C. addresses this same issue].

Dayton Water Systems proposes to regenerate the ion exchange resins from the units. A waste that is regenerated meets the definition of "reclaimed" as defined at 40 C.F.R. § 261.1(c)(4). A material that is reclaimed is also considered "recycled" as defined at 40 C.F.R. § 261.1(c)(7). Hazardous waste sludges that are recycled and are also listed in 40 C.F.R. § 261.31 are solid wastes pursuant to Table 1 pursuant to 40 C.F.R. § 261.2(c)(4).

As both a solid and hazardous waste, the ion exchange resins are subject to the generator requirements of 40 C.F.R. Part 262. Under federal law, this includes the use of a hazardous waste manifest for generators producing greater than 220 lbs of **all** hazardous wastes generated per month. The specific applicable regulatory requirements are also dependent on any State specific regulations that may be required by the particular State a generator may be located in.

During our October 1, 1992 meeting, you referred to the treatment system as being "totally enclosed". Your explanation of this "closed loop" process not only included the actual treatment system, but also the handling, shipment and treatment of the contaminated resins to off-site locations for ion resin regeneration and eventual metals recovery. As a point of clarification in this matter, the only "closed loop" part of this treatment system is the actual ion exchange unit and all related piping and equipment while the unit is in operation. Once wastes or other materials are removed from this treatment system, they no longer are part of this "closed loop" process, and are subject to the regulations.

The significance of the term "totally enclosed treatment system" is that any potential customer that may use this system would not be required to obtain a hazardous waste treatment facility permit

under Federal law pursuant to 40 C.F.R. § 265.1(c)(9) of the regulations. Again, this interpretation may differ depending on specific regulations required from State to State.

I should also inform you that I contacted the State of Ohio's Environmental Protection Agency regarding your letter dated October 11, 1990. This letter identified the ion exchange resins as characteristic sludges. The letter further stated that characteristic sludges that are reclaimed are not classified as solid waste, and, therefore, not subject to regulation under the Resource Conservation and Recovery Act (RCRA).

According to Ohio EPA officials, the characteristic sludge referenced in this letter referred to a specific type of sludge generated by a Minnesota facility [See Attachment]. This sludge was generated by one of your ion exchange units used to process coolant wastewaters generated by electrical discharge machining. This process is not an electroplating operation. The Ohio EPA will issue another letter better clarifying this issue to avoid any future misunderstandings between yourself and other regulatory agencies concerning the proper identification of this waste.

I appreciate the opportunity to provide technical assistance for Dayton Water Systems, Inc. in its efforts to comply with the RCRA regulations. Please call me at (617) 573-5759 if you have any questions regarding the issues addressed in this letter.

Sincerely,

Kenneth B. Rota

Kenneth B. Rota, Environmental Protection Specialist
U.S. Environmental Protection Agency
Waste Management Division
RCRA Enforcement Unit

cc: Ohio EPA
RI DEM