



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-249903

September 21, 1992



The Honorable Alan B. Mollohan
House of Representatives

Dear Mr. Mollohan:

On January 10, 1992, you asked us for information on the Environmental Protection Agency's (EPA) approval of the hazardous waste incinerator being constructed in East Liverpool, Ohio, by Waste Technologies Industries, Inc. (WTI).

In subsequent discussions with your staff, we said that we were unable to conduct a comprehensive review because of our ongoing and previously scheduled environmental protection reviews. However, we agreed with your staff to gather information on (1) the siting of the incinerator, (2) the potential risks posed by its operation, and (3) any other issues that may affect the operation of the incinerator. Your staff stated that this information would assist you in responding to concerns expressed by your constituency.

On June 2, 1992, we briefed you and your staff on the information. At that time, you asked us to summarize that briefing in a letter.

BACKGROUND

In order to construct and operate an incinerator, WTI was required to obtain permits from both the state of Ohio and EPA. In September 1981 WTI filed two applications. One was filed with the state of Ohio for two permits: (1) an air emissions permit to allow WTI to construct the facility and (2) a hazardous waste installation and operation permit. The other application was filed with EPA for a Resource Conservation and Recovery Act (RCRA) permit to construct and operate a hazardous waste facility. The three permits were issued by the respective agencies during 1983-84. In addition, Ohio later issued WTI a

GAO/RCED-92-265R, Ohio Hazardous Waste Incinerator

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National Pollutant Discharge Elimination System permit for discharging treated wastewater into the environment.

In June 1989, after the initial permits were issued, EPA authorized Ohio to administer the state's RCRA program. According to an Ohio official, because WTI's RCRA hazardous waste permit was issued by EPA before Ohio was authorized to administer its own RCRA program, WTI will operate under two concurrent hazardous waste permits: (1) a federal permit subject to EPA's oversight and (2) a state RCRA equivalent permit subject to Ohio's oversight. In addition, Ohio will oversee WTI's compliance with the air emissions and water discharge permits. These permits allow WTI to receive a range of regulated hazardous wastes for blending and incineration.

In early 1990, 9 years after WTI applied for its construction permits, construction of the WTI facility began in East Liverpool. In October 1990 WTI submitted a RCRA permit modification request to EPA Region V for additional spray-drying equipment to eliminate the wastewater discharge from the incinerator.¹ In February 1992 Region V granted the modification. The modification was subsequently appealed, but in July 1992 the Administrator of EPA upheld Region V's decision. While the modification was being appealed, EPA granted WTI temporary authorization to finish constructing the spray dryer and "start up" the incinerator (this phase allows for the limited burning of wastes to help stabilize the facility's operations). In addition, the temporary authorization states that WTI may conduct a trial burn if two conditions are met: (1) WTI must respond to EPA's request for information regarding WTI's corporate structure so that EPA can evaluate WTI's ability to comply with the financial assurance requirements of the RCRA permit and (2) WTI must have its trial burn plan approved by EPA. As of September 2, 1992, EPA had received from WTI a draft trial burn plan and information regarding WTI's corporate structure and was reviewing it. Also as of that date, EPA had not set a trial burn date for the WTI facility.

EPA regulations (40 C.F.R. § 270.41) allow EPA to modify, or ~~revoke and reissue a RCRA permit when certain conditions are met.~~ According to the regulations, when EPA receives

¹The spray dryer is a piece of pollution control equipment that eliminates liquid effluent from the waste incineration process.

any information regarding the facility, it may determine whether one or more causes for modification, or revocation and reissuance of the permit exist. These causes include alterations to the facility, new information not available at the time of the permit's issuance, and the proposed transfer of the permit. If a cause exists, EPA may modify, or revoke and reissue the permit, subject to the limitations of the regulations' facility-siting requirement. The facility-siting requirement provides that the suitability of the facility's location will not be considered while the permit is being modified, or revoked and reissued, unless such new information or standards indicate that a threat to human health or the environment exists which was unknown when the permit was issued.

SUITABILITY OF WTI FACILITY'S SITING

We found that the state of Ohio, not EPA, has primary responsibility in regulating the facility's siting. In processing WTI's permit application (1981-84), Ohio considered the following siting criteria: floodplain and seismic restrictions as well as population density, property values, and health risks. Ohio concluded that the facility presented a minimum risk of adverse impact to the community and met the state's requirements. This conclusion was not made without considerable input from concerned groups. Ohio conducted a hearing with participation from WTI and the state of West Virginia; staff from Ohio's EPA; a citizens' group; and Columbiana County, Ohio, health officials and East Liverpool officials. After the hearing, Ohio issued the hazardous waste permit in April 1984. However, the permit was challenged by groups that were still concerned over the health and environmental risk posed by the facility. In December 1985 an Ohio appeals court upheld the permit. Subsequently, the permit was appealed to the Ohio Supreme Court, which upheld the permit on December 24, 1986.

Regarding the issue of facility siting, it should be recognized that federal siting standards, such as floodplain and seismic standards, also have to be met. In addition to siting standards, there are other federal laws that protect land use, including those that address archaeological and historical sites, critical habitats for endangered or threatened species, and wetlands. For example, the WTI facility is located within a 100-year

floodplain.² Although the standard does not prohibit the construction of a hazardous waste facility that is located within a floodplain, it requires that the facility be constructed, operated, and maintained to prevent washouts of any hazardous waste by floods. EPA determined that WTI had constructed its facility to meet the federal floodplain standard and other federal laws that protect certain land use. Before EPA issued WTI's RCRA permit in June 1983, a public hearing was held in December 1982.

As stated earlier, EPA regulations limit the suitability of a facility's location from being considered when the permit is being modified unless new information indicates that a threat to human health or the environment exists which was unknown when the permit was being issued. New information on such items as spray-drying technology and emission limits on metals and hydrogen chloride were available to EPA during the permit modification process. However, EPA concluded that (1) they were not relevant to the floodplain location--a siting standard--that was known when the RCRA permit was issued to WTI and (2) no adverse health effects would be expected from the operation of the incinerator where presently located. Therefore, EPA stated that it was not necessary to review the suitability of the facility's location during the permit modification process. Nonetheless, EPA considered the new information in modifying WTI's permit, which took place in 1992. Our review of the written record, correspondence, and interviews suggests that EPA followed its regulations in concluding that it did not have a basis for considering the suitability of WTI's location when it modified WTI's permit.

POTENTIAL SITE RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

Your second concern focused on the risk posed by the facility's operation. As you may be aware, EPA has stated that WTI's compliance with the RCRA and air permit requirements during operations will ensure that the facility does not pose an unacceptable risk to human health or the environment.

In responding to concerns expressed that a permit issued in 1983 will not reflect the most up-to-date incinerator

²Defined as any land area which is subject to a 1-percent or greater chance of flooding in any given year from any source.

technology, EPA stated that the most recent permit modification, issued in February 1992, has established permit conditions that fully meet the incineration technology performance standards reflected in its current regulations to protect human health and the environment. Prior to approving the modification, EPA provided a public notice and allowed the public to comment on the proposed permit modification. As presently provided for in the RCRA permit, the WTI incinerator must, among other things, (1) meet specific waste analysis to verify that waste feed is consistent with permit specifications; (2) undergo trial burns that meet performance standards for the destruction of waste; and (3) meet operating requirements specified in the permit, including waste feed rate and combustion temperature. In addition, the WTI staff must continuously monitor operating conditions and maintain monitoring records. WTI must also comply with federal air quality and emission standards established by EPA under the Clean Air Act Amendments of 1990 and meet the emission limits for metal and hydrogen chloride set forth under EPA's 1991 Boilers and Industrial Furnaces rule.

In addition to EPA's position, in 1983, Ohio had a health risk assessment prepared for the WTI facility, as required by regulation. The assessment addressed risks associated with the inhalation of Principal Organic Hazardous Constituents--the standard contaminants of concern from incineration and the transportation of hazardous waste. The assessment of the facility and a subsequent health evaluation concluded that the incinerator would represent a minimum adverse environmental impact and a negligible risk to the human health population in the East Liverpool area.

In a 1991 report, the Center for Hazardous Materials Research at the University of Pittsburgh concluded that the risk assessment on the WTI incinerator appears to have been completed in accordance with Ohio's guidance in existence at the time. However, the report stated that the risk assessment is deficient by current standards, as it does not cover all applicable exposure routes, such as ingestion and dermal (skin) contact, or potential chemicals of concern. The report stated that the 1983 assessment addressed ~~only the inhalation route of exposure~~ and did not address the exposure risks from metals such as lead and mercury.

As a result of these types of more recent concerns, EPA is conducting a two-phased risk assessment of the WTI facility to evaluate the potential health effects. In July 1992 EPA

announced the completion of the first phase--the issuance of a screening document based on conservative assumptions about the risks associated with inhalation. The objective of the assessment was to determine the extent and likelihood of harm to public health resulting from smokestack emissions. EPA concluded that no adverse health effects would be expected from the operation of the incinerator with the spray dryer. (As stated earlier, WTI requested that the dryer equipment be added to the incinerator in 1990.) EPA stated, however, that the screening document predicts that the concentration of lead in the ambient air could slightly exceed the regulatory standard. But EPA also stated that this standard is well below a level of concern for health. The findings are based on computer models which use regional meteorological data and hypothetical emission data.

EPA stated that the second phase of the risk assessment will be more detailed because it will use local meteorological data presently being collected and emissions data obtained from the incinerator's actual trial burn, which has not occurred. An EPA Region V official stated that the assessment will evaluate exposure from inhalation as well as ingestion and dermal contact. Depending on the assessment's results, EPA could require changes to WTI's hazardous waste permit, which could require additional restrictions on the facility's operation. The official estimated that the second phase would be completed in the fall of 1993.

OTHER ISSUES THAT MAY AFFECT THE
OPERATION OF THE INCINERATOR

In our briefing to you, we also stated that issuing operating permits to WTI does not eliminate the need for EPA or the state to ensure that the facility is operating in a manner that protects health and the environment. EPA is aware that, although WTI's continuous monitoring

equipment³ can be effective in detecting violations, periodic on-site inspections and necessary enforcement actions--including penalties against violators--are important to ensure that the facility stays in compliance with the permit requirements.

However, EPA and states have had a history of less-than-adequate performances in carrying out their programs. In a series of past reviews,⁴ we found that EPA and state inspections have not been thorough and complete and their enforcement actions have been untimely and inappropriate. In addition, state enforcement authorities--which are responsible for more than 70 percent of all environmental enforcement actions--do not regularly recover economic benefits in penalties.

Another issue that we identified for you was that the Columbiana County Port Authority, the owner of the land where the WTI facility is located, was not being required to be a co-permittee prior to the approval of the original WTI permit application. This raises the following concerns: Is the permit valid without the Authority's name on it, and can the Authority be financially liable for the safe operation of the WTI facility, even though its name is not on the RCRA permit?

³WTI has installed continuous monitoring equipment in its incinerator that will automatically cut off waste feed to the incinerator if operating conditions deviate from the permit's requirements. Also, the monitoring equipment in the incinerator's smokestack should provide direct, accurate measurements of pollutant emissions; will operate up to 24 hours per day; and should detect violations.

⁴Hazardous Waste: Impediments Delay Timely Closing and Cleanup of Facilities (GAO/RCED-92-84, Apr. 10, 1992); Environmental Enforcement: Penalties May Not Recover Economic Benefits Gained by Violators (GAO/RCED-91-166, June 17, 1991); Air Pollution: Improvements Needed in Detecting and Preventing Violations (GAO/RCED-90-155, Sept. 27, 1990); Hazardous Waste: Many Enforcement Actions Do Not Meet EPA Standards (GAO/RCED-88-140, June 8, 1988); and Hazardous Waste: Facility Inspections Are Not Thorough and Complete (GAO/RCED 88-20, Nov. 17, 1987).

In response to public comments on its 1980 permitting regulations, EPA stated that some facility owners have historically been absentees, knowing and perhaps caring little about the operation of the facility on their property. EPA believed that the Congress intended that this should change and that facilities' owners should know and understand that they are assuming joint responsibility for compliance with the RCRA regulations when they lease their land to a hazardous waste facility. Thus, the EPA regulations in effect when the WTI RCRA permit was approved in 1983 required that the facility owner sign the owner certification item of the permit application. If the facility operator was someone other than the owner, then the operator was to sign the operator certification. The regulation's definition of "facility" includes all contiguous land used to treat hazardous waste. However, EPA stated that the WTI permit application and the subsequent RCRA permit did not include the Columbiana County Port Authority's name. In May 1992 an EPA Region V official stated that, while EPA currently requires the land owner to co-sign the permit application and any final permit for a hazardous waste facility, this stricter interpretation of the regulations was not common practice in 1983. However, we found that, as of August 1992, EPA was reconsidering adding the Authority's name to the RCRA permit.

Because these two issues are important to the safe operation of the incinerator, you may want to follow up with the EPA Administrator on these issues.

Finally, as we pointed out in our briefing, the EPA Inspector General was conducting a review of WTI for another Member of Congress. You may wish to contact the EPA Inspector General to see whether he could provide you with more information on WTI.

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The information contained in this letter was obtained through interviews with EPA Region V officials, WTI representatives, and an Ohio State EPA official. Additionally, we examined a number of documents from EPA, Ohio's EPA, the Tri-State Environmental Council, and WTI, and correspondence between officials from EPA Region V and you.

We hope that this information will assist you in your efforts to ensure that correct decisions are made in

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allowing the facility to begin operations. If you have any further questions about this matter, please contact me on (202) 275-6111, or Gerald Killian, Assistant Director, on (202) 512-6501.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Richard L. Hembra".

Richard L. Hembra
Director, Environmental
Protection Issues

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