

Court Overturns EPA Order To Protect Lansing Groundwater From Ammonia

The United States Court of Appeals in Philadelphia recently vacated an emergency order issued by the United States Environmental Protection Agency's (EPA) Chicago office under the Safe Drinking Water Act (SDWA) that would have required W.R. Grace & Co. (Grace) to remove ammonia from the aquifer that provides drinking water for the City of Lansing, Michigan. The decision is unusual because EPA relied on a rarely used statute, the case was decided by a court in Philadelphia instead of the Midwest, and the result was an unusual defeat for EPA.

Grace disposed of ammonia-containing wastes from fertilizer manufacturing at the Motor Wheel Disposal Site located near Lansing, Michigan. Other companies disposed of various other wastes at the site, including volatile organic compounds (VOCs) and metals. In 1986, EPA listed the site on the National Priorities List (NPL) maintained under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). In 1991, EPA selected a CERCLA cleanup plan for the site that included capping the landfill and pumping and treating groundwater from the contaminated upper aquifer below the site. EPA's Superfund program considered VOCs to be the principal groundwater contaminants, although the Record of Decision established groundwater cleanup criteria for a number of other hazardous substances in the upper aquifer, including a cleanup criterion for ammonia of 34 milligrams per liter (mg/l). The Superfund program did not require any remediation at the lower aquifer, also known as the Saginaw Aquifer, which is a source of drinking water for the City of Lansing. In 1994, EPA entered into a consent decree with a group of potentially responsible parties (PRPs), including Grace, under which the PRP group agreed to implement the Superfund cleanup plan.

In 1997, the Lansing Board of Water & Light (Lansing) became concerned that the lower aquifer was becoming contaminated with ammonia. In 1998, the Michigan Department of Environmental Quality (MDEQ) became concerned that the 34 mg/l cleanup criterion for ammonia in the Superfund consent decree was not stringent enough to protect the lower aquifer. Lansing and MDEQ were concerned that even low levels of ammonia in the lower aquifer might cause a problem known as "nitrification" at the drinking water supply plant, and might promote the growth of microbes that could cause the drinking water plant to violate federal and state drinking water regulations. MDEQ asked the Safe Drinking Water Branch

at EPA's Chicago office to address the problem. In October, 1998, EPA's Safe Drinking Water Branch concluded that 1.75 mg/l would be an appropriate cleanup criterion for ammonia to protect the Lansing water supply. After reviewing a report prepared by a consultant hired by Lansing, the Safe Drinking Water Branch decided that an even more stringent standard of 0.5 mg/l would be appropriate. Background levels of ammonia in the lower aquifer are approximately 0.1 to 0.5 mg/l.

In February, 1999, EPA issued an emergency order under Section 1431 of the Safe Drinking Water Act requiring Grace to reduce the level of ammonia in the lower aquifer to 0.5 mg/l. In response, Grace asked EPA to form a technical committee to consider various options for dealing with ammonia in the lower aquifer. EPA withdrew its order, established the Saginaw Aquifer Technical Evaluation Team ("SATET"), and announced that it would issue a new order based on the findings and recommendations of SATET. SATET included representatives from Grace, EPA, Lansing, and MDEQ. SATET considered a variety of options, including a pump and treat remedy for the lower aquifer, blending contaminated water with uncontaminated water, and treating contaminated water at the wellhead to remove ammonia. In May, 1999, SATET issued a final report recommending that ammonia be removed from the lower aquifer by a pump-and-treat system as a long term remedy, and that other options be used in the short term to prevent ammonia-related problems at the drinking water plant. EPA and Grace disagree on whether Grace concurred with or objected to SATET's final report.

In July 1999, EPA issued a second emergency order under Section 1431 of the SWDA, based on the findings and recommendations in SATET's final report. The order required Grace to reduce the level of ammonia in the lower aquifer to 1.2 mg/l by installing and operating a pump-and-treat system, and to take several interim actions to ensure that ammonia in the raw water taken in by the plant does not exceed 1.2 mg/l.

Grace asked the United States Court of Appeals for the Third Circuit, located in Philadelphia, Pennsylvania, to review EPA's emergency order. The Safe Drinking Water Act allows a party that receives an EPA emergency order to seek judicial review by the United States court of appeals for the circuit in which the party resides or transacts business. That explains why the court of appeals in Philadelphia, rather than the court of appeals in Cincinnati, reviewed the EPA order in this case.

The Third Circuit overturned EPA's order for two reasons. First, the court held that EPA had failed to provide a rational basis for the 1.2 mg/l cleanup criterion for ammonia. EPA stated in the order that it based the 1.2 mg/l cleanup criterion on a conclusion in the SATET final report that 1.2 mg/l is the maximum amount of ammonia that the Lansing water treatment plant can handle. The court concluded that EPA's statement "mischaracterizes the record," because the SATET final report shows that SATET had, in fact, conducted no technical study to determine the maximum level of ammonia that the plant could handle without jeopardizing public health. The court concluded that SATET apparently treated the 1.2 mg/l criterion "as an unquestioned baseline in SATET's mission statement." EPA pointed to two sections of the SATET final report to support its contention that SATET had conducted a technical study to support the 1.2 mg/l criterion. The court concluded that neither section of the report showed that SATET had done so. Therefore, the court concluded that the 1.2 mg/l criterion was not supported by any technical study, and that EPA's order selecting that criterion was therefore arbitrary and capricious. The court noted that EPA and SATET had reviewed a study by a consultant hired by Lansing that had concluded that any ammonia exceeding 0.5 mg/l would adversely affect the water treatment plant. However, the court held that EPA could not use the consultant's report to support its order because the order did not cite that report, and because that report called for a cleanup criterion different from the criterion included in the order.

The court then considered whether there was a rational basis to support EPA's conclusion that removal of ammonia from the lower aquifer by a pump-and-treat system was necessary to protect public health. EPA stated in the order that SATET had concluded "that the only way to avoid this risk was through the removal of excess ammonia from the Saginaw aquifer." The court found, on the contrary, "that there was sharp disagreement among the members of SATET as to whether this form of remediation would be necessary." To support its position, EPA relied on a statement in the SATET report that "the ultimate resolution of the [ammonia problem] lies in remediation of the Saginaw Aquifer." The court found that that statement by SATET does not mean that a pump and treat remedy is the only way to protect public health, as EPA had stated in its order. The court further explained that EPA should have provided "more than a conclusory statement from SATET" to support EPA's selection of a pump and treat remedy. The court was also critical of the lack of reasoning in the SATET final report on this issue, noting that final report deleted, without explanation, a discussion in SATET's draft report that had stated that public health

could be adequately protected by either turning off selected wells or by replacing contaminated wells. The court noted that the SATET final report provided no rational explanation for recommending pump and treat remediation of the aquifer when the draft report had previously concluded that other strategies would also be effective. The only apparent explanation for the difference between the discussion in the draft report and the discussion in the final report was that the Lansing representative on SATET strongly opposed anything other than the pump and treat remedy. The court held that a decision based on the opposition of one technical representative is not rationally based on the facts concerning ammonia contamination and the availability of various remedies to protect public health. The court therefore overturned the order because it failed to provide a rational explanation for requiring pump and treat remediation.

This case is significant because it demonstrates a willingness by the court to make a thorough and critical examination of the factual support for an EPA administrative order issued to address an “emergency.” Few courts in the past have engaged in such a critical analysis of an “emergency” order. This case is unusual because EPA chose to issue an emergency administrative order under Section 1431 of the SDWA rather than an order under Section 106 of CERCLA. If it had issued an order under CERCLA, Grace would not have been entitled to judicial review of the order until after it had fully complied with it. *W.R. Grace & Co. v. U.S. Environmental Protection Agency*, Nos. 99-5662 & 00-3302 (3rd Cir. Aug. 10, 2001).

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