ILLINOIS POLLUTION CONTROL BOARD
February 3, 1994

IN THE MATTER OF:	)	
	)	
AMEROCK CORPORATION, ROCKFORD	)	
FACILITY, SITE-SPECIFIC	)	R87-33
RULEMAKING PETITION FOR	)	(Rulemaking)
AMENDMENT TO 35 ILL.ADM.CODE	)	
PART 304, SUBPART C	)	

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

This matter is before the Board on Amerock Corporation's August 24, 1987 petition for site-specific rulemaking. Amerock seeks site-specific relief at its Rockford manufacturing facility from the effluent limitations for chromium (total and hexavalent), copper, zinc, cyanide, and total suspended solids (TSS). The general effluent limitations currently applicable to Amerock are set forth at 35 Ill. Adm. Code 304.124(a). Amerock asks that those concentration-based limitations be revised to mass-based limitations.

The Board's responsibility in this matter arises from the Environmental Protection Act (Act). (415 ILCS 5/1 et seq. (1992).) The Board is charged by the Act to "determine, define and implement the environmental control standards applicable in the state of Illinois." (415 ILCS 5/5(b) (1992).) More generally, the Board's rulemaking charge is based on the system of checks and balances integral to Illinois environmental governance: the Board bears responsibility for the rulemaking and principal adjudicatory functions, while the Illinois Environmental Protection Agency (Agency) is responsible for carrying out the principal administrative duties. The Agency's duties include administering the regulations that are proposed for adoption in this rulemaking.

A merit hearing on this petition was held in Rockford on January 25, 1988. Briefs were filed by both Amerock and the Agency. On April 19, 1988, the Department of Energy and Natural Resources(ENR) issued its decision that it would perform an economic impact study (EcIS) on the requested site-specific rule.[1] That EcIS, entitled "Economic Impact Study on Amerock

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[1] Section 27 of the Act formerly provided for ENR to perform EcISs. (See, e.g. Ill.Rev.Stat. 1989, ch. 111½, par. 1027.) That statutory provision was repealed in 1992 (P.A. 87-860), and EcISs are no longer part of the regulatory process.

Site-Specific Rule Change", was filed with the Board on November 19, 1990. (Exh. 17.) An economic impact hearing was held in Rockford on July 18, 1991. Amerock subsequently filed an additional brief, although the Agency did not.

BACKGROUND

Amerock owns and operates a facility in Rockford, Illinois which manufactures high-quality decorative hardware products. The facility includes a wide variety of manufacturing operations necessary to convert alloys of steel, zinc, and copper, as well as plastics, into finished products for the home. Manufacturing operations at the plant include sheet metal fabrication, zinc diecasting, plastic molding, burnishing, buffing, cleaning, electroplating, coloring, painting and lacquering, assembling, packaging, and shipping. Amerock employs approximately 1500 people at its Rockford facility. (Tr1. at 8-9.)[2]

Most work areas in which dust or metal-containing particles are generated are vented to the outside air. Amerock states that this venting is done to comply with the requirements of the federal Occupational Safety and Health Act, and to otherwise ensure employee health and safety. Amerock states that all of its air emission sources are in compliance with the Board's air pollution regulations. However, some of the material exhausted to the atmosphere (primarily metal-containing particulate) settles on the roof of the facility and is washed into the roof drainage system by rain and snow melt. The roof drainage system is routed to eight separate outfalls (numbered 000-007 in Amerock's NPDES permit) which discharge into North Kent Creek.[3] Outfall 003 transports non-contact cooling water in addition to the roof drainage. (Tr2. at 69-70.)

In 1983 Amerock discovered that effluent discharges from the eight outfalls exceed, from time to time, effluent limitations for chromium (both hexavalent and total), copper, cyanide, zinc, and TSS. Amerock petitioned this Board for a variance for those parameters, and the Board granted variance on September 20, 1985, in PCB 84-62. As modified on November 21, 1985, the variance expired on September 1, 1987. On August 24, 1987, Amerock filed a petition for extension of that variance, as well as the instant

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[2] "Tr1. at ___" indicates the transcript of the January 25, 1988 merit hearing, and "Tr2. at ___" refers to the transcript of the July 18, 1991 economic impact hearing.

[3] Amerock notes that stormwater permit rules became effective on November 16, 1990, pursuant to the Clean Water Act, but states that its NPDES permit already included a stormwater component. (Tr2. at 93.)

petition for site-specific rulemaking. The Board granted the variance petition on January 9, 1992, in PCB 87-131. As modified on February 6, 1992, the variance extended from December 21, 1987, to December 21, 1992. On February 4, 1993, in PCB 92-120, the Board granted an extension of variance until December 22, 1995, or until final action on this request for site-specific relief.

REQUESTED RELIEF

Section 27(a) of the Act provides that the Board may adopt regulations specific to individual persons or sites. In making our rulemaking decisions, the Board is required to consider:

> the existing physical conditions, the character of the area involved, including the character of surrounding land uses, zoning classifications, the nature of the existing air quality, or receiving body of water, as the case may be, and the technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution. (415 ILCS 5/27(a) (1992).)

Amerock contends that although there are technically feasible options for compliance with the effluent standards, the cost of those options far outweighs any environmental benefit to be gained by compliance. Thus, Amerock argues that compliance is economically unreasonable, and that the Board should grant Amerock's request for mass-based, rather than concentration-based, effluent limitations for chromium (total and hexavalent), copper, zinc, cyanide, and TSS.

COMPLIANCE ALTERNATIVES

As part of its compliance evaluation, Amerock retained Lancy International to identify compliance options. (Exh. 1, App. B.) Lancy identified five options: 1) collection and treatment of the contaminated run-off water; 2) source abatement (installation of air pollution control equipment; 3) discharge of the roof run-off to the sanitary sewer; 4) combination of all outfall discharges with the cooling water discharges from outfall 003 before final discharge to North Kent Creek; and 5) collection and hold-up of all run-off water with slow-bleed into the cooling water outfall. Amerock did not further evaluate options four and five because it believes that those options are contrary to the non-dilution principle in the Board's regulations. (Tr2. at 73; see 35 Ill. Adm. Code 304.102.) After the merit hearing in this matter, Amerock further studied the sanitary sewer discharge option (option three), and decided that it was not an appropriate control option when compared to options one and two. (Tr2. at 74-75.)

The collection and treatment option involves collecting the stormwater run-off and transporting it to a new wastewater treatment facility on Amerock's property. The run-off would be neutralized and any heavy metals removed, and the treated stormwater would be discharged either to North Kent Creek or to the Rockford Sanitary District sewer system. The cost of this option was estimated at $1.485 million in November 1986, with estimated operating costs of $300,000 per year. This option has the advantages of treating the entire stormwater run-off, and an enclosed treatment facility at a single location. Amerock states that the disadvantages of the collection and treatment option are high equipment maintenance costs, high capital costs to treat relatively clean water, increased sewer user fees, production of a hazardous waste, and additional permitting requirements. (Tr1. at 20-21; Exh. 5(a).)

The source abatement option involves the installation of baghouses to capture zinc diecast melting furnace exhaust, and wet scrubbers to capture the plating and other finishing operation exhaust. The installation cost of this option was estimated at $1 million in November 1985, with a 1987 estimate of $306,000 for the baghouse only, excluding engineering, transportation, ducting, and other installation charges. Annual operating costs were estimated at $200,000. The source abatement option has the advantage of eliminating the contamination at the source, and is less costly than the collection and treatment option. Amerock states that the disadvantages include extensive equipment maintenance, the possibility that effluent produced by the wet scrubbers will exceed the capacity of the existing pretreatment facilities, the requirement that baghouse dust be handled as either a special waste or a hazardous waste, and additional permitting requirements. (Tr1. at 21-23; Exh. 5(b).)

The EcIS also evaluated the collection and treatment option and the source abatement option. The EcIS found that the source abatement option would have total costs, over a 25-year period, of $1.8 million, while the collection and treatment option would have total costs of $1.9 million. The study concluded that the source abatement option was least costly, and that it would remove nearly 100 percent of the contaminants. By contrast, collection and treatment fails to achieve the same removal efficiency, especially since some particulates are blown off the roof and would not enter a collection system. (Exh. 17 at 9-10; 77-100.)

Amerock, however, contends that the EcIS fails to adequately evaluate the scope and costs of both of these compliance options. Amerock maintains that the present value cost of the collection and treatment option is in excess of $2.5 million, and the present value cost of the source abatement option is approximately $7 million. (Tr2. at 79-94, 133-142; Exh. 16.)

ENVIRONMENTAL IMPACT

Amerock contends that its stormwater discharges cause virtually no adverse environmental impact on North Kent Creek. Amerock maintains that biological stream studies demonstrate that there are a greater number and a greater diversity of benthic macro-invertebrates, as well as a greater number of fish and fish species, downstream of Amerock's discharges than upstream. (Tr1. at 16-17; Exh. 1, App. D; Exh. 2, 3, and 4.) Amerock also states that macroinvertebrate biotic indices establish that the downstream biological integrity of North Kent Creek has not been adversely affected by Amerock's discharges. (Exh. 4, Table 2.) Amerock further contends that water quality sampling over a three year period showed only two marginal water quality violations, for zinc. (Exh. 17 at 46.) Finally, Amerock maintains that stream sediment analyses demonstrate that there is no accumulation of cyanide, total chromium, or hexavalent chromium in the sediments of North Kent Creek. (Exh. 1.)

The Agency disagrees with Amerock's conclusions on the environmental impact of Amerock's discharges. The Agency argues that much of the evidence presented by Amerock is based upon flawed assumptions, so that Amerock's conclusions are unsupported. For example, the Agency believes that the sampling was too limited in scope, in terms of the number of sampling events and the failure to obtain a true composite. The Agency also believes that were more than two water quality violations, including several upstream from Amerock's discharges.

The EcIS also addressed the environmental impact of Amerock's stormwater discharges. The EcIS concluded that there is a potential hazard to aquatic life from copper and possibly zinc, even though North Kent Creek is a relatively good biotic resource. The EcIS further concluded that the metallic constituents are not toxic to humans or non-aquatic animals at concentrations found either by contact or through accidental ingestion. (Exh. 17 at 152; see generally Exh. 17 at 104-154.) In response, Amerock argues that the environmental conclusions in the EcIS are of very limited value, and contends that the conclusion that there is a potential hazard to aquatic life from copper and zinc is unfounded.

ECONOMIC REASONABLENESS

As noted above, Amerock admits that compliance with the applicable effluent limitations is technically feasible. However, Amerock maintains that compliance costs must be evaluated in relation to the environmental benefit to be achieved from compliance. Amerock contends that in this case, the cost of any technically feasible compliance option far exceeds any conceivable environmental benefit. Therefore, Amerock argues that compliance with the existing effluent standards is

economically unreasonable.

The Agency criticizes the evidence submitted by Amerock on the issue of economic reasonableness, stating that Amerock has failed to provide any evidence on the economics of the compliance options in the context of Amerock's overall operations. The Agency contends that Amerock, as proponent, has an obligation to provide adequate economic information to provide a basis for cost comparison.

CONCLUSIONS

After reviewing the testimony, exhibits, and arguments of the participants in this case, the Board finds that site-specific relief is warranted. It is undisputed that compliance is technically feasible, but we agree with Amerock that comparing the costs of compliance with the minimal environmental impact of Amerock's stormwater discharges leads to a conclusion that compliance, at this time, is economically unreasonable. We believe this case is analogous to the Board's decision in Petition for Site-Specific Volatile Organic Material Emission Limitations for National Can Corporation (January 22, 1987), R85-28, where the Board found that requiring the installation and operation of control equipment would impose a financial hardship without conferring a measurable environmental impact. There is some dispute over the environmental impact of Amerock's stormwater discharges, and some questions remain unresolved. However, Amerock has not requested relief from the water quality standards, and we reiterate that relief from the effluent standards does not provide a defense to any water quality violation. We believe that Amerock has presented sufficient information to conclude, at this time, that the environmental impact of Amerock's stormwater discharges is minimal.

However, the Board is uncertain what effect the air toxic provisions of the federal Clean Air Act (42 USC §7401 *et seq.*), as well as the air toxic control provisions of the state Environmental Protection Act (415 ILCS 5/9.5 (1992)), may have on Amerock's practice of venting its workspaces directly to the air, without add-on controls. Therefore, we propose to grant only a temporary site-specific rule, until December 31, 2000. This period will allow the impact of the air toxic programs to become clear, so that we can be fully informed before granting a permanent site-specific rule.

ORDER

The Clerk is directed to file the following proposed rule with the Secretary of State for first notice publication in the Illinois Register:

TITLE 35: ENVIRONMENTAL PROTECTION

SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
PART 304
EFFLUENT STANDARDS

SUBPART C: TEMPORARY EFFLUENT STANDARDS

Section 304.303 Amerock Corporation, Rockford Facility

a) This section applies only to stormwater discharges from Amerock Corporation's Rockford facility into North Kent Creek in Winnebago County, Illinois.

b) Instead of the general effluent limitations set forth in Section 304.124(a) for the following listed parameters, stormwater discharges from Amerock's Rockford facility shall not exceed the following limitations:

CONSTITUENT	STORET NUMBER	LIMITATION (lbs/mo)
Chromium (total)	01032	4.0
Chromium (hexavalent)	01033	1.0
Copper	01042	20.0
Cyanide	00720	3.0
Zinc	01092	60.0
Total Suspended Solids	00530	300.0

c) This section expires on December 31, 2000.

(Source: Added at 18 Ill.Reg. _____, effective _____)

IT IS SO ORDERED.

M. McFawn abstained.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 3rd day of February, 1994, by a vote of 6-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board