

APR 15 2004

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD STATE OF ILLINOIS
Pollution Control Board

Noveon, Inc.)
)
v.) PCB 91-17
) (Permit Appeal)
Illinois Environmental)
Protection Agency)

NOTICE OF FILING

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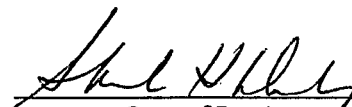
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PLEASE TAKE NOTICE that on **Thursday, April 15, 2004**, we filed the attached **POST-HEARING MEMORANDUM OF NOVEON, INC.** with the Illinois Pollution Control Board, a copy of which is herewith served upon you.

Respectfully submitted,

NOVEON, INC.

By:



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THIS FILING IS SUBMITTED ON RECYCLED PAPER

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POST-HEARING MEMORANDUM OF NOVEON, INC.

Noveon, Inc., f/k/a The BFGoodrich Company ("Noveon"), through its undersigned attorneys, respectfully submits this Post-Hearing Memorandum in support of its appeal of NPDES Permit No. IL0001392.

I. Issues On Appeal and Relief Requested

The NPDES Permit subject to this appeal was issued on December 28, 1990. Noveon timely appealed four conditions of the permit. The first condition concerns an effluent limit for ammonia placed in the permit by Illinois EPA based on Section 304.122(b) of the Board's rules, which was promulgated by the Board in 1972 but never previously applied by the Illinois EPA in any of Noveon's prior NPDES permits. Noveon requests that the Board remand the permit to rescind the effluent limit for ammonia, which is not required under Section 304.122. A plain reading of this regulation supports Noveon's position, not the position of Illinois EPA, and the ammonia limit must be rescinded because it has no legitimate basis. The second condition on appeal concerns the Illinois EPA's designation of two outfalls in the permit for purposes of monitoring and compliance: Outfall 001 and Outfall 001A. Noveon's discharge is physically one outfall, and Noveon requests that the Board reverse and remand the separation of this outfall. The third condition on appeal is the toxicity testing and biomonitoring requirements. Illinois EPA has conceded that if the ammonia limit is rescinded or relief is granted in the pending

adjusted standard proceeding (AS 02-5), this condition is not necessary. Finally, Noveon has appealed the manner in which Illinois EPA interpreted and applied the federal regulations governing discharges from Organic Chemicals, Plastics, and Synthetic Fiber (OCPSF) facilities. Based on a review of additional federal guidance issued after the initial hearings in this appeal, Noveon is withdrawing this portion of the appeal.

II. Statement of Facts and Procedural History

A. The Noveon and PolyOne Manufacturing Facilities

The Noveon Henry Plant is located on the West Branch of the Illinois River in Marshall County, to the north of the City of Henry. 1991 Tr. 26.¹ When the NPDES Permit was issued, the Henry Plant was owned by BFGoodrich. It had two manufacturing units: a specialty chemicals manufacturing unit, which started operations in 1958 producing rubber chemicals, and a PVC resins unit that began operating in 1965. In the period prior to issuance of the 1990 NPDES Permit, two major expansions took place: the start-up of the Recirculating Fluid Bed Coal Fired Boiler and a Rubber Accelerator expansion (the Cure-Rite 18 process). 1991 Tr. 26-28 and Pet. Ex. 1.

The Henry Plant has had a very positive economic impact on the City of Henry and the State of Illinois through taxes and employment. This economic impact is demonstrated in a Fact Sheet concerning the former BFGoodrich attached at Petitioners Ex. 1.² This exhibit also shows the Henry Plant's payment of wages and benefits to all employees for the two manufacturing units, which in 1991 exceeded \$17 million for the combined BFGoodrich operations. Finally,

¹ Noveon will refer to the transcript of hearings that occurred in 1991 as "1991 Tr. ____" and the transcript of the hearing from 2004 as "2004 Tr. ____."

² This financial information does not include Noveon's financial expenditures for worker salaries or environmental compliance subsequent to issuance of the 1990 NPDES Permit, although the figures provided are comparable and certain financial information is included in the testimony in the pending adjusted standard proceeding.

this exhibit demonstrates the financial commitment BFGoodrich made to the environment, spending \$14 million from 1972 to 1982 on environmental controls and an additional \$6.9 million in 1987 to upgrade the wastewater treatment area. Pet. Ex. 1. Both manufacturing units of BFGoodrich were subsequently sold to independent entities but still operate at Henry. The resins unit is now known as PolyOne Corporation, and the specialty chemicals unit became Noveon, Inc. Noveon's wastewater treatment facility continues to serve both Noveon and PolyOne. Pet. Ex. 16 at 5, 6.

The current Noveon Henry Plant is a chemical manufacturing facility. Noveon manufactures two general groups of products. The first general group of products is the rubber accelerators that are used in the vulcanizing process of the tire-curing process for the tire industry. The accelerators decrease the curing time of rubber products (e.g., tires) and are essential for manufacturing and operation of products such as tires. The other product line consists of plastic and rubber anti-oxidants. This manufacturing process produces additives that are used in plastics and rubbers to prevent the degradation of the material from light and heat in products, including such products as rubber baby bottle nipples. 1991 Tr. 30-32.

B. The Wastewater Treatment Facility

A visual depiction of the wastewater source and treatment facility is available in a flowchart at Pet. Ex. 18.³ All wastewater from the Noveon facility's manufacturing areas are discharged for equalization to the Polymer Chemical (PC) Tank, with wastewater from Noveon's Cure-Rite 18 manufacturing area also receiving pretreatment prior to discharge to a separate

³ A more extensive narrative description of the wastewater treatment process is also available at Pet. Ex. 16 and 2004 Tr. 35-47

equalization tank. Following equalization, the wastewater receives additional primary treatment consisting of pH adjustment, addition of coagulant and polymer to assist in removing solids, and primary clarification; secondary treatment consisting of aeration and secondary clarification with returned sludge to maintain an appropriate population of bacteria; and tertiary treatment consisting of filtering wastewater prior to discharge. Pet. Ex. 16 at 5, 6. The PolyOne facility's wastewater is discharged for equalization to the Polyvinyl Chloride (PVC) Tank, with the exception of certain manufacturing wastewater which receives pretreatment unrelated to ammonia prior to discharge to the PVC Tank. The PVC Tank also receives return streams such as backwash water from the sand filter, filtrate from sludge dewatering, and, potentially, primary sludge from the primary clarifier. 2004 Tr. 36, 37. This wastewater is then pumped with the Noveon wastewaters for primary, secondary and tertiary treatment. Pet. Ex. 16, 7.

The Noveon and PolyOne facilities also discharge wastewater to a Storm/Utility Pond, which consists of stormwater runoff and discharges from cooling towers, boilers and well water treatment. A portion of the pond water discharges to the PVC Tank in order to provide the BOD removal required to maintain a minimum operating level in the PVC Tank or is diverted to the PVC Tank when the filter used to treat the remaining pond water reaches capacity. Pet. Ex. 16 at 7; 2004 Tr. 41-42. A portion of the PVC Tank discharge is in turn combined with the PC Tank discharge to ensure the PC Tank discharge is limited to 23 percent of combined influent flow to aeration basins in order to maintain compliance with effluent Biological Oxygen Demand (BOD) concentrations. Pet. Ex. 16 at 7; 2004 Tr. 42. The wastewater is then discharged to the Illinois River through Outfall 001. The remaining pond water goes through a filter for treatment to remove Total Suspended Solids (TSS), and then combines with the other treated wastestreams prior to discharge through a pipe to the Illinois River. The outfall is a pipe that travels

approximately 1,000 yards downstream before turning and going into the Illinois River. 1991 Tr. 87-88.

Nitrification is the conventional treatment for ammonia. Noveon's wastewater treatment facility is constructed similarly to municipal wastewater treatment plants to nitrify ammonia, and in fact the design and operation of Noveon's plant meet the conditions defined in 35 Il. Adm. Code 370.920, 35 Il. Adm. Code 370.1210, and Ten State Standards to grow ammonia-degrading bacteria in order to nitrify ammonia. Pet. Ex. 16, at 9; 2004 Tr. 48. These standards are used by regulators to critique wastewater treatment facility designs to ensure they provide adequate facilities to support complete nitrification.

The ammonia in the Henry Plant wastewater does not nitrify, however, because of the inhibiting effect of certain compounds (principally the building block of accelerator production, mercaptobenzothiazole (MBT)). The lack of nitrification is not due to a lack of equipment or inadequate design, but due to the fact that the bacteria necessary for nitrification will not grow because they are inhibited by the organic nitrogen compounds. Pet. Ex. 16, at 9; 2004 Tr. 48, 49. Importantly, Noveon does not use any significant amounts of ammonia in its processes. PolyOne uses a minimal amount of ammonia in its production areas. The predominance of all ammonia in the effluent is a result of the wastewater treatment. Noveon's influent contains the organic amines, morpholine and MBT. These organic compounds have two effects: first they degrade to form ammonia nitrogen during the wastewater treatment process; second, MBT inhibits nitrification so that ammonia nitrogen is not reduced during wastewater treatment. Pet. Ex. 16 at 8, 9; 2004 Tr. 44-45. It is for these reasons that the unique wastewater flow at the Henry Plant poses significant technical challenges to treat ammonia.

C. Evaluation of Alternatives to Treat Ammonia

When the draft permit was issued in 1990 with proposed ammonia limits, not only did Noveon undertake its own review of literature and its processes to determine whether it could meet the permit condition, but it also engaged Eckenfelder, Inc., a premiere wastewater treatment consulting firm, to provide wastewater treatment consulting services concerning ammonia.⁴ Pet. Ex. 16; 2004 Tr. 31. Noveon looked at the source of ammonia, which was determined to be the degradation of organic nitrogen compounds. Noveon then reviewed various options to eliminate ammonia from the wastewater. These options included reusing the organic nitrogen compound morpholine, which is used to produce accelerators that aid in the vulcanizing process for tires, by stripping and segregating it. 1991 Tr. 78. But this option presented a serious safety concern to plant workers, because the intermediate step of capturing the morpholine was potentially explosive. The process also raised other environmental concerns due to the generation of hazardous waste and quality control issues associated with recycling morpholine. 1991 Tr. 78-79. Noveon also reviewed the possibility of recycling morpholine from the Cure-Rite 18 accelerator process. This alternative presented the same safety and other environmental concerns noted above. 1991 Tr. 80.

Noveon then evaluated pretreatment of the organic nitrogen compounds. The only technologies that were identified for pretreatment were unproven; two were also not actually in use, and a third was a patented proprietary technology in use in only one location in Europe. Further, even with these technologies, the ammonia would still not have met the ammonia limits

⁴ The curriculum vitae of Houston Flippin, Noveon's expert witness at Eckenfelder, n/k/a Brown and Caldwell, may be found at Pet. Ex. 17.

imposed by the draft permit. These pretreatment alternatives were determined to be impractical. 1991 Tr. 82-83.

Finally, Noveon extensively reviewed post treatment technologies,⁵ including ozonation and evaporation, break point chlorination, ion exchange, single-stage nitrification, air stripping, and a separate-stage biological system. None of these treatment processes would have allowed Noveon to consistently meet the NPDES Permit ammonia limitations, and many of them presented other safety and environmental concerns or difficulties of a magnitude that would make them impractical. 1991 Tr. 83-87. Noveon's conclusion from its review of pre-treatment and post-treatment alternatives was that it could not treat, remove or pre-treat the organic compounds in a safe and effective manner, and there was no proven technology available that would allow Noveon to meet the ammonia limits in the NPDES Permit.

D. Course of Proceedings Between Issuance of Draft NPDES Permit and Current Continuation of Permit Appeal with Adjusted Standard Petition

Noveon appealed the four permit conditions on January 24, 1991. The initial public hearing took place on November 19, 1991 and December 16, 1991, at which Noveon presented a substantial part of its case-in-chief. The hearing was continued at that time because of the unexpected illness of Noveon's expert witness at the time, Dr. Patterson, who was afflicted with an eye illness that prevented his participation.

Subsequent to the 1991 hearings, Eckenfelder, n/k/a Brown & Caldwell, continued to assist Noveon in conducting studies and pilot tests to assess methods of treating ammonia at

⁵ Noveon's expert witness, Houston Flippin, was to testify in more detail about Noveon's continued review of post-treatment alternatives, but because much of his work occurred after Illinois EPA issued the permit, Illinois EPA objected to its inclusion in the record and consideration by the Board in this proceeding. See discussion of Illinois EPA's objection at Section III. Nevertheless, Mr. Flippin's testimony is available as Hearing Officer Exhibit 1 and it was also entered in its entirety in the pending adjusted standard proceeding, AS 02-5.

Noveon. During the time between the 1991 hearings and the hearings in February 2004, settlement talks between Noveon and Illinois EPA also proceeded, and Noveon and Illinois EPA regularly met to confer on Noveon's progress and to allow Illinois EPA to have input into the work that was proceeding. Noveon and its consultants performed numerous studies and tests in an attempt to resolve the issues on appeal. Pet. Ex. 16 at 4, 5. While no settlement was reached between the Illinois EPA and Noveon, neither was any new permit issued, and the status quo was maintained between Noveon and Illinois EPA. During this time, Noveon also filed a Petition for Variance. See *BFGoodrich v. Illinois Environmental Protection Agency*, PCB 92-167. Noveon subsequently concluded from its assessment of treatment technologies that no technology was both economically reasonable and technically feasible. As a result, Noveon withdrew the Petition for Variance because, should Section 304.122 be determined to require application of an ammonia limitation, the appropriate mechanism for relief is an adjusted standard, not a variance. See Motion of Noveon, Inc. to Withdraw Variance Petition, PCB 92-167 (June 17, 2002), and Order of the Board, PCB 92-167 (June 26, 2002).

ARGUMENT

III. Noveon's Appeal Should Be Subject to *De Novo* Review

Noveon proceeded at the time of its permit comments in 1990 and on appeal under the assumption that the legal and factual issues on appeal would be heard by the Board under a *de novo* standard of review, and there was no limitation to the record developed before Illinois EPA during the permit proceedings. This standard of review governed the hearings that took place in 1991. At the continuation of the hearings this year, however, Illinois EPA took the position that the hearing was limited to material in existence at the time of the permit proceedings, and the Hearing Officer agreed with this approach. The result was that the testimony of Houston

Flippin, Noveon's expert on the same matters as Dr. Patterson, was entered in a form redacted by Illinois EPA as Pet. Ex. 16. *See* 2004 Tr. 16-20. A substantial amount of information unquestionably relevant to the applicability of 35 Il. Adm. Code 304.122 and on treatment alternatives for ammonia was consequently removed from Mr. Flippin's testimony. The unredacted testimony was entered only as an offer of proof as Hearing Officer Exhibit 1.

At the time of the permit proceedings and the initial round of hearings in this case, there was no question but that the Board's review of an Illinois EPA decision on an appeal of a permit was *de novo*. *See IBP, Inc. v. Illinois Pollution Control Board*, 204 Ill. App. 3d 797, 563 N.E.2d 72 (3d Dist. 1990); *Dean Foods Co. v. Illinois Pollution Control Board*, 143 Ill. App. 3d 322, 492 N.E.2d 1344 (2d Dist. 1986). For permit appeals by an applicant, not a third party, this standard of review for factual determinations is still consistent with the statute. Nothing in the statute has changed that would warrant revising the standard of review to limit the information the Board may consider to the record before the Illinois EPA.

Permit appeals by the applicant, not a third party, are governed by Section 40(a)(1) of the Illinois Environmental Protection Act, 415 ILCS 5/40(a)(1). Section 40(a)(1) of the Act provides that the rules prescribed for Board hearings in Section 32 and subsection (a) of Section 33 of the Act apply to permit appeals. It also provides that the burden of proof is on the petitioner, except with respect to limits in NPDES permits which "are based upon a criterion," in which case "the Agency shall have the burden of going forward with the basis for the derivation of those limits or criterion which were derived under the Board's rules." 415 ILCS 5/40(a)(1). Section 32 of the Act requires hearings before a qualified hearing officer and allows the applicant to submit oral or written argument and testimony and cross-examine witnesses. Section 33(a) of the Act requires the Board to issue a written opinion with the facts and reasons

for its decision. 415 ILCS 5/32 and 33(a). Unlike other provisions of the Act restricting the Board's consideration to information "exclusively on the record compiled in the Agency proceedings," *see, e.g.*, 415 ILCS 40(b), (c), (d) and (e) (applicable to third-party NPDES permit appeals), there is no such limitation in the statutory provisions applicable to this hearing where the applicant is appealing the NPDES Permit.

At the time of the initial hearings, the Board's rules read as follows:

The hearings before the Board shall extend to all questions of law and fact presented by the entire record. The Agency's findings and conclusions on questions of law and fact shall be prima facie true and correct. If the Agency's conclusions of fact are disputed by the party or if issues of fact are raised in the review proceedings, the Board may make its own determination of fact based on the record. If any party desires to introduce evidence before the Board with respect to any disputed issue of fact, the Board shall conduct a *de novo* hearing and receive evidence with respect to such issue of fact.

35 Il. Adm. Code 105.102(b)(8). Subsequently, effective January 1, 2001, new procedural rules by the Board became effective for appeals of final decisions of state agencies. These new procedural rules do not recognize the differences in the statute governing the Board's review depending upon whether the party appealing a permit is the applicant or a third party. *See* 415 ILCS 5/40. Instead, the Board's rules establish one blanket procedure that "[t]he hearing will be based exclusively on the record before the Agency at the time the permit or decision was issued." To the extent the Board's rules differ from the statute, they cannot apply to this proceeding.

The hearing officer's ruling with respect to Mr. Flippin's testimony should be overturned, and Mr. Flippin's testimony should be entered and considered in its entirety. By established caselaw, the standard of review the Board should apply to Illinois EPA decisions appealed by an applicant is still *de novo*. The Board's rules cannot overturn the statute or its interpretation by caselaw. The cases have found that review under Section 40(a) of the statute is *de novo*. *See IBP, Inc.*, 204 Ill. App. 3d 797; *Dean Foods Co.*, 143 Ill. App. 3d 322. This rule must continue

to be applied. All of the issues addressed in Mr. Flippin's unredacted testimony are central to this case, and those areas that were redacted unquestionably relate to areas that were raised in the permit proceedings before the Illinois EPA.

Even if the Board considers the standard of review to have changed, however, fundamental fairness requires that the rules in existence when the NPDES Permit was issued and appealed should continue to be applied. It would be prejudicial to Noveon if the rules applicable to its proceeding were altered during the proceeding. On the other hand, in light of the fact that the prior rules were properly promulgated by the Board and upheld by the courts and governed this case during the prior proceedings, there is no cognizable prejudice to Illinois EPA should those rules continue to be applied in this case. In fact, Illinois EPA expressed its understanding of this standard of review when the hearings proceeded in 1991, and reminded Noveon that the standard to proceed was *de novo*. 1991 Tr. 155.

For purposes of this Post-Hearing Memorandum, Noveon will address only Mr. Flippin's testimony as redacted by Illinois EPA in Pet. Ex. 16. Because Mr. Flippin's testimony was entered in its entirety in the adjusted standard proceeding, however, Noveon will file a later addendum indicating which portions of the post-hearing memorandum to be filed in that proceeding are also relevant and properly admissible in this proceeding,

IV. The Ammonia Limits Placed in the Permit by Illinois EPA Are Improper

In the 1990 permit, for the first time, the Agency determined that Section 304.122(b) of the Board's rules required an ammonia effluent limitation for the Noveon Henry Plant's discharge. Illinois EPA's application of the rule ignores its plain meaning and relies on a misinterpretation that has no basis in the language of the rule, the Board's opinion promulgating it, or any Illinois guidance document. Section 304.122 reads as follows:

- a) No effluent from any source which discharges to the Illinois River, the Des Plaines River downstream of its confluence with the Chicago River System or the Calumet River System, and whose untreated waste load is 50,000 or more population equivalents shall contain more than 2.5 mg/L of total ammonia nitrogen as N during the months of April through October, or 4 mg/L at other times.
- b) Sources discharging to any of the above waters and whose untreated waste load cannot be computed on a population equivalent basis comparable to that used for municipal waste treatment plants and whose total ammonia nitrogen as N discharge exceeds 45.4 kg/day (100 pounds per day) shall not discharge an effluent of more than 3.0 mg/L of total ammonia nitrogen as N.
- c) In addition to the effluent standards set forth in subsections (a) and (b) of this Section, all sources are subject to Section 304.105 [requiring compliance with water quality standards, including those for ammonia].

A. The Agency Is Estopped from Including an Ammonia Limit in the Permit

As noted before, it is important to understand that Noveon does not use any significant amounts of ammonia in any of its processes, although ammonia has been a component of Noveon's wastewater since it started operations in Henry. Illinois EPA has been aware of the presence of ammonia in Noveon's discharge since the 1970s, when the Board passed this regulation. In fact, Illinois EPA placed an ammonia limit in the 1977 draft NPDES Permit issued to Noveon, but Illinois EPA subsequently determined the limit was improperly applied to Noveon and removed the limit. 1991 Tr. 138. No other NPDES Permit contained an ammonia limit until the 1990 Permit, sixteen years later.

Illinois EPA's interpretation that the ammonia effluent limitations in Section 304.122(a) or (b) were inapplicable to Noveon prior to the 1990 NPDES Permit was long-standing. There was no permit limit for ammonia in any of the prior final permits since BFGoodrich began its operations, though Illinois EPA began placing ammonia effluent limits in permits as a result of the adoption of Section 304.122 in 1970. This is readily apparent in the prior permits attached as Petitioner's Exhibit 2 (1978 Permit), Exhibit 4 (1985 Permit), and Exhibit 5 (1986 Permit). The

presence of ammonia was disclosed in permit applications as well. *See, e.g.,* Pet. Ex. 3 at V-1. In fact, the permit writer responsible for the permit on appeal also wrote a 1984 NPDES Permit without an effluent limit for ammonia. 2004 Tr. 159-63.

Noveon relied on the absence of a permit limit for ammonia. When Noveon decides on a new production process for installation, it undertakes an evaluation of the best location among the existing Noveon facilities for the new process. 1991 Tr. 70. Elements that are reviewed include economics of constructing the project; utility services such as electrical, steam generation, and cooling capacities; location to suppliers and customers; the work force; the health, safety and environmental impact; the safety of employees and the public; and regulations. 1991 Tr. 71.

The regulatory review Noveon conducts consists of an evaluation to determine whether the process would meet local and federal regulations when it is developed and installed. Emissions into the air and discharges to water are assessed. With respect to wastewater, Noveon assesses whether the discharges would upset existing treatment at the facility and whether compliance with permits would be maintained. Future regulations are also assessed to determine whether there will be additional costs and controls required. 1991 Tr. 71-72.

The Cure-Rite 18 accelerator expansion, as well as the associated upgrades to the wastewater treatment system to ensure compliance with the BOD limits in Noveon's existing permit, increased organic amines and consequently increased ammonia in Noveon's discharge, although no ammonia is used in this process. 1991 Tr. 105-06. The accelerator expansion was first assessed in 1979, subsequently delayed, reconsidered in 1984, and constructed and started up in 1986-87. The capital costs to construct that process in Henry were in the range of \$12 to \$14 million. Noveon constructed that process and relied on the regulatory limits in place,

including the absence of an ammonia limit, in its regulatory review and its decision to install the new process at the Henry Plant. 1991 Tr. 76, 118-19. While it was apparent that manufacturing the product would result in an increase in ammonia, because there had never been a permit limit in a final NPDES Permit issued to the plant, Noveon did not consider that ammonia would pose an additional cost for construction of the new process. 1991 Tr. 118-19.

Prior to the 1990 permit, Noveon also undertook upgrades to its wastewater treatment facility. Those upgrades were intended to make the facility more efficient and ensure compliance with TSS and BOD limits. Ammonia was not a consideration, again because no ammonia limit had been imposed in a final NPDES Permit. 1991 Tr. 118. As a consequence, however, the increased efficiency also led to greater degradation of organic nitrogen compounds, increasing ammonia in the effluent. 1991 Tr. 105-06.

When the draft permit was issued in 1990, the ammonia limitation was a surprise to Noveon. Ammonia had never been a permit parameter, notwithstanding the prior presence of ammonia in the wastewater at levels that would have exceeded the limits in Section 304.122(b) if that section were applicable. Noveon nevertheless undertook a review to determine whether it could meet the permit condition. The review included looking at the source of ammonia—degradation of organic nitrogen compounds—to determine whether elimination of the organic nitrogen compounds was feasible; assessing recovery and recycling of amines; evaluating pretreatment; and reviewing post-treatment. 1991 Tr. 76-77. Noveon concluded that eliminating the source of inhibition of nitrifying bacteria—principally MBT—would require abandoning any product line responsible for this compound, namely all of the organic compound-using processes. In addition, recycling a primary organic nitrogen compound (morpholine) to remove it from the wastewater would present a safety hazard to Noveon's

operating employees in that the recycled material would be explosive, recycling would generate hazardous waste, and the quality of the products that would be produced with recycled morpholine could not be guaranteed. 1991 Tr. 79-80. In addition to these problems, recycling morpholine would not remove all of the ammonia from the wastewater. And, with respect to treatment options, at the time of the hearing Noveon had assessed a variety of treatment technologies. 1991 Tr. 85-87. Noveon concluded that there was no proven treatment technology that would consistently allow it to meet the draft permit condition.

Noveon relied on this interpretation and the absence of a permit limit for ammonia in constructing its operations at Henry and in evaluating which products to produce at Henry. The plant was constructed at a cost of millions of dollars in reliance on existing permit limits based on existing rules. It would be inequitable to allow Illinois EPA to change its regulatory interpretation after Noveon has relied on it and apply a regulation with which Noveon simply cannot comply. Caselaw on this point is clear. If the meaning of a regulation is debatable,⁶ and circumstances have not changed, an administrative agency is bound by a long-standing interpretation of the regulation. *See Central Illinois Public Service Co. v. Pollution Control Board*, 165 Ill. App. 3d 354, 518 N.E.2d 1354 (4th Dist. 1988) (Administrative agencies are bound by their long-standing policies and customs of which affected parties had prior knowledge). Illinois EPA cannot change the rules to the detriment of a regulated party who has acted in reliance on an interpretation. Noveon reasonably relied on the absence of a permit limit based on Section 304.122(b), because the regulation had been in existence for almost 20 years prior to the 1990 Permit, it was determined by Illinois EPA as inapplicable when questioned by

⁶ Noveon believes that the language of Section 304.122 is clear—that is, it does not apply to Noveon's discharge. But Illinois EPA believes that it does; therefore, we use the term "debatable."

Noveon in 1974, and no ammonia limit based on Section 304.122(b) was ever imposed in a final permit issued by the Illinois EPA until 1990.

B. Section 304.122(a) Does Not Require an Ammonia Limit Because a Population Equivalent Can Be Calculated for Noveon's Untreated Wasteload

By its unambiguous terms, Section 304.122(a) applies to sources that discharge to specified waterways, including the Illinois River, and "whose untreated waste load is 50,000 or more population equivalents." A population equivalent is defined in Board regulations as follows:

Population Equivalent is a term used to evaluate the impact of industrial or other waste on a treatment works or stream. One population equivalent is 100 gallons (380 l) of sewage per day, containing 0.17 pounds (77 g) of BOD₅ (five day biochemical oxygen demand), and 0.20 pounds (91 g) of suspended solids. The impact on a treatment works is evaluated as the highest of the three parameters. Impact on a stream is the higher of the BOD₅ and suspended solids parameters.

See 35 Il. Adm. Code 301.345.

That Noveon's P.E. is less than 50,000 was part of the record before Illinois EPA as it was submitted in written comments on the draft permit by Ken Willings, Noveon's then-Manager of Environmental Health and Safety. The P.E. has also been calculated using permit applications and other documents in the record by Houston Flippin, Noveon's expert witness in this proceeding. Using all relevant calculations, the untreated waste load of the Noveon Henry Plant has a population equivalent of less than 50,000. Pet. Ex. 16 at 12, 13; Pet. Ex. 19; 2004 Tr. 53-55. Consequently, by its plain language, 35 Il. Adm. Code 304.122(a) is not properly the basis for any ammonia effluent limit on the Henry Plant's wastewater discharge.

Population equivalents can be and have been calculated by Noveon's expert Houston Flippin. *See* Pet. Ex. 16 at 11-12; Pet. Ex. 19. Mr. Flippin evaluated data that existed and was

before the Illinois EPA prior to 1990. Based on that data, calculation of the Noveon Henry Plant's population equivalents show the following:

TSS: information in Illinois EPA documents, or pre-1990 applications submitted by Noveon to Illinois EPA, and therefore before Illinois EPA at the time the permit was issued, show a PE ranging from 41,700 PE (1983) to 14,300 (1987-1989).

BOD: information in Illinois EPA documents, or pre-1990 applications submitted by Noveon to Illinois EPA, and therefore before Illinois EPA at the time the permit was issued, show a PE ranging from 4,906 to 14,300.

Flow: information in Illinois EPA documents, or pre-1990 applications submitted by Noveon to Illinois EPA, and therefore before Illinois EPA at the time the permit was issued, show a PE ranging from 7,500 to 14,300.

Pet. Ex. 19; 2004 Tr. 55-60.

Mr. Rick Pinneo, the permit writer at Illinois EPA, agreed that Mr. Flippin "properly calculated" the population equivalents. 2004 Tr. 147. In addition, though not a part of the definition of population equivalents in the Board regulations, a population equivalent can also be calculated based on ammonia nitrogen and Total Kjeldahl Nitrogen (TKN), which is really the thrust of Section 304.122. These population equivalents are also below 50,000. The Noveon Henry Plant's untreated waste load would yield a population equivalent of 20,263 for ammonia nitrogen and 35,793 for TKN. Pet. Ex. 16 at 13.

C. Rule 304.122(b), Cited By Illinois EPA, Does Not Apply to Noveon Because a Population Equivalent Can Be Calculated

Illinois EPA testified that the ammonia limit in Noveon's permit was required by Section 304.122(b) of the Board's regulations. This regulation became effective in 1973, although Illinois EPA did not apply it in a final permit until the 1990 Permit at issue in these proceedings. This is notwithstanding that ammonia has been present in Noveon's wastewater since the 1970s.

Section 304.122(b) requires an ammonia limit for sources "whose untreated waste load cannot be computed on a population equivalent basis comparable to that used for municipal

waste treatment plants.” Section 304.122(b)’s phrase “comparable to that used for municipal waste treatment plants” defines “computed on a population equivalent basis.” It cannot be read any other way. The rule merely questions whether the data exist to express an untreated waste load in population equivalents such as would be evaluated when regulators and municipal plants design or evaluate those plants. It is intended to put the relative size of an untreated wasteload in perspective. 2004 Tr. 51; Pet. Ex. 16 at 11; Pet. Ex. 19. Further, the definition of “population equivalent,” which specifically references industrial wastewater, establishes that the purpose of “population equivalent,” is to facilitate comparisons of *industrial* and other waste to municipal wastewater using the defined factors. See Section 301.345.

Illinois EPA does not appear to have calculated the population equivalents for Noveon, and has in fact conceded that a population equivalent can be computed. 1991 Tr. 127-28. Instead, Illinois EPA has relied on differences it believes are dispositive of the applicability of Section 304.122(b) between Noveon’s wastewater and that of a municipal wastewater. The relevance of those purported differences to the applicability of the rule is not reflected in the language of the rule, in the Board’s opinion adopting the rule, or, indeed, in any written guidance document or policy.

The Board promulgated what is now Section 304.122(a) in 1972, after hearing and testimony on the effects of ammonia on dissolved oxygen levels in the Illinois River. See *Board Order, In the Matter of Effluent Criteria, In the Matter of Water Quality Standards, and In the Matter of Water Quality Standards Revisions for Intrastate Waters*, CR 70-8, 71-4, and 71-20 (Jan. 6, 1972). This rule applied to sources “whose untreated wasteload is 50,000 or more population equivalents.” In 1973, the Board followed up with what is now Section 304.122(b), specifically directed at “industrial dischargers of more than 100 lbs. of ammonia as N, whose

wasteload cannot be computed on a population equivalent (PE) basis.” *See Board Order, In the Matter of Water Quality Standards Revisions*, R 72-4 (Nov. 8, 1973).

It is clear that the Board intended Section 304.122(b) to apply to industrial discharges. But there is no such limitation in Section 304.122(a), which is not limited to either industrial or municipal dischargers. There was no limitation or discussion in the Board’s orders concerning the nature of the wastewater subject to Section 304.122(a), whether the wastewater had to be comparable to municipal wastewater, what factors would be used to make this assessment, or any other factor that might support the Illinois EPA’s interpretation. Its application was simply a question of whether a population equivalent could be calculated or not. And the explicit use of “population equivalents” which in turn explicitly references industrial sources, is clear that Section 304.122(a) applies to industrial sources.

A 1989 memorandum by James Kammueler, the chief of Illinois EPA’s Peoria field office, who has been responsible for field inspections of Noveon, appears to have concurred that the question of which provision of Section 304.122 applies is determined based solely on whether a population equivalent can be calculated. 2004 Tr. 56-57. In that memorandum, Mr. Kammueler asked the following question:

Since BF Goodrich and Pekin Energy appear to have untreated waste loads of greater than 50,000 PE [population equivalents], should their NPDES permit contain effluent limitations per 304.122?

2004 Tr. 56-57, citing Document Number 207 in Administrative Record filed by Illinois EPA.

Though Mr. Kammueler was wrong about the population equivalent calculation, he was correct about the meaning and applicability of Section 304.122(a) of the Board’s regulations—that is, that a population equivalent applies here. Because that population equivalent is below 50,000, the NPDES Permit should not contain an ammonia effluent limitation.

Illinois EPA's creative interpretation of the rule is not based on a written policy or guidance document. 2004 Tr. 153. Rick Pinneo, the permit writer for the permit at issue, testified during the hearing that he determined that factors such as the ratio of Chemical Oxygen Demand (COD) to BOD were relevant to application of the rule. 2004 Tr. 149. But he also testified that he did not find any support for Illinois EPA's interpretation in the Board's opinion or Illinois EPA documents dealing with the alleged comparability of industrial wastewater to municipal wastewater:

Q. . . . I'm a person that wants to build a plant. Where do I find that [comparability factors] in the rules? Where do I find that position taken by the Agency?

A. You will not find it.

Q. So this is basically from your head?

Ms. Williams: I would object

Q. From your mind, your thoughts, whatever you want to do?

Hearing Officer Halloran: Overruled.

A. It's from what I would consider what the regulation says.

2004 Tr. 153. Mr. Pinneo testified that he was the one who brought the COD-to-BOD ratio in, among other "things" he utilized, to determine comparability. 2004 Tr. 149. Mr. Pinneo even testified that his interpretation could be stretched to mean that if municipal waste did not have a BOD or TSS comparable to "typical" municipal waste, then that municipal waste would not be "comparable" to municipal waste under the rule. Mr. Pinneo also considered the degradability of the wastewater. 2004 Tr. 151-55. Wouldn't the Board have noted these factors if Section 304.122 were to be interpreted the way Mr. Pinneo said it should?

Mr. Pinneo did cite a memorandum by Toby Frevert of Illinois EPA as a basis for his interpretation. 1991 Tr. 137-38; 2004 Tr. 155-57. Mr. Frevert's memorandum was written in response to Mr. Kammueler's memorandum supporting Noveon's interpretation of the rule. Mr. Frevert states in cursory and conclusory fashion that because Noveon's wastewater is "industrial," it is subject to Section 304.122(b), not (a). That conclusory interpretation is inconsistent with the plain language of 35 Ill. Adm. Code 304.122. Mr. Frevert's memorandum does not constitute a document of general agency policy or a guidance document interpreting a rule in a generally applicable manner. And Mr. Pinneo wavered as to whether Mr. Frevert interpreted the rule properly and applied the correct terminology. 2004 Tr. 156-57

Illinois EPA's argument and imposition into Section 304.122(a) of factors concerning the nature of the industrial wastewater from a particular facility is simply an attempt to question the basis for the rule and whether calculation of population equivalents makes sense or has meaning. This is not the proper forum to make this argument. Whether the rule's plain meaning is sensible makes no difference to its application. Where the language of a rule is clear and certain, an administrative agency's interpretation of the regulation that runs counter to the regulation's plain language is entitled to little, if any, weight in determining the effect to be accorded the regulation. *See Central Illinois Public Service Co. v. Pollution Control Board*, 165 Ill. App. 3d 354, 518 N.E.2d 1354 (4th Dist. 1988), *citing Chicago Transit Authority v. Industrial Comm'n*, 141 Ill. App. 3d 930, 491 N.E.2d 58 (1986). If Illinois EPA wants to change the rule, it must propose a rulemaking before the Board, allowing the public the notice and comment required by the law.

Illinois EPA's interpretation of Section 304.122(a) and (b) also represents an unexplained change in its position concerning the interpretation and applicability of the regulation to Noveon.

Under this circumstance, to the extent Illinois EPA's interpretation of a Board rule would otherwise be entitled to any deference before the Board, this wholly unsupported change in position makes the Agency's interpretation unpersuasive. *See Dean Foods Co. v. Illinois Pollution Control Board*, 143 Ill.App.3d 322, 492 N.E.2d. 1344 (2d Dist. 1986). Illinois EPA's reading of the rule is simply arbitrary and capricious, and it lacks any support in the Board's opinions adopting 35 Ill. Adm. Code 304.122(a) and (b). Absent this support, it cannot stand as a basis for the ammonia limit in Noveon's NPDES Permit.

D. Water Quality Is Not Adversely Affected by Noveon's Discharge

It is unquestioned that the water quality in the Illinois River has not been affected by Noveon's discharge. In fact, Illinois EPA's witness concerning water quality, Robert Mosher, testified that the water quality in the entire upper Illinois River, including downstream of Noveon's discharge, is better since 1972, notwithstanding Noveon's discharge:

Q. You indicated there was better aquatic life as a result of the adoption of this standard; is that correct?

A. Yes.

Q. What evidence do you have of that?

A. Well, the Agency does trend analysis of water quality data collected in all rivers and streams, including the Illinois River. And there has been a pretty dramatic change in the water quality. Ammonia levels have gone down, dissolved oxygen levels have gone up, fish have repopulated the river.

Q. Is this downgradient of the Henry discharge?

A. I'm speaking of the entire upper Illinois River.

Q. I'm talking about the discharge from the Henry plant, and has there been a positive impact downgradient of the Henry plant as a result of the adoption of this regulation?

A. I think I said that the whole upper Illinois River, and I would include the Henry area as being in the upper Illinois River.

Q. So the water quality has improved downgradient of the Henry Plant; is that correct?

A. You could say that.

Q. No. I'm asking you. You are the witness.

A. Well, I think I just did say that.

Q. Fine. That's all I want to know. So notwithstanding the fact that the Henry plant has continued to discharge ammonia, the water quality has gotten better? Is that correct?

A. That's correct.

2004 Tr. 117-18.

In addition, the purpose of Section 304.122 was to protect against dissolved oxygen sags in the Illinois River, based on a study by T.A. Butts, R.L. Evans and others. 2004 Tr. 120-22. The Board's own opinion in another case shows that Mr. Butts and Mr. Evans abandoned the conclusions of these earlier studies and claimed that, based on the relative influence of the three primary oxygen demand sinks—carbonaceous BOD, nitrogenous BOD, and sediment oxygen demand—effluent limitations in the ammonia rule were unjustified and severely restrictive. *In the Matter of Site Specific Exception to Effluent Standards for the Greater Peoria Sanitary District and Sewage Disposal District*, R87-21 (Oct. 6, 1988). As a party to that proceeding, Illinois EPA was aware of all of this evidence at the time it made its permit decision and formulated a new interpretation of Section 304.122.

V. Noveon's Permit Should Not Separate Wastestreams into Different Outfalls

Prior to the 1990 NPDES Permit, there was one outfall at the Henry Plant, and physically there still is. The 1990 Permit designated two outfalls: Outfalls 001 and 001A. This separation is not representative of the physical makeup of Noveon's discharge or its wastewater treatment process and is neither required nor authorized by law; it was apparently done because of purported dilution of the wastewater by pond wastewater.

The Noveon facility has several different wastewater streams that discharge to the Illinois River through Outfall 001. This outfall is a pipe that travels approximately 1,000 yards

downstream before turning and going into the Illinois River. 1991 Tr. 87-88. The flows are part of one integrated wastewater treatment system, all flows receive the Best Degree of Treatment (BDT), and the configuration of the wastewater treatment system is not intended to effect dilution of Noveon's discharge.

Illinois EPA's separation of the outfalls is based on a fundamental misconception about Noveon's discharge. Illinois EPA believes that there is an effluent, the pond water, which is being discharged past treatment into the outfall structure. 2004 Tr. 133, 134. This is simply not correct.

The pond discharge includes process wastewater (discharges from cooling towers, boilers and well water treatment), and stormwater runoff. The pond water either goes through a filter for treatment to remove TSS, and then combines with other treated wastestreams prior to discharge through a pipe to the Illinois River, or it becomes an essential component of wastewater treatment for other wastestreams by discharge to the PVC Tank in order to maintain a minimum operating level in the tank. A portion of the PVC Tank discharge is in turn combined with the PC Tank discharge to ensure the PC Tank discharge is limited to 23 percent of combined influent flow to aeration basins in order to provide the BOD removal required to maintain compliance with effluent BOD concentrations. Pet. Ex. 16 at 7. The treatment system is one integrated treatment system. 2004 Tr. 97.

Further, Section 304.102 of the Board's regulations allows dilution if BDT is being provided. When the Board adopted the dilution rule in 1972, the Board specifically noted that the rule was not a wholesale prohibition on dilution. The Board stated that "it is desirable to require the employment of readily available treatment methods to reduce as much as practicable the total quantities of contaminants discharged to the waters before resorting to dilution either

before or after discharge.” *In the Matter of Effluent Criteria, In the Matter of Water Quality Standards, In the Matter of Water Quality Standards Revisions for Intrastate Waters*, Opinion at 3-403, R 70-8, R 71-14, R 71-20 (Jan. 6, 1972). Additionally, recognizing the significant opposition to applying the dilution rule in a manner that would impair engineering judgment or economics, the Board stated that the revised standard left “some room for engineering judgment as to the desirability of separating or combining wastestreams for treatment.” *Id.* Where BDT is being provided, dilution is not objectionable. Where a permit condition is not necessary to accomplish the purposes of the Act or Board regulations, it is arbitrary and must be deleted from the permit. *See Browning-Ferris Industries of Illinois, Inc. v. PCB*, 179 Ill. App. 3d 598, 534 N.E.2d 616 (2d Dist. 1989).

At the hearing, Mr. Pinneo conceded in his testimony that if BDT is in fact being provided, then no wastestream separation is required. 2004 Tr. 167. Tim Kluge, the then-manager of the industrial permit unit in the division of water pollution control, testified in this matter in 1991. In his testimony, Mr. Kluge agreed that with the exception of ammonia, which is at issue in this appeal as well as the pending adjusted standard proceeding, Noveon is providing BDT for every parameter it is required to monitor.⁷ 1991 Tr. 130-31. Noveon’s expert, Houston Flippin, testified that wastewater treatment at Noveon, which includes pre-treatment, primary treatment (pH adjustment, coagulation and primary clarifier), and secondary treatment (aeration and secondary clarifier with sludge return), is defined by U.S. EPA as the “Best Available Technology Economically Available” for purposes of the OCPSF sector, which regulations

⁷ At the hearing in 2004, Mr. Pinneo attempted to change the prior admission by his then-supervisor, Mr. Kluge, that Noveon is providing BDT for all parameters except ammonia. The hearing officer sustained an objection to Mr. Pinneo’s testimony in this regard. Mr. Pinneo’s attempted change in Illinois EPA’s position on BDT is both arbitrary and capricious, and is unexplained and unsupported.

govern both Noveon and PolyOne. Noveon treats the wastewater even further by discharging the effluent from the secondary clarifier to a filter to remove additional solids, and by filtering the pond water that is discharged to the PVC Tank. Pet. Ex. 16, at 8.

Under these circumstances, Illinois EPA has not supported its position requiring separation of Outfall 001 into two outfalls. Requiring separate outfalls is neither authorized nor required by Board regulations governing dilution and BDT, and this condition should therefore be deleted from the permit.

VI. Toxicity Testing Should Not Be Required

Noveon has also appealed Special Condition 6, which would require Noveon to conduct extensive investigation to determine what is “toxic” in its effluent, and if any of those parameters exist, conduct an investigation to reduce or treat those parameters. Noveon has already performed extensive investigation, and further testing is unwarranted and duplicative.

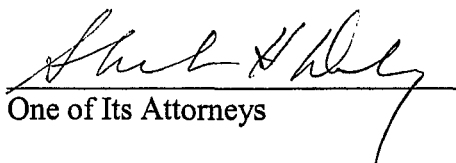
Illinois EPA agrees that if ammonia does not have a required limit or ammonia relief is granted by the Board in the pending adjusted standard proceeding, AS 02-5, there is no need for toxicity testing. 1991 Tr. 132-33, 141-43. Noveon believes that this requirement for additional testing is not necessary in light of the fact that Noveon has sought an adjusted standard, water quality has not been impaired by Noveon’s discharge, and Noveon’s discharge has not and will not cause any violation of water quality standards downstream of the plant. Therefore, Noveon believes Illinois EPA should be directed to reconsider the need for toxicity testing and biomonitoring in light of the decision on the permit appeal or the pending adjusted standard proceeding.

VII. Conclusion

Noveon requests the Board to direct Illinois EPA to rescind the effluent limit for ammonia placed in the permit by Illinois EPA based on Section 304.122(b) of the Board's rules, which was promulgated by the Board in 1972 but never previously applied by the Illinois EPA in any of Noveon's prior NPDES permits. Based on a plain reading of the regulation and the Board's opinions adopting Section 304.122(a) and (b), Illinois EPA's interpretation is arbitrary and capricious and must be rescinded. Noveon also requests the Board to direct Illinois EPA to designate the NPDES permitted outfall in accordance with the physical makeup of Noveon's discharge and the Board's rules as Outfall 001. Finally, Noveon requests rescission of the condition requiring toxicity testing and biomonitoring. Illinois EPA has conceded that if the ammonia limit is rescinded or relief is granted in the pending adjusted standard proceeding (AS 02-5), this condition is not necessary.

Respectfully submitted,
NOVEON, INC.

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Notice of Filing** and **POST-HEARING MEMORANDUM OF NOVEON, INC.** was filed by hand delivery with the Clerk of the Illinois Pollution Control Board and served upon the parties to whom said Notice is directed by

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on Thursday, April 15, 2004.

