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JUN 18 2003

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:)

PETITION OF NOVEON, INC. FOR)
AN ADJUSTED STANDARD FROM)
35 ILL. ADM. CODE 304.122)

AS 02-5)
(Adjusted Standard - Water))
)

NOTICE OF FILING

TO: Dorothy Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601

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Bradley P. Halloran, Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
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Chicago, Illinois 60601

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the attached Recommendation of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

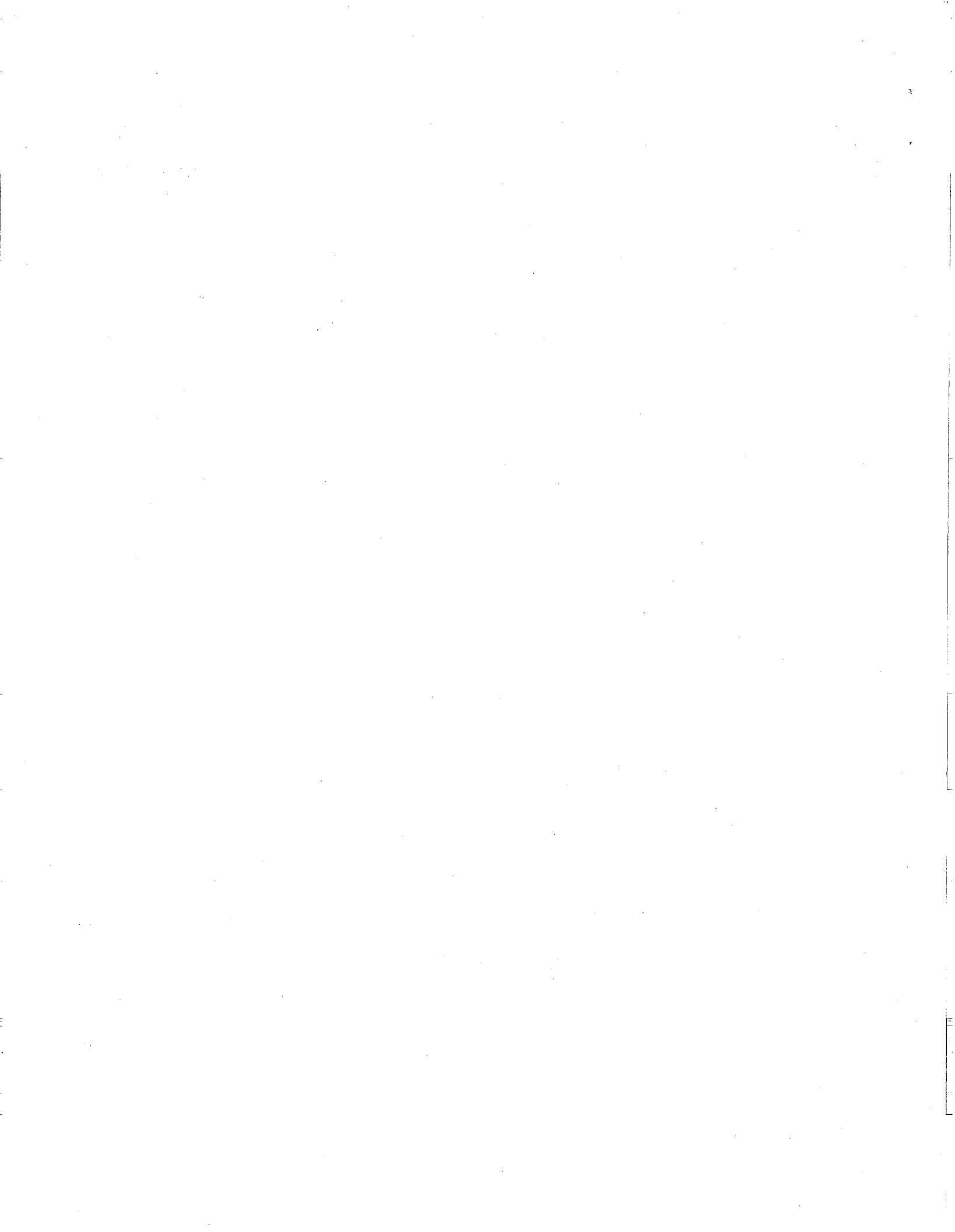
ENVIRONMENTAL PROTECTION AGENCY
OF THE STATE OF ILLINOIS

BY: 

Deborah J. Williams
Assistant Counsel
Division of Legal Counsel

DATED: June 16, 2003
Illinois Environmental Protection Agency
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**THIS FILING IS SUBMITTED
ON RECYCLED PAPER**



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STATE OF ILLINOIS
Pollution Control Board

**RECOMMENDATION OF THE ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY**

NOW COMES the Illinois Environmental Protection Agency ("Illinois EPA") by one of its attorneys, Deborah J. Williams, in response to the Petition for Adjusted Standard ("Petition") of Noveon, Inc. ("Noveon" or "Petitioner") from 35 Ill. Adm. Code 304.122 and pursuant to 35 Ill. Adm. Code 104.416, hereby recommends that the Pollution Control Board ("Board") **DENY** Noveon's request for an Adjusted Standard. In support of its recommendation, the Illinois EPA states as follows:

I. INTRODUCTION

1. On May 22, 2002, Noveon filed a Petition for an Adjusted Standard with the Board. The Petition requests relief from 35 Ill. Adm. Code 304.122 as these regulations apply to the discharge of ammonia nitrogen from Noveon's Henry, Marshall County, Illinois facility.
2. Pursuant to Section 28.1(d) of the Environmental Protection Act, Petitioner filed a Certificate of Publication with the Board on June 11, 2002 stating that notice of the adjusted standard petition was timely published on May 29, 2002. 415 ILCS 5/28.1(d). On June 20, 2003, the Board accepted the Petition for hearing.
3. The Illinois EPA is required to respond to a Petition for Adjusted Standard

within forty-five (45) days of filing pursuant to 35 Ill. Adm. Code 104.416. Hearing Officer Orders dated January 22, 2003, March 20, 2003 and May 15, 2003 extended the deadline for submittal of the Illinois EPA's Recommendation in this matter until June 16, 2003.

II. BACKGROUND

4. Noveon's Henry Plant is located on 1550 County Road, 850 N., in Henry, Marshall County, Illinois. Petition for Adjusted Standard ("Pet.") at 9. This facility was owned and operated by BFGoodrich until 1993. At that time, part of the facility was divested to form The Geon Company and is now known as PolyOne. In 2001, the remainder of the Henry facility was sold by BFGoodrich and is now known as Noveon. Pet. at 9. Noveon operates the wastewater treatment facilities for both PolyOne's and Noveon's production processes.

5. On January 24, 1991, Noveon (at that time doing business as The BFGoodrich Company) appealed its National Pollutant Discharge Elimination Permit ("NPDES") No. IL0001392, issued on December 28, 1990. Pet. at 1. Over a decade later, that permit appeal is still pending before the Board as docket number PCB 91-17 and no subsequent permits have been issued pending resolution of the appeal.

6. The permit appeal proceeding was stayed, while Noveon filed a variance petition with the Board to provide Noveon additional time to explore treatment options and methods for coming into compliance. That proceeding was filed on October 30, 1992 and docketed as PCB 92-167. After 10 years of study, Noveon concluded that no affordable options were available and filed the instant Adjusted Standard petition to obtain permanent relief from the Board's requirements.

7. Noveon treats 360,000 gallons per day from PolyOne and 180,000 gallons per day from Noveon's operations. Process and non-process water discharged per day is approximately 800,000 gallons. Pet. at 9.

8. Noveon produces rubber accelerators and antioxidants for the rubber, lubricant, and plastic industries. Pet. at 9. PolyOne produces polyvinyl chloride ("PVC") resins. Pet. at 10.

9. Noveon's wastewater treatment plant was upgraded in 1987. Pet. at 10. This included installation of two above ground biotreaters, two above ground equalization tanks, and a tertiary filtration system. Pet. at 10. In addition, a third bioreactor was added in 1989 and a fourth in 1998. According to Noveon, "the major source of ammonia is the degradation of amines that occurs in the wastewater treatment process at the Henry Plant." Pet. at 10.

10. The wastewater treatment system treats process wastewater from both plants, as well as stormwater and non-contact cooling water. Pet. at 10. Treatment begins with pre-treatment (separate for Noveon and PolyOne), process water then goes to separate equalization tanks while stormwater and utility waters go to holding ponds. This is followed by primary treatment and a primary clarifier. Solids are then sent to a collection tank and are dewatered in a filter press and sent to a landfill. Primary clarification is followed by activated sludge treatment in four biotreaters to degrade the organic matter. Finally, the wastewater is sent to a secondary clarifier followed by tertiary treatment that consists of polishing by a traveling bridge sand filter. Pet. at 12-13.

11. The discharge from the City of Henry's publicly owned treatment works ("POTW") combines with Noveon's effluent and is discharged through Noveon's outfall

to the Illinois River. The effluents are sampled prior to combining, but not at the outfall. Pet. at 13. Noveon's Outfall 001 is located on the Illinois River between river mile 198 and 199. Pet. at 14. According to Noveon, the 7-day, 10-year low flow for the Illinois River at Henry, Illinois is 3,400 cubic feet per second. Pet. at 14.

III. RELIEF REQUESTED

12. Although Noveon's Petition goes into some detail regarding its interpretation of 35 Ill. Adm. Code Sections 304.122(a) and (b) and Noveon's argument that it should be subject to 304.122(a) rather than 304.122(b), the instant adjusted standard petition requests relief from 304.122 in its entirety. Noveon has not requested relief for the ammonia nitrogen water quality standards of 35 Ill. Adm. Code 302.212, because it claims it can meet those standards. However, "Noveon also seeks from the Board as part of this proceeding, a determination that the ammonia water quality standards will be met with the ZID and mixing zone calculated in Exhibit 1 and 3 and as discussed above for the Henry plant discharge." Pet. at 8.

13. The language of 35 Ill. Adm. Code 304.122 from which Petitioner seeks regulatory relief states 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.

14. Section 304.122(b) requires sources subject to that provision meet an effluent limit of 3.0 mg/L total ammonia nitrogen, while 304.122(a) limits discharges of greater than 50,000 population equivalent ("PE") to 2.5mg/L from April through October and 4.0 mg/L total ammonia nitrogen at all other times. The Illinois EPA has determined that Noveon is subject to subsection (b) of 304.122, because its "untreated waste load cannot be computed on a population equivalent basis comparable to that used for municipal waste treatment plants." Noveon is not able to meet the effluent limits in either provision, but claims it should be subject to subsection (a) and that its PE would be less than 50,000 and therefore, it should not be subject to any effluent limitation for total ammonia nitrogen under Section 304.122.

15. Petitioner has presented three alternative forms of relief in its adjusted standard Petition. Each alternative exempts Noveon from all the requirements of 35 Ill. Adm. Code 304.122 and requires Noveon to install a multi-port diffuser. Each alternative presented conditions adjusted standard relief on an effluent limit expressed in a different format. Alternative #1 imposes an effluent limit for calculated un-ionized ammonia of 3.5 mg/L during April through October and 7.9 mg/L during November through March. Alternative #2 expresses the effluent limit as 1200 lbs/day of total ammonia during April through October and 1735 lbs/day during November through March. Alternative #3 expresses the effluent limitation in terms of a concentration of 155 mg/L total ammonia nitrogen during the months of April through October and 225 mg/L during the months of November through March.

16. Noveon does not explain the differences between the alternative effluent limits or the preferred alternative from Noveon's point of view. In addition, Noveon does not explain why it is requesting a 225mg/L winter effluent limit in Alternative #3 when its consultants determined that the water quality standards would be met with an effluent limit of 189 mg/L year round. Pet. at 7.

IV. LEVEL OF JUSTIFICATION REQUIRED

17. The Illinois EPA agrees with the Petitioner that the regulation of general applicability at issue, 35 Ill. Adm. Code 304.122, does not specify a level of justification or other requirements necessary for this type of adjusted standard. Since there is no specific level of justification for adjusted standards from the regulations at issue in this Petition, the general level of justification provided in Section 28.1 of the Environmental Protection Act ("Act"), 415 ILCS 5/28.1, is the standard of review by which the Board is to judge the instant adjusted standard petition. Section 28.1(c) of the Act, 415 ILCS 5/28.1(c), provides the general level of justification the Board must find a petitioner to have met when granting an adjusted standard petition. That subsection provides:

[T]he Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by petitioner, that: 1) factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner; 2) the existence of those factors justifies an adjusted standard; 3) the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and 4) the adjusted standard is consistent with any applicable federal law.

The Illinois EPA believes that this is the proper standard for the Board to consider and that Noveon has failed to meet this standard of review for the reasons outlined more fully below. In particular, Noveon has failed to demonstrate both that it possesses

substantially and significantly different factors than those considered by the Board in adopting the regulation of general applicability and that there will not be a negative environmental impact from this adjusted standard greater than the rule of general applicability.

V. FACTS PRESENTED IN THE PETITION

18. The rule of general applicability at issue in the matter was adopted on January 6, 1972 as Rule 406. Petitioner claims the basis for adoption of this rule by the Board was to limit discharge of ammonia from large dischargers to the Illinois River, because it was believed at the time these dischargers were impacting dissolved oxygen levels. Pet. at 4-5. Petitioner appears to question the validity of the underlying basis for the rule of general applicability in this case, but such concerns are properly addressed by a rulemaking proceeding not an adjusted standard. Pet. at 5-6.

19. Noveon is one of the large dischargers of ammonia to the Illinois River that the rule was intended to address. The number of sources subject to these provisions is relatively small, but except for Noveon, all dischargers have made efforts to reduce ammonia levels in their discharge (through process changes and/or controls) since these rules were implemented. For example, Mobile Oil Company engaged in several measures to conserve water, pre-treat and reduce ammonia in its discharge. Though the Illinois EPA ultimately supported a site-specific rulemaking, it was only after Mobile Oil Company had reduced the ammonia in its effluent by 50%. Similarly, Union Oil Company engaged in a series of activities to reduce the ammonia in its effluent. The 3M Company changed its process and engaged in treatment to reduce the ammonia in its effluent. The City of Peoria's POTW also reduced the ammonia in its discharges.

20. Noveon claims it is not seeking relief from the water quality standards adopted in 1996 for ammonia or those recently promulgated by the Board in R02-19 adopted in an October 17, 2002 final opinion and order. The new water quality standards retain the limit of total ammonia concentrations to in no case greater than 15 mg/L and establish new formulas to calculate acute, chronic and sub-chronic total ammonia nitrogen water quality standards. 35 Ill. Adm. Code 302.212(a) and (b). The acute and chronic water quality standards are no longer expressed in the form of un-ionized ammonia nitrogen.

21. Noveon also claims that “[w]ith an appropriately calculated zone of initial dilution (‘ZID’) and mixing zone, consistent with both Agency and U.S. EPA guidance on mixing zones, the discharge from the Henry Plant will meet the summer/winter acute and chronic limitations set for in the amended ammonia water quality standards.” Pet. at 6. Petitioner attaches Exhibit 1 and explains in its Petition the basis for its conclusion that it will be in compliance with the former water quality standards for un-ionized ammonia nitrogen. Since Petitioner has not requested relief from the water quality standards, it is not necessary for the Agency determine with certainty from the information presented whether the water quality standards will be met. However, the Petitioners are asking the Board to go beyond its authority to grant adjusted standard relief to request a declaratory judgment that the Illinois EPA must accept the mixing zone and ZID calculated by Noveon and find that the water quality standards will be met. Such a determination would be based both on a detailed analysis of the multi-port diffuser Noveon indicates it will install at some point after adjusted standard relief is granted, as well as a determination whether Noveon has met the requirement of

implementing the “best degree of treatment” under Section 304.102, which is a pre-requisite to obtaining any mixing zone under 35 Ill. Adm. Code 302.102. The proper forum for such a determination would be for Noveon to apply for a construction permit and/or permit modification taking into account the multi-port diffuser, for the Agency to determine the appropriate mixing zone and ZID, and for Noveon to file a permit appeal with the Board if it disagrees with that determination. Setting a ZID and mixing zone are permitting functions that should only be reviewed through a permit appeal.

22. Noveon states that it will be able to meet water quality standards with a discharge no greater than 189 mg/L total ammonia nitrogen effluent limits for winter and summer. Pet. at 7, 15. Noveon does not explain why Alternative request for relief #3 asks for limits of 155mg/L in the summer and 225mg/L in the winter. The Board should not allow an alternative effluent standard that implements a limit greater than even what Petitioner says is required to meet the water quality standard.

23. Noveon states they have agreed to replace the single-port diffuser with a multi-port diffuser as part of this proceeding. Pet. at 7. Although Noveon could have undertaken this project at any time to assure that sufficient mixing was occurring to meet water quality standards, they have not agreed to do so until an adjusted standard is granted by the Board. Noveon indicates that it will not install the diffuser that is a condition of the adjusted standard relief until 1 year after such relief has been granted. The Board should condition any relief granted in this case to take effect only after the required diffuser has been installed and is operational.

24. According to Petitioners, the biological oxygen demand (“BOD”) reduction rate of the plant is over 95% and ammonia nitrogen is discharged at an effluent

concentration range of 23 mg/L to 150 mg/L. Pet. at 12. The Illinois EPA believes the accurate assessment of the range of Noveon's effluent to the river can fluctuate from a low of 10mg/L to a high of 250 mg/L.

25. Petitioner's basis for the claim that it should not be subject to any effluent limit under Section 304.122(a) is because its PE is less than 50,000. No calculations are provided in the petition to explain how this was determined. The Illinois EPA has determined that Section 304.122(a) does not apply to Noveon because its untreated waste load cannot be computed on a population equivalent basis comparable to that used for municipal waste treatment plants. One basis for the conclusion that Noveon's waste is not comparable to municipal waste is that a typical municipal waste stream has a chemical oxygen demand ("COD") to biochemical oxygen demand ("BOD") ration of 2.5 to 1. Noveon's waste stream has a COD to BOD ratio of 6 to 1. This causes Noveon's waste stream to be resistant to biological degradation. It also means that the BOD values for the Noveon waste stream are not as high as what they could be if the waste was as degradable as a municipal waste. Therefore, the Agency concluded that Noveon's untreated waste stream could not have a PE computed comparable to a municipal waste.

VI. EFFORTS NECESSARY TO ACHIEVE COMPLIANCE AND ALTERNATIVES

26. Noveon states in its Petition that "... Noveon and its consultants have concluded, that the evidence presented in this proceeding will show, that none of the available treatment technologies are both economically reasonable and technically feasible for Noveon to significantly reduce the ammonia in the wastewater from the Henry Plant to levels that would achieve compliance with 35 Ill. Adm. Code 304.122(b)." Pet. at 4.

27. Ammonia treatment is referred to as “nitrification” because treatment of ammonia involves oxidizing ammonia to nitrates. Noveon studied the nitrification ability of the existing plant and concluded that: “The results of the treatability study conclusively demonstrated that the Henry Plant could not achieve single-stage nitrification under existing waste loads and optimum conditions of mixed liquor pH, D.O., temperature, alkalinity, F/M ratio and mean cell residency time.” Pet. at 16. Noveon also determined that addition of nitrifier-rich bio-mass would not help because of wasteload characteristics rather than operating conditions. “The inability of the Henry Plant wastewater treatment system to nitrify was due to inhibition of nitrifying bacteria by the PC tank and C-18 tank contents flows.” Pet. at 16.

28. Noveon analyzed the alternative compliance methods by looking at three categories of alternatives: 1) in-process reductions; 2) pretreatment of the wastestream; and 3) post-treatment of the wastestream. Pet. at 17. Noveon concluded that it would not be willing to implement any alternatives to reduce the ammonia in its wastestream. Noveon has offered that in return for receiving regulatory relief from Section 304.122 from the Board, “Noveon will agree to replace the current single-port diffuser with a multi-port diffuser as part of this proceeding.” Pet. at 15. This change is likely necessary to assure Noveon is in compliance with the water quality standards and is not an effort to reduce its ammonia discharge.

29. In evaluating in-process reduction, Noveon concluded that amines could not be eliminated from the process and recycling would create an inferior product and potentially generate a hazardous waste material by-product. Noveon states that: “Excess amines are, however, currently recovered from processes where recovery methods

provide reusable quality materials and are not cost prohibitive.” Pet. at 17. No information is provided on what Noveon considers “cost prohibitive.” The Agency is not in a position to analyze the ability to have in-process reductions with the information provided. In most cases it can be assumed that if there was an alternative cheaper to providing treatment, a discharger would select that alternative. However, since Noveon is not agreeing to implement any form of treatment in this case, that assumption can not be made. The Illinois EPA indicated to Noveon that if they had agreed to make in-process reductions in their ammonia levels, the Agency might have been willing to support adjusted standard relief from the 304.122 effluent standard. However, given that Noveon is arguing that all available treatment options are not cost-effective, it is insufficient for Noveon to simply state that in-process reductions are not possible without providing additional justification.

30. Noveon reviewed its Pretreatment options by studying morpholine recovery, TBA recovery, and a liquid extraction process in which a solvent is passed counter-current to the wastewater removing the amines from the water. Pet. at 17. According to Noveon, none of these alternatives would result in compliance with Section 304.122. In evaluating Petitions for Adjusted Standard, the Agency expects to see the Petitioner perform those options available to it to minimize the impact on the environment. It is not a sufficient justification to simply state, without further evidence, that these methods will not achieve compliance so they are not going to be implemented.

31. Noveon reviews about 8 potential post-treatment compliance options prior to concluding that none of these are technologically feasible and economically reasonable. The eight options will be reviewed in the order they were discussed by

Noveon. For the options where Noveon provides cost figures, the Illinois EPA has analyzed those figures on a per pound reduced basis and compared them to municipal treatment plants that have recently installed nitrification technology as contemplated by 40 CFR 125.3(d)(2). Noveon included Operating and Maintenance ("O&M") costs in its evaluation of alternatives and based those on a 10-year life of the equipment with no salvage value. Because the Illinois EPA felt this 10 year time frame was rather short and because figures available from POTW's did not include O&M, the Illinois EPA subtracted those costs when comparing Noveon's costs with other treatment facilities.

32. The Illinois EPA calculated the cost per pound of ammonia removed from four recent sewage treatment plant nitrification projects for comparison purposes: Geneva, Batavia, St. Charles and Wauconda. Wauconda was left out of this comparison because its project also included a plant expansion and did not seem representative of the cost of added nitrification treatment alone. None of these figures include O&M costs which constitute a significant percentage of the figures presented by Noveon. Costs of rehabilitation and demolition of existing facilities are also included where required. All three facilities chose to install a single stage facility similar to what Noveon proposes in the pretreatment and biological treatment option after evaluation of the most cost effective treatment alternatives. In January 1998, Geneva proposed to reduce 1,042 lbs/day of ammonia from its 5 MGD plant at a total cost of \$8,423,000 or \$8,083 per pound. In February 2002, Batavia proposed to reduce 875.7 lbs/day at its 4.2 MGD plant at a cost of \$6,011,000 or \$6,864/lb. In April 2002, St. Charles proposed to reduce 976 lbs/day from its 9.0 MGD plant at a cost of \$8,414,000 or \$8,621/lb. In Exhibit 7, Noveon provided updated cost figures from the options studied in May 2002. These

updated cost figures should make a good comparison with the dollar figures for the recent nitrification projects.

33. Alkaline air stripping at different points in the wastewater treatment system (e.g., PC tank, PVC tank, and secondary clarifier) is the first alternative addressed by Noveon in the Adjusted Standard Petition. Pet. at 19. This alternative involves increasing pH in the wastewater to remove the ammonia by turning it into a gas. In 1996, Noveon's consultants evaluated using this treatment technology at three points in the current process: within the PC tank, the PVC tank and the secondary clarifier effluent. Id. Noveon claims a reduction of 20% of the ammonia was achieved in the PC tank and the PVC tank at a cost in 1997 of \$2.3 million and \$14.1 million respectively including O&M costs as described above. Noveon states that a 95% reduction in ammonia could be achieved for a cost of over \$14 million using this technology in the secondary clarifier. Noveon found all of these options to be economically unreasonable. The capital cost of this technology in Exhibit 7 is \$6,980,000 and would reduce 864 lbs/day of ammonia at a cost of \$8,079 /lb. This figure is within the range of the comparable POTWs.

34. Struvite precipitation from the combined wastestream influent was evaluated next and found to cost \$5.1 million to reduce final ammonia effluent levels by 24%. This alternative was disregarded by Noveon because it could not achieve full compliance with Section 304.122. The Illinois EPA has indicated to Noveon and reiterates to the Board, that Noveon should be willing to undertake some treatment options. If the best degree of treatment did not achieve full compliance with Section 304.122, then the Illinois EPA would consider supporting adjusted standard relief in this matter. However, since this particular alternative only results in a reduction of 217

lbs/day at a capital cost of \$4.81 million, this actually is an unreasonable alternative at a per pound cost of \$22,165.

35. Noveon evaluated use of effluent breakpoint chlorination and determined it was also economically unreasonable, but also pointed out that this technology is of concern because it increases total dissolved solids levels and may result in formation of chlorinated organics in the effluent. Pet. at 21. The Illinois EPA does not agree that a capital cost of \$1.53 million dollars to reduce 891 lbs/day of ammonia is economically unreasonable, but shares Noveon's concerns about the possible environmental impacts of this technology.

36. The alternative of single-stage biological nitrification of non-PC waste stream combined with separate biological treatment of the PC tank discharge was evaluated by Noveon and dismissed because it only achieved a 47% reduction at a cost of \$4.9 million. At a capital cost of \$2.68 million and reducing 423 lbs/day, this technology had per pound reduction cost of \$6,335 per pound. This alternative is not economically unreasonable when compared to POTWs. It is not clear whether this alternative would achieve full compliance with Section 304.122, but the Illinois EPA encourages the Board to require Noveon to at least implement some ammonia reductions rather than granting the relief requested by Noveon.

37. Noveon concluded that biological nitrification of the combined influent wastestream with the addition of river water was a technically feasible alternative for bringing Noveon into compliance with Section 304.122. This is the technology most similar to that used by the comparison POTWs, but Noveon found it to be both unreliable and cost prohibitive at a cost of \$11.7 million. When looking at capital costs only, as was

done by the POTWs, Noveon's cost would be \$4.4 million to reduce 891 pounds per day (98% removal). This results in a cost of \$4,938 per pound reduced – significantly less expensive than any of the POTWs studied. It appears that this alternative is both technically feasible and economically reasonable and would achieve full compliance with Section 304.122(b).

38. Ion exchange treatment of final effluent was also found to be a technically feasible method of compliance for Noveon, but was dismissed based on “poor removal efficiency.” Noveon's cost for this alternative was \$5.1 million. But at a capital cost of \$1.2 million and a 98% removal rate, this alternative could reduce 891 pounds of ammonia per day at a cost of only \$1,346 per pound. Noveon recently found that ozonation is an alternative that would also achieve compliance with Section 304.122. This alternative was rejected because Noveon claimed the cost was unreasonable, but also because of a concern that this technology would cause BOD effluent violations. Tertiary nitrification was found to be a technologically feasible alternative that would also bring Noveon into full compliance with Section 304.122, but Noveon found this technology economically unreasonable at a cost of \$11.4 million. At a capital cost of \$6.76 million dollars, this technology could reduce 891 pounds of ammonia per day at a cost of \$7,587 per pound. This cost is not greater than the comparison POTWs. In summary, the Agency does not agree with Noveon's conclusion that there is no economically reasonable and technologically feasible compliance alternative available for it to achieve compliance with Section 304.122(b). Noveon has been allowed to delay coming into compliance while all other sources subject to Section 304.122 have made

attempts to do so and many other POTWs have invested similar or greater amounts of money to meet ammonia water quality standards.

39. It is the Agency's opinion that in reviewing available alternatives, Noveon should have looked more thoroughly at the alternative of using granular activated carbon followed by biological treatment. Noveon only looked at powdered activated carbon and only gave a cursory look at that alternative. U.S. EPA guidance indicates granular activated carbon followed by biological treatment is effective at removal of inhibitors (including MBT, the inhibitor at issue for Noveon) which would then allow biological treatment to be more successful and require little upgrade to the existing system.

VII. ENVIRONMENTAL IMPACT

40. Noveon claims that granting adjusted standard relief from Section 304.122 will not result in any adverse environmental impacts. Pet. at 25. The first basis for this claim is that the rule of general applicability incorrectly was premised on the belief that larger dischargers were contributing to dissolved oxygen "sags." The regulation in Section 304.122 is contained within the Board's technology regulations, rather than water quality standards. It is possible that a future rulemaking proceeding would some day overturn the rule of general applicability; but in the meantime, the Illinois EPA does not agree that it is unnecessary to control large dischargers of ammonia to protect the Illinois River.

41. Noveon further claims that acute water quality standards will be met at the edge of the ZID and the chronic standard will be met at the edge of the mixing zone. The Illinois EPA disagreed that Noveon was entitled to a mixing zone as calculated by its consultant for a variety of reasons. Noveon may be using too large a percentage of the

Illinois River for mixing than allowed by the regulations. Also, no mixing zone is allowed until the discharger has complied with Section 304.102 and has met the “best degree of treatment” requirement. Since Noveon has made no attempt to reduce its ammonia discharge, Noveon can not claim to be meeting the “best degree of treatment” as required by Section 302.102(a). Noveon points to each provision in Section 302.102(b) and claims to be meeting it, but does not explain how it will achieve compliance with Section 302.102(a), which in turn requires compliance with Section 304.102. The Illinois EPA does not agree with Noveon’s conclusion that water quality standards will be met and therefore there is no environmental impact from granting relief from Section 304.122.

42. In addition, it is the Illinois EPA’s opinion that Noveon’s discharge is the single most toxic remaining discharge to the waters of the State of Illinois. Now that other highly toxic (or single digit percentage LC50)¹ dischargers in the State such as Sauget and 3M have improved the quality of their discharge, Noveon is the last remaining discharger fail to improve the toxicity of its effluent above the single digit percentage LC50 level.

VIII. PETITIONER’S JUSTIFICATION OF PROPOSED ADJUSTED STANDARD

43. In requesting adjusted standard relief from the Board, a Petitioner has an obligation to first prove to the Board that “factors relating to the petitioner are substantially different from the factors relied upon by the Board in adopting the general regulation.” 415 ILCS 28.1(c). To meet this requirement, Noveon simply states “there are no alternatives that are both technologically feasible and economically reasonable to

¹ LC-50 means the concentration of a toxic substance or effluent which is lethal to 50% of the exposed organisms in a given time period.

achieve the ammonia reduction necessary to comply with 35 Ill. Adm. Code 304.122(b).” Pet. at 28. Noveon presents no evidence that either the technological factors or cost of reducing ammonia are substantially different than what was contemplated by the Board. As indicated above, all other dischargers have made some effort to comply with this regulation and the costs of compliance for Noveon are not significantly different than the cost of installing nitrification capabilities at a conventional wastewater treatment plant. 40 CFR 125.3(d)(2) provides that the removal costs incurred by an industrial discharger must be compared to the costs incurred by a POTW in assessing economic reasonableness.² This evaluation also would be conducted to determine compliance with the “best degree of treatment of wastewater consistent with technological feasibility, economic reasonableness and sound engineering judgment” under Section 304.102.

44. The only other argument Noveon makes to demonstrate that its Plant meets the “substantially different” test is to question the validity of the assumptions underlying the Board’s adoption of the rule of general applicability. Pet. at 29. This is not a legitimate basis for justifying adjusted standard relief, but merely a basis for proposing a revision to the regulation of general applicability.

45. Noveon proceeds to base its justification for relief on its claim that no environmental benefit will result from forcing Noveon to comply and that the costs are economically unreasonable. Although the Illinois EPA believes there is significant environmental benefit to requiring compliance with the regulation of general applicability

² That provision provides that when determining the best conventional pollutant control technology (“BCT”), the permit writer setting case-by-case effluent limitations must consider “(ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources.”

and that the costs of compliance are not unreasonable, even if accurate, these arguments are not sufficient to justify adjusted standard relief.

46. Noveon has also failed to meet its burden under Section 28.1(c) of the Environmental Protection Act (“Act”) to demonstrate that “the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability.” Noveon claims that no measurable impact upon the environment or human health would result from the relief requested. Pet. at 29. In one sense Noveon is correct in this regard, since Noveon has never come into compliance with Section 304.122 since its adoption in 1972, the existing level of environmental impact will not change. However, Illinois EPA believes that the results of this existing situation are indeed substantially and significantly more adverse than contemplated by the Board. It is possible that the suggested diffuser will eventually bring Noveon into compliance with the ammonia water quality standards. That eventual compliance does not change the environmental harm caused by the toxicity of Noveon’s discharge and its refusal to even attempt to make some effort to reduce the ammonia level in its discharge to at least begin to approach compliance with Section 304.122(b).

47. Noveon rests its entire argument for adjusted standard relief on the premise that it is too expensive to implement the available treatment alternatives. Yet the Petitioner fails to present any contextual information in which to place its conclusion that would justify a claim of economic hardship. The Illinois EPA attempts to give the figures provided some context by comparing them to recent nitrification projects by POTWs and did not find Noveon’s costs to be out of line on a cost per pound basis.

Noveon's total cost would be high, because the total pounds of ammonia to be reduced is very high.

48. Because Noveon has failed to meet its burden to justify the relief it has requested under Section 28.1(c) of the Act, the Illinois EPA must recommend that the Board deny Noveon's request in its entirety.

IX. CONSISTENCY WITH FEDERAL LAW

49. The Illinois EPA agrees with Noveon's conclusion that the Board has authority to grant relief from 35 Ill. Adm. Code 304.122 without conflicting with any federal statutes or regulations. On its face, the Petition does not request relief from water quality standards or mixing zone regulations and therefore would not need U.S. EPA approval as a change in water quality standards. However, it is not clear what type of relief Noveon is requesting by asking the Board to determine that the ZID and mixing zone identified in the Exhibits attached to its Petition are "appropriate." The vague and unusual nature of this relief makes it unclear to the Illinois EPA whether this type of relief would be consistent with federal law.

X. HEARING

50. Petitioner has requested a hearing in this matter. The Illinois EPA agrees that a hearing is necessary if Noveon is to justify that it has met the standard of review to receive Adjusted Standard relief from the Board in this matter.

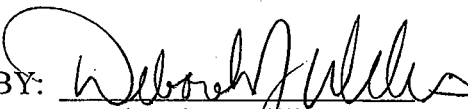
XI. RECOMMENDATION AND CONCLUSION

WHEREFORE, for the reasons stated herein, the Illinois EPA recommends that

the Pollution Control Board **DENY** the Adjusted Standard Petition of Noveon, Inc.

Respectfully Submitted,

ENVIRONMENTAL
PROTECTION AGENCY OF THE
STATE OF ILLINOIS

BY: 
Deborah J. Williams
Assistant Counsel
Division of Legal Counsel

DATED: June 16, 2003

Illinois Environmental Protection Agency
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Springfield, Illinois 62794-9276
(217) 782-5544

STATE OF ILLINOIS

COUNTY OF SANGAMON

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PROOF OF SERVICE

I, the undersigned, on oath state that I have served the attached, **Recommendation of the Illinois Environmental Protection Agency** upon the person to whom it is directed, by placing a copy in an envelope addressed to:

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601
(First Class Mail)

Mark Latham
Richard Kissel
Gardner, Carton and Douglas
191 North Wacker Drive, Suite 3700
Chicago, Illinois 60606
(First Class Mail)

Bradley P. Halloran, Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601
(First Class Mail)

and mailing it from Springfield, Illinois on **June 16, 2003** with sufficient postage affixed as indicated above.

Nancy J D Lampert

SUBSCRIBED AND SWORN TO BEFORE ME

this 16th day of June 2003

Cynthia L. Wolfe
Notary Public

