

ILLINOIS POLLUTION CONTROL BOARD

May 21, 1998

IN THE MATTER OF:)
)
PETITION OF PDV MIDWEST REFINING,) R98-14
L.L.C. FOR A SITE-SPECIFIC) (Rulemaking - Water)
RULEMAKING AMENDMENT TO 35 ILL.)
ADM. CODE 304.213)

Proposed Rule. First Notice.

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

On October 17, 1997, PDV Midwest Refining, L.L.C. (PDV) filed a petition (Pet.) seeking to amend and renew a previously granted site specific rule. PDV is requesting three changes to this rule: First, that the Board's effluent regulations be amended to provide site-specific ammonia nitrogen effluent standards for PDV's discharge to the Chicago Sanitary and Ship Canal. Second, that the change in ownership from UNO-VEN to PDV be reflected. Third, that the expiration date of the rule be eliminated.

The Board's responsibility in this matter arises from the Environmental Protection Act (Act). 415 ILCS 5/1 *et seq.* (1996). The Board is charged therein to "determine, define and implement the environmental control standards applicable in the State of Illinois." 415 ILCS 5/5(b).

By today's action, the Board adopts the proposed amendments for first notice, pursuant to the Illinois Administrative Procedure Act. 5 ILCS 100/1-1 *et seq.* (1996). The proposed amendments will be published in the *Illinois Register*, whereupon a 45-day public comment period will begin during which interested persons may file public comment with the Board.

BACKGROUND

PDV owns a petroleum refinery located in Will County near Lemont, Illinois. The refinery operates under National Pollution Discharge Elimination System (NPDES) permit number IL 0001589. This permit was issued by the Agency on September 1, 1994, and expires on June 1, 1998. The refinery was formerly owned and operated by the Union Oil Company of California (Union) and then operated by the UNO-VEN Company (UNO-VEN). The refinery began operations in 1969. From October 1992 through July 1997, the maximum monthly production rate observed at the Refinery was 162,219 barrels per day. Pet. at 5.

The refinery employs approximately 650 people, and produces products including conventional and reformulated gasolines, turbine fuels, diesel fuels, furnace oils, petroleum coke, and various specialty naphthas used to manufacture intermediate products. Pet. at 5.

The refinery draws influent from and discharges effluent to the Chicago Sanitary and Ship Canal (Canal) which is a tributary to the Illinois River. The wastewater effluent contains ammonia nitrogen. The ammonia nitrogen contained in the effluent is from two sources: that derived from nitrogenous compounds present in crude oil that are removed by various refinery operations, and that already present in the intake water from the Canal.

REGULATORY BACKGROUND

The Board has adopted Section 304.122 (35 Ill. Adm. Code 304.122) to control ammonia discharge to the Illinois River System. Section 301.122(b) contains the provision applicable to the PDV refinery, and limits ammonia nitrogen discharges to an effluent discharge concentration of 3.0 mg/l. This standard applies to monthly average samples, as specified at 35 Ill. Adm. Code 304.104(a)(1).

In 1987, the Board granted a site specific rule change to the refinery; see In the Matter of: Proposal of Union Oil Company of California to Amend the Water Pollution Regulations: 35 Ill. Adm. Code 304.213 (March 19, 1987), R84-13. The Board amended and renewed this rule in 1993; see In the Matter of: Petition of UNO-VEN to Amend Regulations Pertaining to Water Pollution: 35 Ill. Adm. Code 304.213 (December 16, 1993), R93-8. In 1993, the Board set effluent limits for ammonia nitrogen at 9.4 mg/l monthly average and 26.0 mg/l daily maximum. The current site-specific rule will terminate on December 31, 1999.

In the instant petition, PDV requests that the discharge limits for ammonia nitrogen set in 1993 be adopted in this rulemaking. PDV also requests that their change in name be reflected and that the December 31, 1999, termination date be eliminated.

PROCEDURAL HISTORY

Two hearings were held in this matter. A public hearing was held on March 6, 1998, in Joliet, Illinois. PDV presented three witnesses: Claude Harmon, Manager Environmental with PDV; James Huff of Huff & Huff, Inc.; and Robert M. Stein of AWARE Environmental, Inc. The Agency pre-filed the testimony of Charles W. Gunnarson, but did not present any witnesses at the hearing. PDV filed a post-hearing comment on April 6, 1998.

An additional public hearing was held March 30, 1998, solely on the decision of the Illinois Department of Commerce and Community Affairs (DCCA) not to conduct an Economic Impact Study in connection with this rulemaking. No one testified at this hearing, and the Board has not received any comments regarding an economic impact study concerning this matter.

TESTIMONY AND COMMENTS

At the March 6, 1998 hearing, Mr. Harmon testified about the refinery's efforts to remove ammonia from its wastewater streams, and about the need for site specific relief. Mr. Harmon outlined a number of procedures impacting ammonia reduction that have been initiated by PDV since 1992. Generally, these procedures include source control such as the

changes in the performance of sour water strippers, and the upgrade of existing facilities occurring mainly in the waste water treatment plant. Tr. Exh. 1 at 2.¹

Mr. Stein testified that PDV has been unable to consistently meet the ammonia nitrogen concentration standard of 3.0mg/l, but has consistently achieved compliance with the 9.4 mg/l monthly average and 26.0 mg/l daily maximum effluent limitations set by Board in the site specific rule change on December 16, 1993. Tr. Exh. 2 at 2. Mr. Stein testified that the refinery has a state of the art wastewater treatment system which exceeds BAT criteria and allows the facility to comply with all the United States Environmental Protection Agency (USEPA) refinery discharge regulations. Tr. Exh. 2 at 3, 10. Mr. Stein further testified that alternative add-on, end of pipe treatment technology for additional ammonia removal has been evaluated and would have an estimated annualized cost of \$3,708,000, but would not guarantee the refinery's consistent compliance with the 3 mg/l ammonia nitrogen limitation. Tr. Exh. 2 at 10.

Mr. Huff's testimony concerned the environmental impact of the ammonia in the refinery's discharge to the Chicago Sanitary & Ship Canal. Tr. Exh. 3 at 2. Mr. Huff testified that the refinery has consistently achieved the BAT limits since 1987, and that site specific relief is, thus, not required to achieve BAT limits, but rather for the Illinois River Basin concentration limitations. Tr. Exh. 3 at 7. Mr. Huff further testified that the net ammonia contribution from the refinery from 1992 to 1997 is 15 lbs/day, and that since 1996, the refinery has extracted from the canal 13 pounds per day more ammonia than what it discharged over that same period. Tr. Exh. 3 at 8; Tr. at 35. Mr. Huff stated that the ammonia discharge from the refinery is not causing any water quality violations in the Illinois River system, and that no environmental impacts from the requested site specific relief have been identified. Tr. at 37; Tr. Exh. 3 at 9.

The Agency did not present any witnesses at the March 6, 1998, hearing, but did submit pre-filed testimony on February 25, 1998. The pre-filed testimony concerns only one issue. The Agency does not object to PDV's petition, but believes that the language of the proposed site specific rule change should be modified to include a termination or sunset provision to terminate the rule by its own terms on a date certain. Ag. Test. at 1. The Agency states that such a provision will encourage PDV to continue to explore means to further reduce the ammonia-nitrogen discharge to the Chicago Sanitary and Ship Canal, and that should new technologies be developed that are technologically feasible and economically reasonable, they may be considered in assessing the continuance or alteration of PDV's site specific relief. Ag. Test. at 1.

The Agency believes that a ten year termination clause for the relief requested is appropriate. Ag. Test. at 2. The Agency notes that the Board recently proposed and included a similar termination provision in site specific relief requests by a petroleum refinery downstream of PDV's facility. Ag. Test. at 2. See In the Matter of Site Specific Petition of

¹ References to any exhibit to the transcript of the March 6, 1998, hearing will be cited as "Tr. Exh. _." References to the Agency's pre-filed testimony will be cited as "Ag. Test."

Mobil Oil Corporation for Relief from 35 Ill. Adm. Code 304.122, Ammonia Nitrogen Effluent Standards, R97-28 (January 22, 1998).

PDV did not address the termination provision issue at the March 6, 1998, hearing, but did so in a post hearing comment filed on April 6, 1998. PDV does not object to a 10 year termination provision, provided that the site specific rule tracks the recently adopted rule for Mobil's Joliet refinery referenced by the Agency in its pre-filed testimony. Post. Hrg. Br. at 7. Specifically, PDV requests that if the termination provision is included, that subparagraph (d) of the PDV proposal be deleted. Subparagraph (d) requires PDV to make continuing efforts to reduce the concentration of ammonia nitrogen in its wastewaters.

CONCLUSION

The Board finds that PDV has presented evidence warranting continued consideration of this matter, and that the record justifies adopting the proposal for first notice.

The sole point of discord in this proposed rule is the inclusion of a sunset provision. The Agency does not object to the petition, but feels a sunset provision should be included. PDV is amenable to a sunset provision so long as the rule does not require them to make continuing efforts to reduce the concentration of ammonia nitrogen in its wastewaters. The Agency did not comment on PDV's position on the sunset provision.

The Board believes that the Agency's recommendation merits further consideration, and includes a sunset provision in today's proposal for first notice. This provision will encourage PDV to take advantage of new technology and to continually explore methods of lowering its ammonia-nitrogen discharge during the pendency of the site-specific rule. To that end, the Board's proposal includes subparagraph (d) of the original proposal requiring PDV to make continued efforts to reduce the ammonia nitrogen concentration in its wastewaters. Subparagraph (d) is reasonable, and appropriately included in this site-specific rule.

The Board will again review the record in this matter upon completion of the first notice period to determine whether the record continues to support moving this matter towards adoption.

ORDER

The Board hereby proposes for first notice the following amendments to 35 Ill. Adm. Code 304.213. The Clerk of the Board is directed to file these proposed rules with the Secretary of State.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 304
EFFLUENT STANDARDS
SUBPART A: GENERAL EFFLUENT STANDARDS

Section	
304.101	Preamble
304.102	Dilution
304.103	Background Concentrations
304.104	Averaging
304.105	Violation of Water Quality Standards
304.106	Offensive Discharges
304.120	Deoxygenating Wastes
304.121	Bacteria
304.122	Total Ammonia Nitrogen (as N: STORET number 00610)
304.123	Phosphorus (STORET number 00665)
304.124	Additional Contaminants
304.125	pH
304.126	Mercury
304.140	Delays in Upgrading (Repealed)
304.141	NPDES Effluent Standards
304.142	New Source Performance Standards (Repealed)

SUBPART B: SITE SPECIFIC RULES AND EXCEPTIONS NOT OF GENERAL APPLICABILITY

Section	
304.201	Wastewater Treatment Plant Discharges of the Metropolitan Water Reclamation District of Greater Chicago
304.202	Chlor-alkali Mercury Discharges in St. Clair County
304.203	Copper Discharges by Olin Corporation
304.204	Schoenberger Creek: Groundwater Discharges
304.205	John Deere Foundry Discharges
304.206	Alton Water Company Treatment Plant Discharges
304.207	Galesburg Sanitary District Deoxygenating Wastes Discharges
304.208	City of Lockport Treatment Plant Discharges
304.209	Wood River Station Total Suspended Solids Discharges
304.210	Alton Wastewater Treatment Plant Discharges
304.211	Discharges From Borden Chemicals and Plastics Operating Limited Partnership Into an Unnamed Tributary of Long Point Slough
304.212	Sanitary District of Decatur Discharges
304.213	UNO-VEN Refinery Ammonia Discharge
304.214	Mobil Oil Refinery Ammonia Discharge
304.215	City of Tuscola Wastewater Treatment Facility Discharges
304.216	Newton Station Suspended Solids Discharges
304.218	City of Pana Phosphorus Discharge
304.219	North Shore Sanitary District Phosphorus Discharges
304.220	East St. Louis Treatment Facility, Illinois-American Water Company
304.221	Ringwood Drive Manufacturing Facility in McHenry County
304.222	Intermittent Discharge of TRC

SUBPART C: TEMPORARY EFFLUENT STANDARDS

Section

304.301	Exception for Ammonia Nitrogen Water Quality Violations (Repealed)
304.302	City of Joliet East Side Wastewater Treatment Plant
304.303	Amerock Corporation, Rockford Facility

Appendix A References to Previous Rules

AUTHORITY: Implementing Section 13 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/13 and 27].

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 30, p. 343, effective July 27, 1978; amended at 2 Ill. Reg. 44, p. 151, effective November 2, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; amended at 4 Ill. Reg. 20, p. 53 effective May 7, 1980; amended at 6 Ill. Reg. 563, effective December 24, 1981; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 6 Ill. Reg. 13750, effective October 26, 1982; amended at 7 Ill. Reg. 3020, effective March 4, 1983; amended at 7 Ill. Reg. 8111, effective June 23, 1983; amended at 7 Ill. Reg. 14515, effective October 14, 1983; amended at 7 Ill. Reg. 14910, effective November 14, 1983; amended at 8 Ill. Reg. 1600, effective January 18, 1984; amended at 8 Ill. Reg. 3687, effective March 14, 1984; amended at 8 Ill. Reg. 8237, effective June 8, 1984; amended at 9 Ill. Reg. 1379, effective January 21, 1985; amended at 9 Ill. Reg. 4510, effective March 22, 1985; peremptory amendment at 10 Ill. Reg. 456, effective December 23, 1985; amended at 11 Ill. Reg. 3117, effective January 28, 1987; amended in R84-13 at 11 Ill. Reg. 7291 effective April 3, 1987; amended in R86-17(A) at 11 Ill. Reg. 14748, effective August 24, 1987; amended in R84-16 at 12 Ill. Reg. 2445, effective January 15, 1988; amended in R83-23 at 12 Ill. Reg. 8658, effective May 10, 1988; amended in R87-27 at 12 Ill. Reg. 9905, effective May 27, 1988; amended in R82-7 at 12 Ill. Reg. 10712, effective June 9, 1988; amended in R85-29 at 12 Ill. Reg. 12064, effective July 12, 1988; amended in R87-22 at 12 Ill. Reg. 13966, effective August 23, 1988; amended in R86-3 at 12 Ill. Reg. 20126, effective November 16, 1988; amended in R84-20 at 13 Ill. Reg. 851, effective January 9, 1989; amended in R85-11 at 13 Ill. Reg. 2060, effective February 6, 1989; amended in R88-1 at 13 Ill. Reg. 5976, effective April 18, 1989; amended in R86-17B at 13 Ill. Reg. 7754, effective May 4, 1989; amended in R88-22 at 13 Ill. Reg. 8880, effective May 26, 1989; amended in R87-6 at 14 Ill. Reg. 6777, effective April 24, 1990; amended in R87-36 at 14 Ill. Reg. 9437, effective May 31, 1990; amended in R 88-21(B) at 14 Ill. Reg. 12538, effective July 18, 1990; amended in R84-44 at 14 Ill. Reg. 20719, effective December 11, 1990; amended in R86-14 at 15 Ill. Reg. 241, effective December 18, 1990; amended in R93-8 at 18 Ill. Reg. 267, effective December 23, 1993; amended in R87-33 at 18 Ill. Reg. 11574, effective July 7, 1994; effective July 7, 1994; amended in R95-14 at 20 Ill. Reg. 3528, effective February 8, 1996; amended in R94-1(B) at 21 Ill. Reg. 364, effective December 23, 1996; expedited correction in R94-1(B) at 21 Ill. Reg. 6269, effective December 23, 1996; amended in R97-25 at 22 Ill. Reg. 1351, effective December 24, 1997; amended in R97-28 at 22 Ill. Reg. 3512, effective February 3, 1998; amended in R98-14 at ___ Ill. Reg. _____, effective _____.

SUBPART B: SITE SPECIFIC RULES AND EXCEPTIONS NOT OF GENERAL
APPLICABILITY

Section 304.213 UNO-VEN Refinery Ammonia Discharge

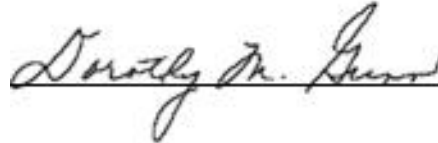
- a) This Section applies to discharges from ~~UNO-VEN's~~ the PDVMR Refinery, located in Lemont into the Chicago Sanitary and Ship Canal.
- b) The requirements of Section 304.122(b) shall not apply to the discharge. Instead ~~UNO-VEN~~ PDVMR must meet applicable Best Available Technology Economically Achievable (BAT) limitations pursuant to 40 CFR 419.23 (1992) incorporated by reference in subsection (c). ~~UNO-VEN~~ PDVMR shall also meet a monthly average limitation for ammonia nitrogen of 9.4 mg/l and a daily maximum limitation of 26.0 mg/l.
- c) The Board incorporates by reference 40 CFR 419.23 (1992) only as it relates to ammonia nitrogen as N. This incorporation includes no subsequent amendments or editions.
- d) ~~UNO-VEN~~ PDVMR shall continue its efforts to reduce the concentration of ammonia nitrogen in its wastewaters.
- e) ~~UNO-VEN~~ PDVMR shall monitor the nitrogen concentration of its oil feedstocks and report on an annual basis such concentrations to the Agency.
- f) ~~UNO-VEN~~ PDVMR shall submit the reports described in subsection (e) no later than 60 days after the end of a calendar year.
- g) The provisions of this Section shall terminate on December 31, ~~1999~~2008.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

Board Member K.M. Hennessey abstained.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 21st day of May 1998 by a vote of 6-0.

A handwritten signature in cursive script, reading "Dorothy M. Gunn", written over a horizontal line.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board