ILLINOIS POLLUTION CONTROL BOARD
March 14, 1986

IN THE MATTER OF:	)	
	)	R84-13
PROPOSAL OF UNION OIL COMPANY OF CALIFORNIA TO AMEND THE WATER POLLUTION REGULATIONS	)	

PROPOSED RULE. FIRST NOTICE.

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

This matter comes before the Board upon the April 25, 1984 filing of a proposal by Union Oil Company of California (Union) requesting relief from the 3 mg/l ammonia nitrogen effluent standard established in 35 Ill. Adm. Code 304.122(b). Union requests that instead it be required to meet the federal best available technology economically achievable (BAT) limitations set forth in 40 CFR 419.23 (1985). Union has calculated and the Agency has not disagreed that the allowable BAT ammonia nitrogen limits would be 775 lbs/day monthly average and 1705 lbs/day daily maximum (Exh. 9 at 5; see Exh. 8 App. C). For comparison purposes, 775 lbs/day is approximately 29 mg/l (R. 60). At hearing Union requested dissolved oxygen (DO) WQS relief in the event the Board determines that Union causes or contributes to a dissolved oxygen violation in the Illinois River.

Hearing was held on December 12, 1984 in Lemont, Illinois. The Department of Energy and Natural Resources (DENR) determined that an economic impact study was unnecessary and filed its negative declaration to that effect on May 13, 1985. The Economic and Technical Advisory Committee agreed with this finding, filing its concurrence on May 16, 1985. On July 8, 1985, the Agency submitted its brief recommending that relief be denied. The last brief, by Union, was submitted on July 31, 1985. In response to a Board inquiry on the status of the Calumet wastewater treatment plant, Union filed on November 21, 1985, a letter which contained information obtained from the Illinois Environmental Protection Agency (Agency).

Hearing Record

Union owns and operates a petroleum cracking refinery located in Lemont, Will County, Illinois which has a rated capacity of 154,000 barrels of crude oil per day. Some of the oil used is sour crude which is high in nitrogen content and which contributes to the high ammonia nitrogen levels in wastewater discharge. The record does not contain the percentage of Union's crude feedstock which could be classified as sour. The refinery draws from and discharges to the Chicago Sanitary and Ship Canal (Canal), a secondary contact stream, pursuant to

NPDES Permit No. 0001589. Discharge is at river mile 296.5 which is 5.5 miles upstream of the Lockport Lock and Dam and 20 miles downstream of the Metropolitan Sanitary District of Greater Chicago's (MSD) West-Southwest and Calumet wastewater treatment plants (R. 75). After treatment in Union's wastewater treatment plant (WWTP), approximately 3.3 million gallons per day (MGD) of process wastewater and contaminated surface runoff are discharged. The WWTP consists of primary, secondary and tertiary treatment. Equipment includes a combined flow equalization and storm basin, two API separators, a primary clarifier, an activated sludge basin and a polishing pond. In-plant technology includes three sour water strippers, two stripper storage tanks, and the recycling and treating of all cooling water.

Union has been granted five previous variances from the ammonia nitrogen effluent limitation found at Section 304.122(b):

PCB 77-163, September 29, 1977; 27 PCB 511
PCB 78-168, September 21, 1978; 31 PCB 499
PCB 80-124, September 4, 1980; 39 PCB 438
PCB 82-87, October 5, 1982; 49 PCB 43
and December 2, 1982; 50 PCB 57
PCB 84-66, February 20, 1985.

The variance in PCB 84-66 imposed a monthly average ammonia nitrogen effluent limitation of 625 lbs/day and a daily maximum of 1,160 lbs/day based on Union's expectation that its expanded delayed coker unit and its new needle coker complex would increase the ammonia nitrogen of its effluent by 73 lbs/day under specified process conditions (PCB 84-66, February 20, 1985 slip op. at 2). For comparison purposes, 625 lbs/day is approximately 23.4 mg/1 (R. 60).

A Union witness testified regarding the best available technology economically achievable (BAT) for refinery operations such as that at Union Oil. According to him, the USEPA defined a model plant which includes in-plant and end-of-pipe treatment. In-plant controls were sour water strippers, elimination of once-through barometric condensor water, segregation of sewers and elimination of once-through cooling water. End-of-pipe treatment includes flow equalization, preliminary oil and solids removal (primary clarifier), biological treatment and polishing (Exh. 9 at 3,4). The witness testified that the Union refinery has all of these controls. In addition it has programs to minimize water usage, provide air cooling, has extensive stripping and provides thermal oxidation of stripper bottoms. While USEPA model plant sour water strippers were defined as providing ammonia removals of greater than 85 percent, Union represents that its combined long-term removal for the strippers averages 93 percent with monthly averages typically greater than 90 percent.Union currently exceeds the BAT requirements (Exh. 9 at 5).

As a part of its pollution control effort, Union uses water conservation. A 16 million gallon polishing lagoon which also

serves as a holding lagoon provides the refinery with fire protection water when needed. The holding lagoon reduces the amount of water in Union's discharge. While under BAT guidelines it could discharge 42 gallons of water per barrel of crude refined, Union discharges only 28 gallons per barrel (Exh. 8 at 2-13). Of these 28 gallons, Union estimates that 6 gallons per barrel are from stormwater flows. Id. Union's current plant refines three times as much oil as its retired Lemont plant and uses one-twentieth as much water (R. 14).

This water conservation effort by Union in a sense penalizes it. While the federal BAT standards are based on mass loadings of ammonia nitrogen discharged in the effluent (40 CFR 419.23, 1985), the Board's ammonia nitrogen effluent limitation is based on concentration, which is mass per volume. While Union has reduced the volume of water in its discharge, the mass remains constant. Therefore, the mass of ammonia nitrogen is greater per unit of volume after recycling than if Union did not recycle, which in turn raises the concentration (mass/volume) of ammonia nitrogen in the effluent.

Alternative systems to meet the 3 mg/l ammonia nitrogen effluent standard were discussed by Union's consultants in the Aware Report (Exhibit 8). Considered not technically feasible were single-stage activated sludge, single stage activated sludge with mutant bacteria, land application, ozonation, air stripping, and steam stripping (Aware Report at 3-22). Other systems considered which can meet the 3 mg/l ammonia nitrogen standards intermittently but not consistently include: single stage activated sludge with powdered activated carbon (PAC), two stage activated sludge, two stage biological treatment with activated sludge in the first phase and fixed media in the second stage, and ion exchange (Id. at 3-23). These alternatives and another, known as breakpoint chlorination, with their costs and problems are summarized below (from Exh. 8, Table 4-6).

The activated sludge/PAC process has a capital cost of $3,268,000 and operating and maintenance costs of $568,000/yr. Needed facility modifications include addition of a 2.0 million gallon aeration basin, installation of new aeration system in existing aeration basin, and installation of a PAC addition facility. Potential problems include lack of proven process reliability, abrasion due to PAC which may require additional equipment modifications and alternate sludge disposal techniques.

The two-stage activated sludge process has a capital cost of $3,535,000 and operating and maintenance costs of $216,000/yr. Needed facility modifications include addition of a 0.73 million gallon aeration basin, installation of a new aeration system in existing aeration basin, and the installation of a new 125 foot diameter clarifier. Potential problems include no proven process reliability and poor settling of sludge in the second stage.

The two-stage activated sludge/fixed media process has a capital cost of $3,195,000 and operating and maintenance costs of $159,000/yr. Needed facility modifications include installation of a new aeration system in the existing aeration basin and the installation of 5.0 million square feet of RBC media. Potential problems include no proven process reliability.

The ion exchange process has a capital cost of $10,800,000 and operating and maintenance costs of $685,000/yr. Needed facility modifications include installation of a granular media filter and the ion exchange system. Potential problems include no proven process reliability, high attrition of exchange media, and organic fouling.

The chlorination/dechlorination (breakpoint chlorination) process has a capital cost of $1,950,000 and operating and maintenance costs of $932,000/yr. Needed facility modifications include the installation of the chlorination and dechlorination systems. While it is technically feasible, it may produce toxic chlorinated hydrocarbons and was thus discounted.

The Agency recommended that Union should be required by the Board to proceed with second stage nitrification (Agency Brief at 7, 9, 10). The record before the Board does not support such a finding. The Union expert testified that while second stage nitrification was theoretically feasible, it would present operational difficulties (R. 180-2).

Union summarized its past compliance efforts and costs (Exhibit 1, Tables 2 and 3). The most recent efforts included the use of a sulfide-removing chemical and additional steam to enhance nitrification, full scale trial addition of Sybron/biochemical mutant bacteria to establish a nitrifier population, and the installation of permanent dissolved oxygen analyzers in the aeration basin. The additional steam and bacteria did not increase nitrification (PCB 84-66, February 20, 1985 slip op. at 4). Present design projects include adding hydrogen peroxide to the WWTP and final clarifier modifications. The total capital cost for Union's improvement program between 1977 and 1984 was $1,023,000 while the total operating cost was $1,274,000 (Exh. 1, Table 3).

Water Quality

Chicago area wastewaters are collected by the North Shore Channel and channelized sections of the North and South Branches of the Chicago River, subsequently joining the Sanitary and Ship Canal (Canal). The Cal-Sag Channel joins the Canal upstream of Union. The Canal ends approximately one mile below the Lockport dam where it empties into the Des Plaines River. The Illinois River is formed at river mile 272.86 at the confluence of the Des Plaines and Kankakee Rivers. It consists of eight navigation pools controlled by seven locks and dams on the waterway and the Alton dam on the Mississippi.

Chicago area wastewaters from three large MSD plants are discharged upstream of Union. The Northside plant discharges to the North Branch of Chicago River, the West-Southwest to the Canal, and the Calumet plant to the Cal-Sag. All Chicago waste and diversion flows are combined at the confluence of the Canal and the Cal-Sag upstream of Union.

Different water quality standards (WQS) apply in the various streams. The Canal and the Des Plaines River from its confluence with the Canal are secondary contact waters up to the I-55 bridge southwest of Joliet. This reach includes the Union refinery. The waters below the I-55 bridge, which include a 17 mile stretch of the Des Plaines River and the Illinois River are classified as general use waters.

The ammonia nitrogen WQS for secondary contact waters are 2.5 mg/l April through October and 4.0 mg/l November through March (Section 302.407). The dissolved oxygen (DO) WQS for secondary contact water is 4 mg/l (Section 302.405).

The secondary WQS in the Canal for ammonia nitrogen and DO are being exceeded. The ammonia nitrogen secondary WQS is being violated downstream of Union at the Agency's only Canal sampling station, Lockport (Exh. 5, Table 3-1 at 3-4). Union's monitoring of influent ammonia nitrogen at its plant upstream of Lockport shows ammonia nitrogen WQS violations in the Canal (Id., Figure 3-2). Violations of the DO secondary WQS are also occurring at the Lockport station (Id., Table 3-2).

The general use ammonia nitrogen WQS ranges from 1.5 mg/l to 15 mg/l based on temperature and pH (Section 302.212). The general use minimum DO WQS is 5 mg/l, but DO may not be less than 6 mg/l during at least 16 hours of any 24 hour period (Section 302.206). Both the general ammonia nitrogen and DO WQS are sometimes exceeded in the Illinois River (R. 120, Exh. 5 at 3-13, Table 3-5 at 3-14; B-18, Table 3-8 at 3-19, 3-25). Monitoring data generally show compliance with the WQS in the Illinois River. Between 1978 and 1983, however, a DO WQS violation rate of one to three percent existed in the Illinois River (Exh. 4 at 6). For example, Agency data shows one violation at Lacon in 1980 (Exh. 4 at 6, Table 3).During the same 1978 to 1983 period,total ammonia nitrogen WQS violations declined from eleven percent to zero (Exh. 4 at 6). The latest Agency monitoring data show that between January and September 1984 there were no DO or ammonia nitrogen WQS violations in the river. Id.

The Illinois State Water Survey (ISWS) modeling study (Exh. 7) concluded that at 7-day, 10-year low flow conditions there would be DO WQS violations in the Peoria pool of the Illinois River. The modeling study was based on data collected in the summer in 1971, 1972, 1978, and 1979 and based on 1971 and 1980 waste loadings (R. 86; Exh. 7). The minimum modeled DO level in the Illinois River was 3.1 mg/l in the Peoria Pool at river mile

180 (Exh. 4; Table 4). It is expected that this level will increase to 3.7 mg/l once the MSD Calumet plant achieves nitrification. Id.

Using the ISWS model data as a starting point, Union's consultant calculated Union's DO contribution at the Peoria pool during low flow as 0.017 mg/l (Exh. 4, Table 4).

The ammonia nitrogen WQS violations are expected to decline in the Canal and be eliminated in the Illinois River once the MSD's Calumet Treatment Plant achieves an effluent quality of 7 mg/l BOD and 2 mg/l ammonia nitrogen (R. 119-121). This assumption by Union is based on the historical decrease in ammonia loadings between 1971-1980 (Exh. 5 at 3-25). Whether the ammonia nitrogen WQS will be achieved in the Canal will depend on the degree of nitrification maintained at both the Calumet and WSW treatment plants (R. 120). The Calumet plant is expected to achieve nitrification by January 1987 (Huff letter dated 11-6-85 rec'd 11-21-85).

While the additional nitrification at the Calumet plant should improve the DO concentration of the waterways, violations are expected to continue. As the Illinois State Water Survey pointed out, "the bottom sediments alone will cause significant oxygen depletion in all pools above the Peoria Dam....The SOD [sediment oxygen demand] rates below the Dresden Island Dam will continue to exert ambient demands irrespective of what is done in the Chicago area to eliminate storm overflows or to improve treatment plant efficiencies." (ISWS Contract Report 324, July 1983 as cited at R. 122).

The WQS violations differ in each pool and the causes include sediment oxygen demand, benthic demand and dissolved biochemical oxygen demand. The latter includes the effect of ammonia loading as an oxygen consuming material. The concentration of oxygen in the water also depends on the extent of aeration in each pool.

The impact of Union's discharge on stream biota was also analyzed. By determining the species number and diversity, the stream can be classified as to the extent of pollution.

Grab samples were taken of the Canal bottom at locations upstream and downstream of Union's discharge on two different days (Exh. 5, Table 5-3 at 5-16). The results of the September 8, 1983 sampling revealed tubifex worms present along the near shore of Union's property, both upstream and downstream of Union (Exh. 5 Fig. 5-5 at 5-18). None were found in the middle or at the far shore because of a lack of bottom sediment (The Canal, whose bottom is bedrock, lacks sediment in places where barge traffic has scoured it clean). The results of an October 7, 1983 sampling included tubifex (sludge) worms, leeches and Chironomid midges above and below Union's discharge in the near shore

sediments. The number of each and their location are indicated in Exhibit 5, Table 5-4 (At 5-20).

The tubifex worms were abundant above and below Union's outfall on both days (Fig. 5-5 and 5-6). Giving their tolerance to polluted water, their abundance in this segment of the Canal indicates a polluted stream segment (Exh. 5 at 5-15, 5-17, Fig. 5-5).

Another method of stream classification involves use of a diversity index. The October 7 results were used to calculate a Shannon diversity index value of less then 0.16 at each sampling site (Exh. 5, Table 5-4 at 5-20). This indicates a polluted stream segment (Id. at 5-21).

The results of Exhibit 5 pointing to a polluted stream segment are in agreement with the Agency's own benthic studies of 1978, 1979 and 1980 which showed that the waterway is polluted upstream of Union's outfall at approximately the Lockport Lock (Exh. 5 at 5-21). The authors conclude that there is no change in the diversity or the number of organisms due to the effects of Union's discharge.

The concentration of ammonia nitrogen was also sampled during the two benthic sampling days in order to calculate the un-ionized ammonia concentrations which are toxic to fish at certain levels. Un-ionized ammonia concentrations were calculated at a pH of 7.4, 4.0 mg/l ammonia nitrogen, and at temperatures of 21° C and 26° C. At the two temperatures, the un-ionized values were 0.042 mg/l and 0.060 mg/l, respectively. Reviewing another study, the authors conclude that these levels would not be acutely toxic to carp, noting that the above calculated un-ionized values occur after the mixing area of less than 100 feet downstream of Union's discharge (Exh. 5 at 5-22).

The authors of Exhibit 5 did not perform actual fish population counts. They did rely on a 1974 MSD fish study wherein carp, goldfish and a green sunfish were caught upstream of Union's outfall at the Lockport Lock and Dam (Exh. 5 at 5-21). Eleven miles upstream of Union's outfall between Laramie Avenue and Willow Springs Road there were no fish. Id. The authors conclude that the lack of fish diversity indicated by the MSD study is a result of the physical features of the Canal, the lack of spawning habitat and the low DO levels in the Canal. Id.

Effluent Standard Relief

Union offers three main reasons why it cannot at this time comply with the 3 mg/l ammonia nitrogen effluent standard. First, its water conservation practices contribute to higher concentrations of ammonia nitrogen in its discharges, although the pound loadings remain constant (R. 24-5). Therefore, using a concentration limitation instead of a mass limitation penalizes Union. The Board notes that Union would be in violation even if

it did not conserve water. Second, the increase in use of sour crudes, those with high sulfur and nitrogen contents, will increase the ammonia nitrogen in the effluent (Exh. 1, Fig. 1; R. 169-70). Union noted that since 1979 the nitrogen content of its crude oil has doubled (R. 16). The increased use of sour crudes appears to be an industry trend (Id., Attach. 1; R. 16-17). Third, the WWTP is only accomplishing sporadic nitrification due to an inhibitory effect of an unknown substance or substances on the nitrifying bacteria population (R. 150, 168, 42-3; See 164-166). While some attempts have been made to identify the substance or substances, they have not been identified (R. 40-1). Union asserts that no technically feasible alternatives which are also economically reasonable have been shown to exist.

The Board finds that the existence of an alternative that can consistently meet the 3 mg/l ammonia nitrogen effluent standard at Union which is technically feasible and economically reasonable is not apparent based on the record. The evidence does show that there are alternatives available which would approach this goal, although not consistently.

Additionally, the Board notes that the current impact of Union's discharge on the waterway is minimal.

The Board finds that Union has shown exceptional circumstances to justify relief. Therefore, the Board will grant Union relief from the ammonia nitrogen effluent standard located at 35 Ill. Adm. Code 304.122(b). Union will have to meet the BAT limitations at 40 CFR 419.23 for ammonia nitrogen.

Water Quality Standard Relief

Union has requested relief from the DO WQS through the operation of 35 Ill. Adm. Code 304.105 (R. 9-11) in the event that the Board determines that Union causes or contributes to a DO violation downstream in the Peoria pool of the Illinois River (Pet's Memorandum at 4,5). The issue of whether relief is needed stems from the ISWS modeling study of DO concentrations in the Illinois River at 7-day, 10-year low flow conditions, discussed above. The Agency contends that the general use ammonia nitrogen WQS of Section 302.212 and the secondary contact ammonia nitrogen WQS of Section 302.407 also apply to this proceeding (Agency Brief at 4).

The Board agrees that in the theoretical situation described, Union would be contributing to the modeled DO violation at low flow in the Peoria pool of the Illinois River. Given the facts of this proceeding, however, such violation is de minimus and no relief is needed. This finding applies only to the Peoria Pool DO model violation and shall not be construed as applying to any other existing or potential WQ violation. Theoretically, any upstream ammonia nitrogen discharge contributes to that DO violation. The Board will consider actual

violation on a case by case basis. For the Board to rule otherwise would trigger a mass of variance and site-specific requests for relief from theoretical WQS violations.

Even if one assumes that WQS relief is necessary in this situation, the mention of thet possibility occured at hearing and in briefs. There was no adeqate public notice of an intention to change a WQS pursuant to 40 CFR 131.20(b) (1985). The relief in this proceeding will be confined to the effluent discharge.

Conclusion

The Board is aware that the Sanitary and Ship Canal and Illinois River have a number of pollution problems. The Board agrees with the Agency that these problems are serious and that existing poor water quality should not be used to justify additional pollution. The waterways must be cleaned up to provide a suitable medium for diverse populations of aquatic life. The Board notes that the water quality of the waterways has been improving over the years, and intends that trend to continue.

The Board will allow Union to meet the BAT limits for ammonia nitrogen instead of those of Section 304.122(b). Union is also required to continue its current efforts to reduce ammonia nitrogen discharges. At hearing, Union committed to continue operating its existing nitrogen removal facilities (R. 62). Union's consultant also stated that continued operation was essential to consistently meet the BAT standard (R. 193). Union shall also monitor its influent and effluent ammonia nitrogen concentrations, as well as the nitrogen content of its crude oil and report them to the Agency on a monthly basis.

On its own motion, the Board has incorporated 40 CFR 419.23 (1985) by reference into the rule and added a requirement that the site specific rule, if finally adopted, expire in approximately eight years. This "sunset provision" is appropriate in this situation because of the changing water quality situation. It is expected that once the MSD Calumet WWTP plant achieves nitrification in early 1987, significant changes in water quality will occur in the Canal and the Illinois Waterway. The Board anticipates that the eight years will provide adequate time for the MSD improvements to come on line and be debugged, allowing four to five years to determine how water quality will respond. Prior to the termination date, Union will be able to assess the water quality and should also have better data on the nitrogen content of its feedstocks and any improvements in nitrogen removal technology.

Unfortunately, the record does not contain a discussion of the current or future effects of MSD's Tunnel and Reservoir Plan (TARP) on water quality in the Canal and the Illinois Waterway. A consultant for Union did state that "[a]ccording to MSDGC's Facility Plan Supplement, modeling of the dissolved oxygen

profile in the Chicago Sanitary and Ship Canal indicated that without elimination of combined sewer overflow the DO standard could not be maintained." (Exh. 4 at 3). Such information on TARP, a Chicago metropolitan combined sewer overflow project, would be helpful in the future, especially as different phases are completed.

The Board, in another site-specific proceeding, In re Decatur Sanitary District, R85-15 (First Notice Opinion and Order, January 23, 1986), proposed a sunset provision wherein the Board stated:

> Among other situations is the possibility that a future change in treatment technology, or, in the alternative, a change in technical or scientific understanding of the dynamics of water quality, would reflect negatively on the exception granted to the District. The Board can not determine that any such changes will occur, but neither can it definitively say that they will not. Given that the history of environmental management has witnessed many such changes, the prudent posture may be to limit the operation of an exception to a specific time interval, after which a reconsideration may be undertaken.
>
> Admittedly, the problems associated with the permanency of a rule can be challenged by a counter-proponent who at a future date offers an alternative rule which partially or in total reverses an existing site-specific rule. However, this places the burden on a party other than the holder of the exception. The Board believes a more appropriate procedure is to require the holder of the exception to bear the burden of justification for continuing the exception.

In addition, the Board expressed its concern that the proliferation of site-specific proposals, absent some Board review mechanism, would lead to "an edifice of patchwork site-specific rules, some of which will inevitably become obsolete and others which will lose their justification with time." (Id. at 7). The Board likewise adopts the Decatur reasoning here.

In commenting on this proceeding, the Agency raised questions as to why Union's nitrogen removal was far less efficient than that of the nearby Mobil refinery. It also suggested that Union could employ existing technology to improve its effluent quality. Unfortunately, these matters were not pursued at hearing, when witnesses were available to shed considerable light on the questions. The Board invites both Union and the Agency to provide such substantive comments and data as they see fit during the first notice period.

Although the Board believes that Union should be allowed to continue its current activities, such activities are reasonable

only until its discharges can be viewed in light of expected changes on the waterways. At that time a far more accurate assessment of the impact of the discharge and feasibility of compliance can be made.

ORDER

The Board hereby proposes to adopt the following rule and instructs the Clerk of the Board to cause its publication for First Notice in the Illinois Register:

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

PART 304

SITE-SPECIFIC RULES AND EXCEPTIONS
NOT OF GENERAL APPLICABILITY

Section 304.213 Union Oil Refinery Ammonia Discharge

a. This section applies to discharges from Union Oil Company of California's Chicago Refinery, located in Lemont, Illinois into the Chicago Sanitary and Ship Canal.

b. The requirements of Section 304.122(b) shall not apply to said discharge. Instead Union must meet applicable Best Available Technology Economically Achievable (BAT) limitations pursuant to 40 CFR 419.23 (1985) incorporated by reference in subsection (c).

c. The Board incorporates by reference 40 CFR 419.23 (1985) only as it relates to ammonia nitrogen as N. This incorporation includes no subsequent amendments or editions.

d. Union shall continue its efforts to reduce the concentration of ammonia nitrogen in its wastewaters and shall continue monitoring the influent and effluent ammonia nitrogen concentrations of its wastewater treatment plant, reporting such concentrations to the Agency in both lbs/day and mg/l on a monthly basis.

e. Union shall monitor the ammonia nitrogen concentration of its oil feedstocks and report such concentrations to the Agency on a monthly basis.

f. The provisions of this Section shall terminate on December 31, 1995.

IT IS SO ORDERED.

Board Members B. Forcade, J.T. Meyer, and W. Nega dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Opinion and Order was adopted on the 14th day of March, 1986 by a vote of 4-3.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board