ILLINOIS POLLUTION CONTROL BOARD
March 31, 1994

MARATHON OIL COMPANY,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 92-166
	)	(Permit Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
	)	
Respondent.	)	

JOSEPH W. WRIGHT, OF MCBRIDE BAKER & COLES, AND RONALD L. ANDES APPEARED ON BEHALF OF PETITIONER;

CHARLES W. GUNNARSON APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

This matter comes before the Board upon a petition for review filed by Marathon Oil Company (Marathon). Marathon requests that the Board remand the National Pollutant Discharge Elimination System (NPDES) permit issued on September 30, 1992 by the Illinois Environmental Protection Agency (Agency) for waste water discharges from Marathon's petroleum refinery located near Robinson, Illinois. Marathon contests the manner in which dilution/allowed mixing was utilized by the Agency in determining discharge limits in the NPDES permit and the manner in which toxicity provisions are expressed in the permit. Marathon also raises procedural issues regarding the manner in which Marathon's NPDES permit application was processed by the Agency.

The Board's responsibility in this matter arises from the Environmental Protection Act (Act) (415 ILCS 5/1 et seq. (1992).) The Board is charged there to adjudicate disputes arising out of permit decisions made by the Agency. More generally, the Board's responsibility in this matter is based on the system of checks and balances integral to Illinois environmental governance: the Board is charged with the rulemaking and principal adjudicatory functions, and the Agency is responsible for carrying out the principal administrative duties, including the issuance of permits.

Based on review of the record, the Board remands this matter to the Agency for reissuance of the permit consistent with the actual low flow conditions in the receiving stream.

PROCEDURAL HISTORY

Marathon has been issued NPDES permit No. IL0004073 covering waste water discharges from the Robinson refinery. That permit[1] was due to expire on August 1, 1991. On January 1, 1991 Marathon timely filed an application for reissuance of the permit[2]. Various exchanges between Marathon and the Agency thereafter ensued, culminating in reissuance of permit No. IL0004073 on September 30, 1992.

On October 29, 1992 Marathon filed the instant appeal contesting the September 30, 1992 reissuance.

The Agency filed its record in this proceeding on December 4, 1992. The Agency record contains forty-seven individual documents (exhibits) plus attachments, comprising 766 pages in aggregate.

On February 25, 1993 Marathon filed a motion to supplement the record. The motion was denied by Board order of March 11, 1993.

After being rescheduled from time to time to allow for settlement discussion and discovery, hearing was held before hearing officer Stephen Davis on October 27, 1993 in Robinson, Illinois. Marathon called three witnesses: Richard F. Bonelli, Jr., Manager of Technical Services at Marathon's Robinson facility; Sandra M. Bron, an engineer employed in the Permit Section of the Agency's Division of Water Pollution Control; and Robert G. Mosher, Unit Supervisor for Standards and Monitoring Support in the Agency's Division of Water Pollution Control. The Agency called one witness, the same Mr. Mosher.

Neither party presented either opening or summary arguments at hearing, instead standing on their briefs.

Marathon's brief was filed on December 10, 1993. The Agency filed its brief on January 10, 1994. Marathon filed a reply brief on February 15, 1994.

At the time Marathon filed the instant appeal, it had two additional actions before this Board that involve provisions of its NPDES permit: a variance petition from chloride limits and a petition to amend the site-specific rule from which the same chloride limits flow. The variance petition has since been resolved by grant of the variance, with conditions, for a term of

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[1] The "old permit" is Exh. B to the Marathon petition (Pet. Exh. B).

[2] The application is Exh. A to Marathon's Petition (Pet. Exh. A) and Exh. 8 of the Agency Record (Rec. Exh. 8).

one year or upon completion of the site-specific rulemaking. (Marathon v. IEPA, PCB 91-173, October 7, 1993.) The site-specific rulemaking is in first notice. (In re: Marathon Site-Specific, R91-23, October 7, 1993.)

BACKGROUND

The NPDES permit at issue here covers three separate effluent outfalls: 001, 002, and 003. Outfall 001 carries the discharge from Marathon's waste water treatment plant (WWTP). Outfalls 002 and 003 carry the discharge from impoundments on the Marathon property.

The WWTP treats wastes generated in operations within the refinery. Marathon's WWTP has had various configurations over time (Tr. 9-12). Most recently Marathon began operating a new WWTP, with a startup date January 1, 1993 (Tr. at 10).

The receiving stream for the Marathon discharge is an unnamed[3] tributary of Sugar Creek. There are permitted point source discharges to the unnamed tributary located upstream of the Marathon discharge. Although the natural 7-day 10-year low flow (7Q10) of the unnamed tributary is zero, actual low flow at the point of the Marathon discharge is determined by the upstream discharges.

ISSUES AND BOARD FINDINGS

Mixing/Dilution

As an initial point, the Board observes that it will remand this permit to the Agency for reissuance consistent with admission at hearing (Tr. at 51-54) that the 7Q10 appropriate for mixing/dilution considerations in this matter is 1.2 cubic feet per second (cfs). When the permit was originally issued in September 1992 the Agency proceeded under the assumption that the appropriate 7Q10 was zero[4], and accordingly that no allowance for

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[3] Although not officially named, the creek is sometimes referred to as Robinson Creek.

[4] Each party blames the other for causing the "7Q10 = zero" assumption to ever have had currency with the Agency. The Board does not find it productive to try to sort out and assign blame. The Board is perplexed however, as to how the matter could ever have arisen as late as September 1992. That the actual 7Q10 was not zero is affirmed in the instant record in documents as old as 1986 (e.g., R. at 18) and has even been cited in several earlier Board opinions concerning Marathon matters (e.g., PCB 85-83 at 67 PCB 514, January 23, 1986; PCB 91-173 at 129 PCB 52, January 9,

mixing could be made. The Agency is now apparently prepared to entertain rewriting the permit allowing for dilution. Under these circumstances remand is appropriate.

In some other cases of this nature, the Board might find that remand with the simple instruction to reconsider the permit in light of the appropriate 7Q10 figure would be sufficient to resolve the matter. However, in the instant case it is apparent to the Board that the parties are sufficiently at odds that more instruction on the issue of dilution/mixing is going to be necessary.

Underlying the instant dispute is the concept of allowed mixing. The Board discussed this concept at the time it adopted the concept in its currently applicable form:

> Today's rules affirm a long-standing tenet of Illinois environmental law. That tenet is that a discharger unable to comply with the requirement of not causing or contributing to water quality violations found at 35 Ill. Adm. Code 304.105, after making every effort to fulfill the obligations of the discharger (see discussion below) and given the limits imposed by the nature of the receiving water body and the character of the outfall(s), is entitled to use a limited portion of the receiving body of water to effect mixing of the effluent with the receiving water. Within this limited portion of the receiving body of water, the discharger is excused from compliance with 304.105. This is the "allowed mixing concept", which is developed principally in Section 302.102. (In re: Amendments to Title 35, Subtitle C (Toxics Control), R88-21(A), 107 PCB 279, January 25, 1990.)

This concept is expressed in the rules at Section 302.102(a):

> a) Whenever a water quality standard is more restrictive than its corresponding effluent standard, or where there is no corresponding effluent standard specified at 35 Ill. Adm. Code 304, an opportunity shall be allowed for compliance with 35 Ill. Adm. Code 304.105 by mixture of an effluent with its receiving waters, provided the discharger has made every effort to comply with the requirements of 35 Ill. Adm. Code 304.102.

The limiting circumstances under which allowed mixing may be used for compliance with Section 304.105 are set out at Section

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1992).

302.102(b). As the Board has previously noted, taken as a whole an intent of the provisions of subsection (b) is that the volume of waters used for allowed mixing must be as small as is practical, such as to limit impact on aquatic life, human health, and recreation. (Id. at 107 PCB 281.) Subsection (b) in full reads:

> b) The portion, volume and area of any receiving waters within which mixing is allowed pursuant to subsection (a) shall be limited by the following:
>
> 1) Mixing must be confined in an area or volume of the receiving water no larger than the area or volume which would result after incorporation of outfall design measures to attain optimal mixing efficiency of effluent and receiving waters. Such measures may include, but are not limited to, use of diffusers and engineered location and configuration of discharge points.
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> 2) Mixing is not allowed in waters which include a tributary stream entrance if such mixing occludes the tributary mouth or otherwise restricts the movement of aquatic life into or out of the tributary.
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> 3) Mixing is not allowed in waters adjacent to bathing beaches, bank fishing areas, boat ramps or dockages or any other public access area.
>
> 4) Mixing is not allowed in waters containing mussel beds, endangered species habitat, fish spawning areas, areas of important aquatic life habitat, or any other natural features vital to the well being of aquatic life in such a manner that the maintenance of aquatic life in the body of water as a whole would be adversely affected.
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> 5) Mixing is not allowed in waters which contain intake structures of public or food processing water supplies, points of withdrawal of water for irrigation, or watering areas accessed by wild or domestic animals.
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> 6) Mixing must allow for a zone of passage for aquatic life in which water quality standards are met.

7) The area and volume in which mixing occurs, alone or in combination with other areas and volumes of mixing, must not intersect any area or volume of any body of water in such a manner that the maintenance of aquatic life in the body of water as a whole would be adversely affected.

8) The area and volume in which mixing occurs, alone or in combination with other areas and volumes of mixing, must not contain more than 25% of the cross-sectional area or volume of flow of a stream except for those streams where the dilution ratio is less than 3:1. Mixing is not allowed in receiving waters which have a zero minimum seven day low flow which occurs once in ten years.

9) No mixing is allowed where the water quality standard for the constituent in question is already violated in the receiving water.

10) No body of water may be used totally for mixing of a single outfall or combination of outfalls.

11) Single sources of effluents which have more than one outfall shall be limited to a total area and volume of mixing no larger than that allowable if a single outfall were used.

12) The area and volume in which mixing occurs must be as small as is practicable under the limitations prescribed in this subsection, and in no circumstances may the mixing encompass a surface area larger than 26 acres.

A principal source of dispute between Marathon and the Agency focuses on the consequence of applying subsection (b)(8) to the Marathon situation. According to subsection (b)(8) up to 25% of the volume of flow of the receiving stream is available for mixing (dilution) <u>if</u> the ratio of the stream flow to the effluent discharge is greater than 3:1. Subsection (b)(8) further provides that no mixing (dilution) is allowed if the 7Q10 is zero.

For the Marathon discharge the ratio of stream flow to effluent discharge is less than 3:1. The "up-to-25%" provision of subsection (b)(8) accordingly does not apply.

The unnamed tributary does not have a 7Q10 of zero. Accordingly, the "no mixing" provision of subsection (b)(8) also does not apply.

In this circumstance, the parties seen to have concluded that it is correct to interpolate between the 25%-mixing and no-mixing conditions cited at subsection (b)(8). In this vein, Marathon produces graphs illustrating the interpolation procedure. (Marathon brief at p. 8, 10.) The interpolation procedure, however, is without justification, either mathematically or legally.

Mathematically there is no justification for a linear interpolation, particularly so when the ordinate is not linear; there is also no justification for the assumption that the limit for a ratio of 0:1 is a 100% dilution allowance.

Legally there is no basis for the interpolation. Subsection (b)(8) on its face addresses just two circumstances: what is allowed when dilution is greater than 3:1, and what is allowed when the 7Q10 is zero. Nothing is said in subsection (b)(8) about any other circumstances, including the circumstance of the Marathon discharge. Subsection (b)(8) is simply mute on the circumstance of the Marathon discharge.

Subsection (b)(8) therefore does not enter into the determination of a mixing/dilution value in the instant case. Other provisions in subsection (b) may. For example, not all of the flow in a receiving stream may be used for dilution lest the provision for a zone of passage at subsection (b)(6) be violated. Similarly, it is possible that the amount of allowed dilution might be defined on a parameter by parameter basis, including the possibility of no allowed mixing for some parameters pursuant to subsection (b)(9).

A second point of some issue is the matter of a mixing zone applicable to the Marathon discharge. Marathon requests, for example, that the Board remand this matter to the Agency with instruction that the Agency "calculate a mixing zone for the stream". (Marathon brief at p.17.)

It would appear that both parties miscomprehend the nature of a mixing zone and how a mixing zone is different from allowed mixing. The nature of a mixing zone is set forth at 35 Ill. Adm. Code 302.102(d)-(i). Pursuant thereto, a mixing zone is a physical volume with dimensions of length, width, and depth, not percentage of flow (compare Marathon Brief at p. 7-11 and Agency brief at p. 9-18). Moreover, a mixing zone is a condition in an NPDES permit that derives because the permit applicant provides proof that allows the Agency to determine that the proposed mixing zone conforms with federal and State law. (Section 302.102(d) and (f).) These and other facets of mixing zones have been discussed in some detail by the Board in the opinion that

accompanied adoption of the current Section 302.102. (See In re: Amendments to Title 35, Subtitle C (Toxics Control), R88-21(A), 107 PCB 283-9, January 25, 1990.). For additional discussion of the distinction between allowed mixing and mixing zones the parties are directed to the Illinois Supreme Court's opinion in Granite City Division of National Steel Company et al. v. The Illinois Pollution Control Board, 613 N.E.2d 719, 155 Ill. 2d 149 (1993).

There is no indication that Marathon has presented the Agency with the proof necessary for the Agency to determine a mixing zone. To remand with instructions that the Agency determine a mixing zone would constitute shifting a burden of proof to the Agency. This the Board will not do, and accordingly the request to remand for a mixing zone determination is denied.

Moreover, should Marathon wish to receive a mixing zone determination, it will have to follow the appropriate application procedures as part of a new permit application. The Board will not allow the instant application or its adjudication to be burdened with the new issue of a mixing zone determination.

Lastly, Marathon contests the Agency's use of the design average flow in determining Marathon's dilution ratio. Use of the design average flow in circumstances like this is in line with standard engineering practice (e.g., see Wastewater Treatment Plant Design, Water Pollution Control Federation Manual of Practice No. 8 and American Society of Civil Engineers Manual on Engineering Practice No. 36, p. 6); Marathon presents nothing that convinces the Board that the standard practice is inappropriately applied here.

Toxicity Testing/Evaluation

The September 30, 1992 permit contains at conditions 13, 14, and 15 provisions relating to toxicity testing, including at condition 15 a provision that requires Marathon to conduct a Toxicity Reduction Evaluation (TRE). Marathon now pleads that the "Board remand this matter to the Agency with instructions to ... impose toxicity testing and a TRE in a manner consistent with U.S. EPA guidance". (Marathon brief at p. 17.)

However, Marathon fails to point the Board to any USEPA guidance that the toxicity provisions of the September 20, 1992 permit are allegedly inconsistent with, either generally or specifically. Moreover, Marathon also does not present argument that USEPA guidance even controls the content of the permit conditions.

The Board reminds Marathon that in review of contested permit conditions it is the burden of the petitioner to prove that there would be no violations of the Act or Board regulations if the permit were to issue with different conditions. (e.g.,

Browning-Ferris Industries of Illinois, Inc. v. Pollution Control Board (2nd District 1989), 179 Ill. App. 3d 598, 534 N.E.2d 616.) Marathon has not met this burden, and the Board must thereby deny remand of the permit as regards consistency of toxicity testing and evaluation.

Although this denial disposes of the sole toxicity issue before the Board, for the purposes of assuring that there be no future confusion on the matter, the Board again believes that some further discussion is warranted.

Underlying much of the issue of toxicity testing/evaluation appears to be the matter of how the new WWTP should be factored into the permit. Even though it is never so explicitly put, Marathon appears to view the toxicity provisions of the September 30, 1992 permit as onerous and unnecessary given the presence of the new WWTP. (See Tr. at 21-22; Marathon brief at p. 13-14).

The Board finds nothing in the record that demonstrates that the presence of the new WWTP warrants a change in the provisions of the September 20, 1992 permit. It would certainly be hoped that the new WWTP has caused Marathon's effluent to be improved. However, this does not rise to the level of the necessary proof.

Finally, the Board notes that it is uncontested that the waters of the unnamed tributary have exhibited a degraded aquatic community associated with toxicity of its waters. This fact is not only documented within the instant record (e.g., Rec. Exhs. 1 and 20), but has been presented in several prior actions brought by Marathon before this Board (Marathon v. IEPA, PCB 85-83, 67 PCB 513, January 23, 1986; In the Matter of: Marathon Petroleum Company Site-Specific, R87-2, 103 PCB 133, September 13, 1989; Marathon v. IEPA, PCB 91-173, October 7, 1993; In re: Marathon Site-Specific, R91-23, October 7, 1993). The Board shares the deep concerns of the Agency regarding the toxicity in the unnamed tributary. This toxicity does need to be characterized and eliminated. On this basis the Board affirms that the requirements for both toxicity testing and a TRE are conditions necessary to assure compliance with the Act and the Board's regulations.

Public Hearing and Agency Rules Governing NPDES Permits

Marathon alleges that the Agency is in violation of the Act and Board regulations because it failed to hold a public hearing in this matter and because the Agency has not promulgated rules governing the issuance of NPDES permits. Marathon asks that the Board direct the Agency to afford Marathon a hearing on its NPDES permit, and to further direct the Agency to come into compliance with the Act and promulgate procedures for the issuance of NPDES permits.

The Board finds that these allegations are improper enforcement in a permit appeal proceeding. In a permit appeal proceeding the Board may not entertain challenges to the Agency's performance of its duties in the granting of permits. (See, Landfill, Inc., v. Pollution Control Board (1978), 387 N.E. 2d 258).

Assuming arguendo that the matter of the hearing was properly before the Board in this permit appeal, the Board still could not find favor with Marathon's request for the Agency to now be ordered to hold a hearing.

Whether an Agency hearing is to be held in an NPDES permit review is discretionary with the Agency, as has been declared by the appellate court:

> It is apparent from the language of this Rule[5] that the decisions as to whether to hold a public hearing is to be made by the Agency, based upon its determination as to the existence of a significant degree of public interest in the permit or group of permits. It is a discretionary decision to be made by the Agency. (Borg-Warner Corp. v. Mauzy, 100 Ill. App. 3d 862, 427 N.E.2d 415, 56 Ill. Dec. 335 (3rd Dist. 1981).)

Marathon presents no argument that would allow this Board to conclude that the Agency abused this discretion or otherwise failed to comport with the requirements pertaining to NPDES hearings.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

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[5] The "Rule" here referred to reads:

> The Agency shall hold a public hearing on the issuance or denial of an NPDES Permit or group of permits whenever the Agency determines that there exists a significant degree of public interest in the proposed permit or group of permits (instances of doubt shall be resolved in favor of holding the hearing), to warrant the holding of such hearing.

At the time this rule was addressed by the Court it was Rule 909(a) of the Board's Water Permits rules, Chapter 3, Part IX. Upon codification Rule 909(a) was moved to 35 Ill. Adm. Code 309.115(a)(1), where it now resides.

ORDER

This matter is hereby remanded to the Illinois Environmental Protection Agency for reissuance of NPDES permit No. IL0004073 consistent with the Board's findings of fact and conclusions of law in this matter.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1992)) provides for the appeal of final Board orders within 35 days of the date of service of this order. The Rules of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill.Adm.Code 101.246 "Motions for Reconsideration".)

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 31st day of March, 1994, by a vote of 5-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board