

ILLINOIS POLLUTION CONTROL BOARD  
September 20, 1979

BEKER INDUSTRIES CORP., )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 79-9  
 )  
 ENVIRONMENTAL PROTECTION AGENCY, )  
 )  
 Respondent. )

Mr. Duane A. Siler, Patton, Boggs & Blow, appeared for the  
Petitioner;  
Mr. William E. Blakney, Assistant Attorney General, appeared  
for the Respondent.

OPINION AND ORDER OF THE BOARD (by Mr. Young):

This matter comes before the Board on a Petition for Variance  
filed by Beker Industries, Corp. on January 16, 1979, requesting  
relief from certain terms and conditions of NPDES Permit IL0036463  
which was issued on December 14, 1978, and became effective on  
January 13, 1979. Specifically, a variance is requested from  
the Board regulations which under the NPDES permit require:

1. For monitoring and treating contaminated storm water  
runoff from Outfalls 002a, 002b, 003, 004d, 006 and  
007 to meet the effluent limitations required by Rules  
302(i) (temperature), 406 (ammonia nitrogen), 407  
(phosphorus and 408 (additional contaminants) of  
Chapter 3: Water Pollution Regulations;
2. For separately monitoring and treating Outfalls 001  
and 002c, 004a and 004b, and 004c and 005, and for  
separately monitoring combined Outfalls 004a-004b  
and 004c-005 for compliance with the total dissolved  
solids (TDS) of Rule 408(b) of Chapter 3; and
3. For complying immediately with these other require-  
ments of the permit, including final effluent  
limitations.

On February 26, 1979, the Environmental Protection Agency  
submitted a recommendation advising the Board to allow, as per  
Request No. 2, the consolidation of certain discharges and the  
mathematical combination of these combined waste streams for  
compliance with the TDS requirements. However, the Agency also  
recommended denial of Petitioner's request for a variance from

the remaining permit in Requests 1 and 3 which require monitoring, treatment and immediate compliance with the requirements of Chapter 3 and the NPDES permit. On May 21, 1979, Beker filed an Amended Petition which significantly modified the proposed compliance measures and clarified the compliance studies and programs to be undertaken by the Petitioner. After reviewing these revisions, the Agency submitted an amendment to the original recommendation on June 29, 1979, and a minor modification on August 1, 1979, in favor of the variance subject to specific conditions outlined by the Agency.

Hearing was held on August 30, 1979, in Ottawa, Illinois during which the Petitioner submitted clarifications to purported ambiguities in the record. No members of the public were present.

Beker Industries owns and operates a chemical manufacturing facility in Marseilles, Illinois which is bounded by the Illinois River and the Kickapoo Creek. Originally, the Marseilles facility produced sulfuric acid, phosphoric acid and diammonium phosphate (DAP). After temporarily closing the facility, Beker converted the plant to the manufacture of dicalcium phosphate in addition to sulfuric acid while phosphoric acid and diammonium phosphate production was discontinued. According to the petition, the Marseilles facility currently produces 25,500 tons of dicalcium phosphate and 188,000 tons of sulfuric acid annually. (Pet. 4-5; Am. Pet. 19-20).

In 1975, Beker filed an NPDES permit application which listed five non-process water discharges ancillary to the production of chemicals. Since Petitioner's facility discharged no process wastewater pollutants, the Marseilles facility was in compliance with all applicable USEPA effluent regulations and therefore, was subject only to the Board Rules regarding wastewater discharges to the Illinois River and the Kickapoo Creek. (Am. Pet. 4; Rec. 4).

On December 14, 1978, Petitioner was issued a revised NPDES permit which identified seven additional or a total of twelve discharges as separate outfalls each requiring monitoring and treatment. Eleven of the twelve discharges were to the Illinois River; Discharge 007 flowed to the Kickapoo Creek. Descriptions of the twelve outfalls identified by the NPDES permit are as follows:

- 001 - Noncontact Cooling Water
- 002a - Cooling Water Pond
- 002b - Contaminated Storm Water Runoff
- 002c - Noncontact Cooling Water
- 003 - Steam Condensate and Contaminated Storm Runoff

- 004a - Boiler Blowdown-Sulfuric Acid Plant
- 004b - Water Treatment (Softener) Plant Waste
- 004c - Noncontact Cooling Water
- 004d - Contaminated Storm Water Runoff-Sulfuric Acid Storage Area
- 005 - Noncontact Cooling Water-Sulfuric Acid Plant
- 006 - Gypsum Pond
- 007 - Contaminated Storm Runoff-East Side

In addition to listing Discharges 001, 003 and 005, the revised NPDES permit segregated waste streams in Discharges 002 and 004 in accordance with the source of wastewater contamination. Foremost among the discharge sources is a 35-acre former phosphoric acid cooling water pond (Discharge 002a), which flows to the waters of the Illinois River via an inlet and adjacent outlet point. Petitioner claims that with the discontinued production of phosphoric acid, the pond serves as a catchment for storm water runoff for a gypsum pile approximately 50 feet high and occupying about 80 acres. However, the Agency asserts that waste from clean-up operations are being pumped to the pond in addition to the runoff from the gypsum pile. (Am. Pet. 5, 6; Am. Rec. 2-3, 6).

Discharge 002b serves as an outfall which collects wastewater from clean-up operations, precipitation events and overflows from sump pumps not directed to the cooling pond. Discharge 002c receives water from the Fuller-Kenyon compressor and its discharge converges with the surface flow of Discharges 002a and 002b in a drainage ditch tributary to the Illinois River. (Am. Pet. 5-6; Am. Rec. 3).

The revised NPDES permit also divided Discharge 004 into four wastewater streams which are combined in a common ditch before flowing into the Illinois River. Discharges 004a, 004b, 004c and 004d were distinguished for purposes of separate monitoring and effluent limitations for the contaminants carried by each outfall. Petitioner claims that Discharges 004a, 004b and 004c carry storm water runoff from areas which formerly manufactured phosphoric acid and diammonium phosphate. (Am. Pet. 5-6; Am. Rec. 3).

The revised NPDES permit also identified two discharge points from Petitioner's facility for separate monitoring and treatment. Discharge 006 is a discharge point from a separate pond also containing calcium sulfate (gypsum) which flows directly to the Illinois River. Discharge 007 conveys contaminated storm runoff from the east side of Petitioner's facility into Kickapoo Creek. (Am. Pet. 6; Am. Rec. 3, 4).

After reviewing the terms and conditions of the NPDES permit, as revised, Beker has proposed alternative measures to ultimately meet the requirements of the permit which requires approval of the Board in the form of a variance. Beker's proposed compliance

program involves three basic elements. First, Petitioner requests relief for intermittent overflows from the cooling water pond tributary to Discharge 002a and four additional wastewater streams of contaminated storm water. Second, Beker seeks modification of the NPDES permit to consolidate three discharges and to combine by mathematical formula the new discharges to comply with the TDS requirements. Third, Petitioner requests that the Board establish a schedule of compliance to reasonably implement these measures and to provide the necessary interim effluent limitations during the variance period.

The first of these elements includes two distinct parts. As the first part, Beker proposes to implement a program to prevent overflows from the cooling water pond (Discharge 002a) and the gypsum pond. Measures include liming the cooling pond, dilution from natural precipitation and managing the discharge to eventually eliminate the pond as a source of pollution. In addition, Petitioner seeks a modification of the permit's ammonia nitrogen effluent limitation to allow a daily maximum concentration of 120 mg/l. The second aspect of this part would require Beker to initiate measures to reduce contamination of storm water runoff from 002b, 003, 004d and 007. Specific clean-up and monitoring programs have been designed to remove contamination or eliminate the discharge from the drainage area. (Am. Pet. 8-15).

The second element of Petitioner's program would allow Beker to consolidate into three discharges the following waste streams: Discharges 001 and 002c (noncontact cooling waters), Discharges 004c and 005 (noncontact cooling waters), and Discharge 004a (boiler blowdown) and 004b (water treatment (softener) plant waste). Petitioner also seeks to mathematically combine new Discharges 004a-004b and 004c-005 for purposes of compliance with the TDS effluent limitations. (Am. Pet. 15-17).

As the final element, Beker requests that a specific schedule and interim limitations be established to permit Petitioner to continue operations while implementing the proposed program. Petitioner seeks a reasonable timetable for submission of permits for construction, diversion of discharges and other proposed measures and a reasonable schedule for commencing clean-up, monitoring measures and construction in accordance with the proposed program. In addition, Beker requests interim limitations and monitoring requirements which reflect current conditions at the Marseilles facility. (Am. Pet. 17-19).

Petitioner has estimated that the total capital cost for completion of the proposed control measures ranges from \$113,500 to \$156,000. In addition to the clean-up operations mentioned above, Petitioner has proposed monitoring and treatment equipment for Discharges 001-002c, 004a-004c, and 004c-005 to assure compliance with all applicable effluent limitations. To monitor compliance of the combined Discharges 004a-004b/004c-005 with the TDS effluent limitation of Rule 408(b), will require measurements of actual flow at each monitoring station and a suitable mathematical formula approved by the Agency to determine the TDS concentration in the combined discharge. Petitioner claims that the proposed program is the most cost-effective means of assuring maximum environmental protection. (Am. Pet. 7, 22-25).

It has been the position of Beker Industries from the very beginning of this proceeding that the Environmental Protection Act does not authorize the Agency to impose limitations on storm water runoff. Beker accedes to the NPDES permit requirements for Outfalls 002a, 002b, 003, 004d and 007, only for the purposes of this variance proceeding. In response, the Agency maintains that the authority to control a contaminated storm water runoff discharge pursuant to NPDES authority is well-founded within appropriate definitions of the Act and the Board regulations and therefore within the scope of Section 12(f) of the Act.

Having reviewed the arguments, the Board finds since the discharge from Petitioner's outfalls, identified above, are admixtures of land runoff and significant amounts of contaminants, the storm water runoff assumes the character of "wastewater" for the purposes of the NPDES permit provisions of Sections 12(f) and 13(b) of the Act and Board regulations thereunder. Moreover, control of such discharge is clearly required by Federal regulations pursuant to the Clean Water Act. (See 40 CFR, Part 122). (Am. Pet. 2; Rec. 17-18).

In reviewing Beker's original variance petition, the Agency objected to Petitioner's failure to provide measures for achieving full compliance, as per Procedural Rule 401(a) (6), and its inability to determine environmental impact as required by Procedural Rule 410(a) (7). According to the Amended Recommendation, the Agency has determined that Petitioner's proposed program will provide the data necessary to meet the compliance requirement. The Agency also believes that continued discharges will have localized impact for the short length of time of the variance. Furthermore, the Agency supports such effluent limitations for Outfall 002a, 002b and 007 for the duration of the variance period as has been determined by the Agency's best engineering judgment. (Rec. 13-16; Am. Rec. 4-5).

The Board finds that a variance is warranted to allow Petitioner to implement its proposed program within the time frame of the Order. Interim limitations will be provided as are recommended by the Agency. Petitioner will be granted a variance from the applicable terms and conditions of its NPDES permit as determined by the Order.

The Board will direct the Agency to modify Petitioner's NPDES Permit IL0036463 in compliance with this Order pursuant to Rule 914 of Chapter 3 and to include interim effluent limitations which are consistent with this Order.

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

#### ORDER

The Petitioner, Beker Industries Corp., is hereby granted a variance from Rules 302(i) (temperature), 406 (ammonia nitrogen), 407 (phosphorus) and 408 (additional contaminants) of Chapter 3: Water Pollution Regulations, to permit modification of the terms and conditions of NPDES Permit IL0036463 as necessary to initiate and implement the requirements of Paragraphs 1 through 9 of this Order.

#### 1. Outfall 001

- A). Outfall 001 shall be combined with Outfall 002c. Within 30 days of the date of this Order, Petitioner shall submit a properly executed construction permit application to the Agency for this proposed combined outfall. Within 30 days following issuance of the construction permit for the combined outfall, Petitioner shall commence monitoring pursuant to the final limits in its NPDES permit. During the interim discharge period, Petitioner shall monitor the outfalls separately pursuant to the provisions of its present NPDES permit.

#### 2. Outfall 002a

- A). Within 30 days of the date of this Order, Petitioner shall submit a properly executed construction permit application including "as-is" drawings of the cooling pond to the Agency for the proposed managed discharge program of Outfall 002a. Final details of the managed discharge program shall be approved by the Agency prior to issuance of the construction permit.

- B). Within 10 days of the date of this Order, Petitioner shall commence neutralization of the cooling pond (Outfall 002a) with lime. Within 120 days after the date of the Order in this proceeding, Petitioner shall have completed such neutralization and shall commence the program of managed discharge of the contents of the pond and monitoring thereof in accordance with the final limits of its NPDES permit (with the exception of ammonia-nitrogen to be outlined below). All work requiring additional permits shall be completed within 30 days after issuance by the Agency of such permit.
  - C). Interim effluent limits for Outfall 002a with the exception of ammonia-nitrogen shall correspond to those requested in Exhibit B in the original Petition for Variance.
  - D). Petitioner shall be allowed to discharge ammonia-nitrogen at a level of 120 mg/l daily maximum from Outfall 002a for a period of one year following pond neutralization. At the end of the one year period, Petitioner shall request that its NPDES permit be modified to reflect then current discharges, with a daily maximum not to exceed 120 mg/l. Within 2 years following the date of this Order, Petitioner shall have achieved compliance with Chapter 3 limits for ammonia-nitrogen for Outfall 002a or seek an extension of relief from the Board.
  - E). Until such time as the program of managed discharge commences, the interim effluent limits for Outfall 002a shall be as requested in Exhibit B of the original Petition for Variance.
3. Outfall 002b
- A). Within 30 days after the date of this Order, Petitioner shall implement fully all of the ameliorative and preventive measures prescribed in its Petition with respect to Discharge 002b.

- B). Within 30 days after the date of this Order, Petitioner shall submit a properly executed construction permit application for diversion of boiler blowdown from Outfall 002b for inclusion and treatment in Outfall 004a combined with 004b.
- C). Within 120 days after the issuance of a construction permit for diversion of boiler blowdown from Outfall 002b, Petitioner shall have completed such diversion.
- D). Petitioner shall develop a housekeeping and maintenance plan to prevent spills in the unloading area which would drain to the junction box downstream of the phosphoric acid plant sump pump. Petitioner shall submit such plan to the Agency no later than six months from the date of this Order.
- E). For a period of six months following implementation of the foregoing measures, Petitioner shall monitor the discharge with respect to all parameters specified for Outfall 002b in its NPDES permit by means of weekly grab samples during periods of runoff. Petitioner shall provide monthly monitoring reports to the Agency during this six-month period. If at the conclusion of such monitoring and resulting data shows that the measures taken by Petitioner have significantly reduced contamination, the Agency would be authorized, upon Petitioner's request, to modify the permit with respect to such discharge to relieve Petitioner of any further obligation to continue monitoring thereof. If at the conclusion of such monitoring, the Agency concludes on the basis of the resulting data that the quality of the discharge is unacceptable, the Agency would be authorized to reopen these variance proceedings concerning such discharge unless Petitioner were to implement such additional measures as the Agency might consider necessary to reduce the contamination of the discharge;



provided, however, that to the extent that the discharge is in compliance with applicable effluent limitations under Part IV of Chapter 3 regulations it would be deemed acceptable to the Agency.

4. Outfall 003

- A). Within 30 days of the date of the Order in this proceeding, Petitioner shall have fully implemented all of the ameliorative and preventive measures for Outfall 003 as described in its petition.
  
- B). For a period of six months following implementation of the foregoing measures, Petitioner shall monitor the discharge with respect to all parameters specified for Outfall 003 in its NPDES permit by means of weekly grab samples during periods of runoff. Petitioner shall provide monthly monitoring reports to the Agency during this six-month period. If at the conclusion of such monitoring the resulting data shows that the measures taken by Petitioner have significantly reduced contamination, the Agency would be authorized, upon Petitioner's request, to modify the permit with respect to such discharge to relieve Petitioner of any further obligation to continue monitoring thereof. If at the conclusion of such monitoring the Agency concludes on the basis of the resulting data that the quality of the discharge is unacceptable, the Agency would be authorized to reopen these variance proceedings concerning such discharge unless Petitioner were to implement such additional measures as the Agency might consider necessary to reduce the contamination of the discharge; provided, however, that to the extent that the discharge is in compliance with applicable effluent limitations under Part IV of Chapter 3 regulations it would be deemed acceptable to the Agency.

5. Outfalls 004a and 004b

- A). Within 30 days of the date of the Order in this proceeding, Petitioner shall submit a properly executed construction permit application for the proposed combined treatment of discharges from Outfall 004a and 004b and diversion of boiler blowdown from Outfall 002b.
- B). Within 120 days from the date of issuance of a construction permit for such combined outfall, Petitioner shall have completed construction and commenced monitoring pursuant to its final NPDES permit limits for the combined discharge.
- C). During the interim discharge period for Outfall 004a, 004b and the boiler blowdown diverted from 002b, Petitioner shall monitor the discharges separately in accordance with the interim limits proposed in Exhibit B to the original Petition for Variance.
- D). Within 30 days of the date of the Order in this proceeding, Petitioner shall submit a formula acceptable to the Agency for calculation of total dissolved solids for mathematically combining Outfall 004a-004b and 004c-005 for this parameter. Petitioner shall be allowed to discharge total dissolved solids pursuant to this formula of mathematical combining Outfall 004a-004b and Outfall 004c-005 for a period of five years.

6. Outfall 004c and 005

- A). Within 30 days after the date of the Order in this proceeding, Petitioner shall submit a properly executed construction permit application to the Agency for proposed combined Outfall 004c-005.
- B). Within 30 days after the issuance of a construction permit for the combined Outfall 004c-005, Petitioner shall have commenced monitoring pursuant to its final NPDES permit limits.
- C). In the interim period, Petitioner shall monitor Outfall 004c and 005 separately pursuant to present NPDES permit.

7. Outfall 004d

A). Within 30 days after the date of the Order in this proceeding, Petitioner shall complete all ameliorative and preventive measures described in its petition so that Outfall 004d may be eliminated as a discharge point. The Agency shall be authorized to delete Outfall 004d, upon the request of Petitioner, after completion of such measures.

8. Outfall 006

A). Within 30 days of the date of the Order in this proceeding, Petitioner shall eliminate the discharge at Outfall 006. The Agency shall be authorized to delete Outfall 006, upon the request of Petitioner, after completion of elimination of the discharge.

9. Outfall 007

A). Within 30 days of the date of the Order in this proceeding, Petitioner shall implement all of the ameliorative and preventive measures for Outfall 007 as described in its petition.

B). For a period of six months following implementation of the foregoing measures, Petitioner shall monitor the discharge with respect to all parameters specified for Outfall 007 in its NPDES permit by means of weekly grab samples during periods of runoff. Petitioner shall provide monthly monitoring reports to the Agency during this six-month period. If at the conclusion of such monitoring the resulting data shows that the measures taken by Petitioner have significantly reduced contamination, the Agency would be authorized, upon Petitioner's request, to modify the permit with respect to such discharge to relieve Petitioner of any further obligation to continue monitoring thereof. If at the conclusion of such monitoring the Agency concludes on the basis of the resulting data that the quality of the discharge is unacceptable, the Agency would be authorized to reopen

these variance proceedings concerning such discharge unless Petitioner were to implement such additional measures as the Agency might consider necessary to reduce the contamination of the discharge; provided, however, that to the extent that the discharge is in compliance with applicable effluent limitations under Part IV of Chapter 3 regulations, it would be deemed acceptable to the Agency.

10. Petitioner, within 30 days of the date of this Order, shall request Agency modification of NPDES Permit IL0036463 to incorporate all conditions of the variance set forth herein.

11. The Agency, pursuant to Rule 914 of Chapter 3, shall modify NPDES Permit IL0036463 consistent with the conditions set forth in this Order and include such interim effluent limitations which are consistent with the terms of this Order.

12. Within forty-five (45) days of the date of this Order, the Petitioner shall submit to the Manager, Variance Section, Division of Water Pollution Control, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois, 62706, an executed Certification of Acceptance and Agreement to be bound to all terms and conditions of the variance. The forty-five day period herein shall be suspended during judicial review of this variance pursuant to Section 41 of the Environmental Protection Act. The form of said certification shall be as follows:

CERTIFICATION

I, (We), \_\_\_\_\_ having read the Order of the Pollution Control Board in PCB 79-9, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
SIGNED

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 20<sup>th</sup> day of September, 1979, by a vote of 5-0.

Christan L. Moffett  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board