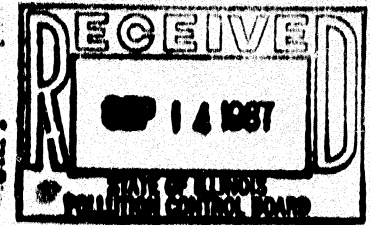


STATE OF ILLINOIS )  
 ) SS  
COUNTY OF MC HENRY )



BEFORE THE POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

MORTON THIOKOL, INC., )  
MORTON CHEMICAL DIVISION, )  
 )  
Petitioner, )  
 )  
v. ) PCB 86-223  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

VERIFIED MOTION TO MODIFY VARIANCE

Petitioner, Morton Thiokol, Inc., Morton Chemical Division ("Morton Chemical"), by its attorneys Richard J. Kissel and Susan M. Franzetti of Martin, Craig, Chester & Sonnenschein, pursuant to Section 103.241(b)(1) of the Pollution Control Board of the State of Illinois' (the "Board") Rules and Regulations, 35 Ill. Adm. Code 103.241(b)(1), respectfully moves the Board to modify its Order, dated May 28, 1987, granting Morton Chemical a variance from 35 Ill. Adm. Code 304.120(c) and 304.141(a) for its plant located in Ringwood, Illinois (the "Ringwood plant") subject to certain conditions. A true and correct copy of the Board's May 28, 1987 Opinion and Order, PCB 86-223, is attached hereto as Exhibit A.

As more fully set forth below, Morton Chemical is seeking a modification only of paragraphs 5(A) through 5(C) of the

Board's Order which concern certain interim compliance dates in the compliance schedule ordered by the Board. Morton Chemical is not seeking to modify the Order's June 30, 1988 expiration date for the variance. As required by Section 103.241(b)(1), Morton Chemical has newly discovered evidence which by due diligence could not have been discovered in time to inform the Board prior to its issuance of the May 26, 1987 Order pursuant to Section 103.224.

In support of this Motion, Morton Chemical states as follows:

1. On December 30, 1986, and as amended on February 3, 1987, Morton Chemical petitioned the Board requesting a variance until June 30, 1988 for Outfall 001A at its Ringwood plant from 35 Ill. Adm. Code 304.120(c) providing for a 10 mg/l effluent limitation for BOD<sub>5</sub>. Outfall 001A discharges an average of 0.01 MGD of treated polymer washwater. A hearing was held on March 30, 1987 in the City of McHenry and thereafter, the parties submitted post-hearing briefs to the Board extending through the period until May 6, 1987.

2. In its Amended Petition for Variance (a copy of which is attached as Exhibit B hereto), Morton Chemical informed the Board that the results of a treatability study and process review completed in January, 1987 (the "Phase I Treatability Study") showed that either ozonation or biological treatment would be effective in treating the BOD<sub>5</sub> in the Outfall 001A polymer washwater discharge. (See Amended Petition, Ex. B at p. 9, ¶ 14). Morton Chemical further stated that necessary

additional tests and studies (the "Phase 2 Treatability Study") were to be performed to determine (1) the respective reliability of the alternative technologies; (2) their respective costs of installation and operation; and (3) to perform an economic analysis concerning the implementation of either the ozonation or biological treatment systems. (Id. at p. 9, ¶ 15).

3. Based on then existing facts and the status of its treatability study, Morton Chemical submitted the following compliance schedule for achieving compliance with Section 304.120(c)'s 10 mg/l effluent limitation for BOD<sub>5</sub>:

- a) the development of detailed design criteria, the completion of an economic analysis and the selection of an appropriate technology by no later than April 30, 1987;
- b) the completion of plans and specifications for the additional wastewater treatment system by no later than July 31, 1987;
- c) the completion of equipment procurement by no later than February 29, 1988;
- d) the completion of equipment installation by no later than May 31, 1988; and
- e) attaining fully operational levels and achieving compliance with the applicable BOD<sub>5</sub> effluent limitation for Outfall 001A by no later than June 30, 1988.

4. As of the March 30, 1987 hearing on Morton Chemical's Amended Petition, Morton Chemical still believed, and no new facts had been or could have been discovered showing otherwise, that it could comply with its proposed compliance schedule with the exception of extending the April 30, 1987 date for

selection of an appropriate technology to June 30, 1987. As of the date of the hearing, the Phase 2 Treatability Study had just recently concluded. (Tr. 79)<sup>1</sup> The preliminary indications were that the ozonation studies had concluded satisfactorily. (Tr. 79). However, a complete evaluation of the data generated in the Phase 2 Treatability Study was then still being conducted by Morton Chemical's technical consultant, Dr. James Patterson of Patterson Associates, Inc. (Tr. 79-80).

5. Subsequent to the Board's entry of its May 28, 1987 Order, Patterson Associates, Inc. completed its evaluation of the Phase 2 Treatability Study and issued to Morton Chemical its draft report thereon, entitled "Concept Engineering Report" dated June 22, 1987. A true and correct copy of the June 22, 1987 Concept Engineering Report is attached hereto as Exhibit C.

6. As provided in the Concept Engineering Report, the Phase 1 and 2 Treatability Studies showed that as between the aerobic biological and ozonation treatment approaches studied, only ozone oxidation was technologically capable of consistently achieving compliance with the applicable 10 mg/l BOD<sub>5</sub> effluent limitation for Outfall 001A. (Concept Engineering Report, Ex. C at p. 24). Patterson Associates then proceeded to develop the design criteria and cost estimate for

---

1. The March 30, 1987 hearing transcript is referenced herein as "Tr." with the corresponding page(s) of the transcript cited.

the ozone oxidation concept design it developed. Based on experience, Patterson Associates had expected that the treatment cost for the proposed concept design would fall within the typical range of about \$5 - 20/gpd treatment capacity. (Id. at p. 28). However, unexpectedly, as detailed in Table 10 of the Concept Engineering Report, the overall estimated cost for installing the proposed ozone treatment process is \$4.2 million or about \$210/gpd treatment capacity -- ten-fold more than the high end of the typical range of treatment costs. (Id.) As Patterson & Associates concluded, "[t]his is an exceedingly high unit cost for BOD control." In addition, based on current power costs, the annual electrical power costs are estimated to be in excess of \$500,000 for the 2,500 lb/day ozonation unit proposed in the Concept Engineering Report.

7. Because of the economic unreasonableness of the proposed ozone treatment process, Morton Chemical was not able to select a treatment approach by the June 30, 1987 deadline set forth in paragraph 5(A) of the Board's May 28, 1987 Order. Morton Chemical has taken immediate steps to verify the Phase 2 Treatability Study data and results. To do so, on or about June 29, 1987, Morton Chemical sent a sample of the Outfall 001A polymer washwater discharge to Emery Industries ("Emery") in Cincinnati, Ohio, a vendor of ozonating equipment, for the performance of BOD<sub>5</sub> treatability studies to be conducted in their facility and requested that Emery design or recommend a

suitable ozonator for treating the Outfall 001A discharge. A true and correct copy of Morton Chemical's June 29, 1987 Purchase Order authorizing Emery to perform the above-described work is attached hereto as Exhibit D. However, in early June, 1987, Emery orally informed Morton Chemical that it did not recommend ozonation for treatment of the BOD<sub>5</sub> in Outfall 001A's discharge. Morton Chemical has requested but not yet received a written confirmation from Emery of its oral recommendation.

8. In addition to its efforts to verify Patterson & Associates findings concerning the ozonation treatment process, Morton Chemical has made additional efforts to determine the availability of an alternative treatment technology that is both technically feasible and economically reasonable. First, in early July, 1987, Morton Chemical submitted to O'Brien and Gere Engineers, Inc. ("O'Brien and Gere"), in Edison, New Jersey, all of the data generated during the Phase 1 and 2 Treatability Studies conducted by Patterson Associates and requested O'Brien and Gere to evaluate that data and, if appropriate, to submit a proposal for treatment tests. A true and correct copy of Morton Chemical's July 9, 1987 Purchase Order to O'Brien and Gere for the above-described work is attached hereto as Exhibit E. Second, based on a review of relevant informational materials concerning potentially viable wastewater treatment systems, in early July, 1987, Morton Chemical also contacted AquaTec, Inc. ("AquaTec") of Rockford,

Illinois, a distributor of the "Ring Lace" wastewater treatment system -- an advanced biological treatment process. At that time, Morton Chemical requested from AquaTec a proposal for pilot testing of a Ring Lace unit at the Ringwood plant.

9. O'Brien and Gere has submitted to Morton Chemical a proposal dated July 10, 1987 for test work to evaluate the application of an advanced biological treatment process to reduce the level of BOD<sub>5</sub> in the Outfall 001A discharge. In its proposal, O'Brien and Gere states that advanced biological treatment technologies are available to achieve compliance with the 10 mg/l BOD<sub>5</sub> effluent limitation and recommends two alternative processes for testing to minimize the cost of treatment. O'Brien and Gere further states that it believes the proposed testing could be completed in a three month period. A true and correct copy of O'Brien and Gere's letter proposal dated July 10, 1987 is attached hereto as Exhibit F. Morton Chemical has authorized O'Brien and Gere to proceed with the proposed testing of the recommended treatment alternatives and such tests are expected to begin very shortly.

10. AquaTec also has submitted to Morton Chemical a proposal dated July 6, 1987 in which it recommends that Morton Chemical install a pilot Ring Lace treatment plant to be run for a minimum of two months at the Ringwood plant. Pursuant to its request, AquaTec has been provided with the data generated from the Phase 1 and 2 Treatability Studies to determine whether the Ring Lace system or any other processes would be

effective to treat the Outfall 001A discharge before proceeding with the installation and operation of the pilot Ring Lace treatment plant. A true and correct copy of the July 6, 1987 AquaTec proposal is attached hereto as Exhibit G. Morton Thiokol also has requested that O'Brien and Gere study the available information concerning the "Ring Lace" technology and provide a recommendation concerning its potential effectiveness.

11. As shown above, Morton Chemical is and has been diligently pursuing all viable alternatives to obtain a technically feasible and cost-effective solution to achieving compliance with the BOD<sub>5</sub> effluent limitation for Outfall 001A. However, even given such efforts, Morton Chemical has not been able to comply with the conditions of the Board's variance order requiring it to (1) develop design criteria and to complete the selection of the appropriate technology by June 30, 1987 and (2) to complete plans and specifications for the needed facilities by July 31, 1987. Further, although O'Brien and Gere has preliminary advised Morton Chemical that it does not expect that a large treatment system will be required, Morton Chemical does not believe it can meet the equipment procurement deadline of February 29, 1988 contained in the Board's Order. While at this time Morton Chemical is not certain that it can comply with the remainder of the Board-ordered compliance schedule, it is currently pursuing alternatives which, if viable, could provide the means for complying with the remainder of the compliance schedule as ordered.



12. By this motion, Morton Chemical is seeking additional time from the Board to allow it to pursue a more cost-effective approach than the expenditure of \$4.2 million in capital costs and more than \$500,000 in annual operating costs to treat the BOD<sub>5</sub> in Outfall 001A. Morton Chemical submits that these additional costs to achieve compliance would constitute an arbitrary and unreasonable hardship. Therefore, Morton Chemical submits that it is reasonable and justified under the circumstances presented here to allow it additional time to pursue the above-described alternatives to identify a cost-effective treatment process. Accordingly, Morton Chemical requests that the Board modify paragraphs 5(A), (B) and (C) of its May 28, 1987 Order as follows:

5. Petitioner shall comply with the following schedule:
  - A. By November 30, 1987, develop design criteria and complete selection of the appropriate technology;
  - B. By December 31, 1987, complete plans and specifications for the needed facilities; and
  - C. By April 30, 1988, begin the construction of facilities.

Because Morton Chemical may still be able to comply with the remainder of the compliance schedule set forth in paragraphs 5(D) and (E) of the Board's Order, Morton Chemical is not requesting a modification of these deadlines at this time. Upon receiving the results of the treatment studies now in progress, Morton Chemical will so advise the Board if it cannot comply with the remainder of the compliance schedule.

13. As set forth below, Morton Chemical has complied with all of the other conditions contained in the Board's Order and will continue to do so:

- a. Morton Chemical has continued to monitor and report all parameters for Outfall 001A as required by its NPDES permit, including BOD. A true and correct copy of Morton Chemical's Discharge Monitoring Report on Outfall 001A for June and July 1987 is attached hereto as Group Exhibit H;
- b. Beginning in June, 1987, Morton Chemical began monitoring and reporting for mercury concentrations at Outfall 001 and Outfall 001A on a monthly basis (See Group Exhibit H). The monitoring results for mercury were below .0002 mg/l (the detectable limit) for both Outfalls 001 and 001A;
- c. Morton Chemical has reported monthly on its progress to achieve compliance through its construction program and has submitted such reports to the Agency with its DMR's. True and correct copies of the July and August progress reports are attached hereto as Group Exhibit I; and
- d. Morton Chemical submitted a Certificate of Acceptance dated June 10, 1987 as required by Paragraph 7 of the Board's Order, a true and correct copy of which is attached hereto as Exhibit J.

14. Pursuant to the provisions of Section 103.241(c)(1), Morton Chemical has notified the Agency of this motion as shown by the Notice of Motion attached hereto.

WHEREFORE, Morton Chemical respectfully moves the Board to modify the terms of paragraph 5(A) through 5(C) of its Order dated May 28, 1986 granting Morton Chemical a variance by extending the interim compliance dates set forth therein from June 30, 1987 to November 30, 1987 for paragraph 5(A); from

July 31, 1987 to December 31, 1987 for paragraph 5(B); and from  
February 29, 1988 to April 30, 1988 for paragraph 5(C).

Respectfully submitted,

**MORTON THIOKOL, INC.,  
MORTON CHEMICAL DIVISION,  
Petitioner**

By: *Martin, Craig, Chester & Sonnenschein*  
Martin, Craig, Chester &  
Sonnenschein, Attorneys  
for Petitioner

**OF COUNSEL**

RICHARD J. KISSEL  
SUSAN M. FRANZETTI  
Martin, Craig, Chester & Sonnenschein  
55 West Monroe Street  
Chicago, Illinois 60603  
(312) 368-9700

(03350/SMF)



CERTIFICATE OF SERVICE

The undersigned, being sworn, states that copies of the attached Verified Motion To Modify Variance were filed with the Clerk of the Pollution Control Board of the State of Illinois, by messenger, and that copies of the attached motion were served upon counsel for the Illinois Environmental Protection Agency and the Board Hearing Officer in this matter by depositing same in a United States mail depository, properly addressed and with proper postage affixed, located at 55 West Monroe Street, Chicago, Illinois before the hour of 5:00 p.m. on Monday, September 14, 1987.

*Kathleen B. White*

Signed and sworn to  
before me this 14th day  
of September, 1987.

*Daniel F. O'Connell*

Notary Public

