

Specialty Chemicals, Detergents and Phosphates, and Rubber Chemicals Divisions. (R. 22).

NCB is a product of a reaction between nitric acid and monochlorobenzene (MCB). Monsanto manufactures paranitrochlorobenzene and orthonitrochlorobenzene which are isomers of NCB. (R. 9). According to a Monsanto witness, the plant is the sole source of NCB, both PNCB and ONCB, in the State. Additionally, the record indicates that Monsanto has only one U.S. competitor in the production of NCB. However, there are six major foreign competitors in West Germany, Japan, and France. Evidently, eastern European bloc countries also manufacture NCB. Monsanto, though, is the world's largest producer of NCB. (R. 23-24).

NCB is a component in the manufacture of chemicals whose end products include yellow inks and pigments, non-aspirin pain relievers, glass window plastic interlayer, synthetic polymers, pesticides, tires and rubber hoses. (R. 24). The NCB process at the plant employs 54 people. (R. 24).

Paul Haechrel, who works as an Environmental Specialist at the plant, testified that "prior to the Pollution Control Board's adoption of the revised definition of VOM in January, 1988, the emissions from this [NCB] process were not considered to be specified air contaminants". (R. 12). He further testified:

Once the new definition of VOM was promulgated, Monsanto met with the Illinois Environmental Protection Agency to discuss applications for permits for sources that now required permits.

Pursuant to a schedule agreed to by the Agency, Monsanto submitted a number of permit applications, including the one for this process.

Not until Monsanto began testing and gathering data on the NCB process in order to complete the permit application did it determine that these sources would not meet the control requirements in 35 Illinois Administrative Code, Section 215.966.

(R. 12).

Section 215.966 requires compliance with an 81% reduction in uncontrolled emissions by April 1, 1989. Haechrel stated that the only way Monsanto could comply by that date is to shut down the NCB process. (R. 12).

Max W. McCombs, who is the plant's General Superintendent for Government and Environmental Affairs, addressed the impact of shutting down the NCB process at the plant.

Since NCB is a key raw material for many other products within Monsanto, any loss in NCB production would be directly felt at the plant and throughout the company in many distinct product lines.

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Any shutdown of this unit could be permanent, and could irreparably damage Monsanto's NCB business.

The worldwide NCB market is currently suffering from a shortage of NCB. Shutdown of Monsanto's NCB unit would create additional shortages of this necessary product.

Shutdown of the NCB process at the plant would result in significant annual losses to Monsanto.

A shutdown would also immediately jeopardize the employment of fifty-four persons who are involved in the NCB process at the plant, and indirectly impact employment of others throughout Monsanto.

The NCB process is also an integral part of many other processes at the plant. Since the NCB process supplies these other operations with a necessary raw material they would also be forced to shut down. Because of the worldwide shortage, the NCB could not be replaced by outside purchases.

(R. 24, 25-26).

According to Monsanto, the 42 sources which are the subject of the variance request have an uncontrolled emission rate of 67 tons per year (TPY). However, the current emission level, factoring in a certain degree of control which currently exists, is 44 TPY. (R. 11).

Thirty of the 42 sources (source designation numbers: 107, 108, 109, 110, 111, 112, 165, 170, 173, 176, 403, 405, 416, 417, 418, 419, 428, 431, 440, 442, 501, 508, 510, 523, 524, 539, 546, 547, 550 and 552) currently vent to a scrubber - identified as "135 scrubber". The emissions from the scrubber are 39 TPY (62 if calculated as uncontrolled). (R. 10,11).

The 12 other sources (source designation numbers: 301, 302, 303, 304, 306, 314, 317, 318, 319, 320, 325 and 397) vent to the atmosphere through four separate vents. The twelve sources do not have controls and emit 5 TPY.

Proposed Compliance Plan

Monsanto is proposing to modify its process and install equipment in order to bring its emissions from these 42 sources into compliance with the 81% reduction requirement by March 31, 1990. At hearing Haechrel described the proposed control program.

The control system includes three components. The first component will tie together the vents from sources 301, 302, 303, 304, 325, and 397, and discharge these emissions into the top of an existing MCB surge tank, source 398.

(This source is in compliance with the Board's Air Pollution Regulations, and, therefore, is not included in the sources for which this Variance is sought.)

A new scrubber will be installed on the vent of the 398 tank.

Cool liquid MCB in source 398 will be the scrubbant, and circulated from the tank through the scrubber.

This cooling and scrubbing of the vent gases will significantly reduce emissions.

Currently the total VOM emissions from these sources are less than one TPY. This component of the control system will reduce these emissions by at least 81%.

The second component will encompass a major process change, whereby the emissions from sources 306, 314, 317, 318, 319, and 321 will be vented into a water tank, source 378 (this source is in compliance with the Board's Air Pollution Regulations and, therefore, is not included in the sources for which this Variance is sought), and from there into an existing condenser.

The condenser will be colled [sic] by non-contact cooling water from cooling towers.

By dropping the temperature of the vent stream, the gases will be condensed and returned to tank 378, thereby significantly reducing emissions.

Currently these sources emit approximately 4 TPY. This component will reduce these emissions by at least 81%.

The third component of the control program will vent 30 sources (Numbers 107, 108, 109, 110, 111, 112, 165, 170, 173, 176, 403, 405, 416, 417, 418, 419, 428, 431, 440, 442, 501, 508, 510, 523, 524, 539, 546, 547, 550, and 552) through a new scrubber which will use NCB as a scrubbant.

Currently these thirty sources, along with a tank car loading facility area, are vented to the 135 scrubber which has a 37% efficiency in reducing all these emissions.

The thirty sources will be disconnected from the 135 scrubber and will be directly vented to the new scrubber where the gases will be absorbed by the scrubbant.

The scrubbant will be collected in scrubber tank 535 (this source is in compliance with the Board's Air Pollution regulations, and, therefore, is not included in the sources for which this Variance is sought.)

Current VOM emissions from these thirty sources are approximately 39 TPY. If uncontrolled, these emissions would be approximately 62 TPY.

This component of the control system will reduce these uncontrolled emissions by a minimum of 81%.

The 135 scrubber will continue to be used to control emissions from the tank car loading facility area (which is not part of this Variance request). With the reduced load on the 135 scrubber, it will control those emissions by at least 81%.

All of the control equipment just described will be designed to achieve the stated VOM emission reductions at maximum loading conditions.

In fact, design specifications will call for at least 85% control in order to ensure 81% removal at maximum loading conditions.

Therefore, at the end of the compliance program, Monsanto will have achieved VOM emission reductions in excess of the 81% requirement.

Once the new emission control system is in operation, total VOM emissions from the subject sources will be approximately 12 TPY, a total reduction of 32 TPY from the current 44 TPY, and a reduction of approximately 55 TPY from the uncontrolled emissions of 67 TPY.

(R. 13-16).

Agency Recommendation

In its Recommendation, the Agency states that the W.G. Krummrich plant is located in St. Clair County, and that St. Clair County is in a non-attainment area with respect to the national ambient air quality standard (NAAQS) for ozone. As to Monsanto's current emissions the Agency states:

As a major hydrocarbon source, in an ozone nonattainment area, Monsanto to an unquantified degree, contributes to the nonattainment of NAAQS for ozone in the [St. Louis] Metro East area.

(Ag. Rec., p.2).

However, the Agency agrees with Monsanto that the only method for complying with the April 1, 1989 compliance date imposed by Section 215.966 is for Monsanto to shut down. The Agency asserts that such an option is economically unreasonable.

The Agency recommends that the Board grant Monsanto a variance subject to conditions which are set forth in the Recommendation.

On the issue of consistency with federal law, Monsanto states that U.S. EPA has not approved Section 215.966 as a part of Illinois' State Implementation Plan (SIP). Monsanto reasons that since U.S. EPA has not yet approved the rule, a variance from the rule will not violate federal law and will not conflict with the current SIP. (Pet., p. 13).

The Agency agrees that the U.S. EPA has not yet approved Section 215.966. The Agency further contends that if the Board grants a variance subsequent to such approval, the variance would have to be submitted to U.S. EPA by a SIP revision.

Findings

Monsanto's current emissions from the sources subject to the variance request total 44 TPY. Monsanto is requesting a variance in order to implement controls and achieve compliance in less than one year from now. Agency agrees with Monsanto that the only alternative to a variance is for Monsanto to shut down. Given all the circumstances of this case, the Board finds that denying Monsanto a variance would impose an arbitrary or unreasonable hardship. Consequently, the Board will grant Monsanto a variance from Section 215.966 subject to conditions. The Board accepts the variance conditions which were recommended by the Agency. The Board has made some wording changes to the recommended conditions and has added a beginning date of June 1, 1989 for the submission of quarterly progress reports. Monsanto has agreed to the Agency-suggested expiration date of March 31, 1990 and apparently has no objection to the other recommended conditions. (R 26-27). The Board notes that Monsanto filed its Petition on December 30, 1988, well before the April 1 compliance deadline. The Board will begin the variance period retroactively to April 1, 1989.

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

ORDER

Monsanto Company (Monsanto) is hereby granted variance from 35 Ill. Adm. Code 215.966 for its volatile organic material (VOM) emissions from 42 sources involved in the nitrated chlorobenzene process at the W.G. Krummrich plant, Village of Sauget, and which are identified by the following source designation numbers: 107, 108, 109, 110, 111, 112, 165, 170, 173, 176, 301, 302, 303, 304, 306, 314, 317, 318, 319, 320, 325, 397, 403, 405, 416, 417, 418, 419, 428, 431, 440, 442, 501, 508, 510, 523, 524, 539, 546, 547, 550 and 552. This variance is subject to the following conditions:

1. The variance shall begin April 1, 1989 and expire March 31, 1990.
2. Monsanto shall achieve compliance by completing the following actions in the month and year corresponding to each action:

<u>Action</u>	<u>Month/Year</u>
a) Binding agreement made for	5/89

design of process

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|----|---|-------|
| b) | Application for construction permit | 6/89 |
| c) | Construction permit approved | 9/89 |
| d) | Binding agreement made for purchase of equipment | 9/89 |
| e) | Field construction initiated | 9/89 |
| f) | Equipment delivered to site | 11/89 |
| g) | Construction and installation complete | 1/90 |
| h) | Equipment started up and tested to demonstrate compliance | 2/90 |
| i) | Equipment fully operational | 3/90 |
3. Beginning June 1, 1989, Monsanto shall submit to the Illinois Environmental Protection Agency quarterly progress reports which detail progress made in Monsanto's efforts to achieve compliance in accordance with this variance. These quarterly reports shall be sent to:
- Mr. John Justice, Regional Manager
Division of Air Pollution Control
Illinois Environmental Protection Agency
2009 Mall Street
Collinsville, Illinois 62234
4. During the term of this variance, emissions from the sources which are the subject of this variance (listed above) shall not exceed 44 tons per year.
5. Prior to the expiration of this variance, Monsanto shall cause tests to be conducted in order to insure compliance with 35 Ill. Adm. Code 215.966. Monsanto shall notify the Agency that such testing will occur at least ten days prior to the conducting of the test.
6. Within 45 days after the date of this Order, Monsanto shall execute and send to the Agency a Certificate of Acceptance of this variance by which it agrees to be bound by the terms and conditions contained herein. The executed Certificate shall be sent to:

Illinois Environmental Protection Agency
 Attention: James O'Donnell
 Enforcement Programs
 2200 Churchill Road
 Springfield, IL 62794-9276

The 45-day period shall be held in abeyance for any period during which this matter is appealed. Failure to execute and forward the Certificate within 45 days renders this Variance void and of no force and effect. The form of the certification shall be as follows:

CERTIFICATION

I, (We) _____, having read the Order of the Illinois Pollution Control Board in PCB 88-206(B), dated April 27, 1989, understand and accept the Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

 Petitioner

 Authorized Agent

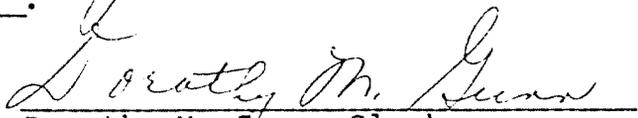
 Title

 Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987, ch. 111-1/2, par. 1041, provides for appeal of final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 27th day of April, 1989, by a vote of 7-0.


 Dorothy M. Gunn, Clerk
 Illinois Pollution Control Board