ILLINOIS POLLUTION CONTROL BOARD
January 8, 1981

INTERNATIONAL MINERALS & CHEMICAL CORPORATION,	)	
Petitioner,	)	
v.	)	PCB 80-133
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

PATRICK O. BOYLE, ATTORNEY AT LAW, APPEARED ON BEHALF OF THE PETITIONER.

WAYNE WIEMERSLAGE, ATTORNEY AT LAW, APPEARED ON BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (by D. Satchell):

This matter comes before the Board on a petition for variance filed July 21, 1980 by International Minerals and Chemical Corporation (IMC), a New York corporation authorized to do business in Illinois. The petition requests, pursuant to Rule 505, a variance from Rule 502(a) of Chapter 2: Air Pollution. These rules prohibit open burning of wastes creating a hazard of explosion except pursuant to a variance. On July 28, 1980 the Illinois Environmental Protection Agency (Agency) objected to the variance and requested a hearing and on August 22, 1980 recommended that the variance be denied. On November 24, 1980 a hearing was held in Jonesboro. Members of the public did not attend and the Board has received no public comment (R. 1).

The Trojan Division of IMC's chemical group operates a plant in Wolf Lake, Union County. The facility is situated to the east of Illinois Route 3, approximately one and one-half miles north of the community of Wolf Lake. The facility is located within the Shawnee National Forest, approximately three-fourths of a mile west of the Pine Hills Camp Ground and one mile south of the LaRue-Pine Hills Ecological Area (Pet. Ex. 7). It is largely situated within the E ½, Sec. 33, T. 11 S., R. 3 W., 3 PM, Union County.

At the Wolf Lake facility IMC manufactures nitrostarch dynamite. In addition IMC fabricates explosives and primers from the nitrostarch dynamite and from other explosive agents brought to the facility. Explosives received in packages include the following: pentolite, TNT, composition B and HBX (Pet. III). These

explosives consist of various combinations of the following: trinitrotoluene (TNT), pentaerythritol tetranitrate (PETN), cyclonite (RDX), aluminum, wax and calcium chloride. A wax-like residue and small amounts of explosives remain on the inside of the packaging materials after the explosives are removed (Pet. 3). Approximately 65% of the contaminated paper and wood is from primer packaging materials. These packaging materials are not reusable and must be destroyed (Pet. 3-A).

IMC manufactures primers by melting mixtures of explosives and casting the mixture (Pet. II). Defective primers are melted and reused. However, occasionally defective primers are disposed of with other explosive refuse.

IMC manufactures shell casings at the Wolf Lake plant, using approximately 70% Kraft paper, 15% recycled chip paper, 15% polylaminated paper and small quantities of glue. IMC packs explosives into these shell casings at the Wolf Lake plant. Explosives are emptied out of rejects for reuse (R. 13). About 35% of the explosive waste is reject shell casings. These are contaminated with explosives. In addition, large amounts of powder can accidentally remain in some shells. Reject shells may be contaminated with the following materials: ammonium nitrate, sodium nitrate, nitrostarch, zinc oxide, aluminum, sodium thiosulfate, wheat flour, carbon black, ground coal, oil and guar gum (Pet. III; Pet. Ex. 1).

IMC employs about sixty persons at Wolf Lake. An additional forty or fifty persons are employed in sales or at field magazines which are directly or indirectly affected by the Wolf Lake operation The Wolf Lake facility produces primers at a maximum rate of about 135,000 kg per month and nitrostarch dynamite and blasting agents at a rate of about 900,000 kg per month (Pet. 3; Pet. Ex. 1).

Each week IMC generates approximately 2500 kg of explosive contaminated packaging, reject primers and reject shells (Pet. 4). IMC requests a variance to burn this along with an estimated 110,000 kg of existing similarly contaminated material. IMC proposes to burn a weekly total of about 3600 kg (8000 lbs.) (Pet. 5).

Trojan-U.S. Powder Company was previously granted a variance for open burning on the site (PCB 74-32, 13 PCB 105, July 18, 1974). This was a six month variance conditioned on the posting of a performance bond and completion of a detailed plan to bring the site into compliance. Trojan never posted the performance bond and advised the Agency that it no longer required a variance for open burning (Rec. 3). IMC has explained at that time open burning ceased and landfilling began (R. 8; Pet. Ex. 1). In 1975 and 1976 the explosive waste consisted of nitrostarch contaminated paper cartons and paper. Nitrostarch decomposes over a period of time and can be landfilled. The TNT and other wastes that are now involved

do not similarly decompose (R. 12). The Agency has indicated that it would not issue IMC permits to landfill its present material (Pet. Ex. VI).

In 1975 the Agency informed IMC that it would require permits for its landfill operations. IMC discontinued its landfill operation (R. 10). Since that time IMC has apparently stockpiled its waste. The accumulated waste is less than the time interval times its rate of waste production for two reasons. Its rate of waste production has varied over the years because of differences of rate and type of production. There have been several fires in the waste piles which have reduced its volume (R. 14).

IMC proposes to conduct open burning of the explosive contaminated waste on the Wolf Lake site in a fenced, remote northern area. Both the stockpile and the proposed burning site are situated within the NE ¼ of NE ¼ of Sec. 33, T. 11 S., R. 3 W. IMC will have a fire truck and two trained personnel available during all operations. An adequate firebreak will be constructed between the forest and the open burning area (Pet. 6; Pet. Ex. 6).

The burning area will be scraped clear of the vegetation and covered with cinders from burned coal. An earthen berm will be constructed around the burning site to insure that there is no rainwater runoff contamination of Wolf Lake. Runoff will be collected to a single place within the berm (Pet. Ex. 6). Wolf Lake is the only known habitat in Illinois for certain endangered species (IEPA v. Missouri Pacific R. R. Co. and IMC, PCB 80-87).

The proposed burning site is located at an elevation of 350 feet near the base of a steep slope. It is approximately 700 feet from the crest of a ridge with elevations varying from 600 to 700 feet above sea level. IMC has stated that it has the capacity to stop any fire before it reaches this slope (Pet, 8).

The nearest residence is located approximately two-thirds of a mile southwest of the proposed burning site (Pet. 7). Union County is designated by the U. S. Environmental Protection Agency (USEPA) as: "cannot be classified or better than national standards" for carbon monoxide, hydrocarbons and nitrogen oxides, i.e., as an attainment area for these pollutants. Union County is designated as better than national standards for suspended particulates (TSP) (Rec. 7). The nearest air quality reporting station is located at Carbondale, twenty miles northeast of the facility.

Emissions from burning explosive waste are expected to be similar to those from open burning of municipal refuse, since the explosives represent a negligible portion of the mass. The Agency anticipates the following figures for annual emissions:

Carbon monoxide	8.8 tons
Hydrocarbons	3.1 tons
Nitrogen oxides	0.6 tons
Particulates	1.7 tons

The above data are taken from the recommendation (Rec. 8; Ex. 9). The emission figures are comparable to those given by IMC (Pet. 7; Pet. Ex. 3, 5).

Since the facility and burning site do not have a potential to emit more than 100 tons per year, it is not subject to review for the prevention of significant deterioration of air quality in an attainment area. Since the facility and the proposed burning site are not major sources the Agency has not determined whether or not the petitioner has adopted the best available control technology for its proposed open burning site (Rec. 8).

IMC uses a background TSP level of 96 ug/m^3 (micrograms per cubic meter), based on monitoring data from Cape Girardeau, Missouri. The Agency believes this background concentration is not representative of the area. The second highest twenty-four hour TSP concentration measured in Mount Vernon, Illinois in 1979 is 113 ug/m^3. The Agency believes this is a better estimate.

The maximum computed twenty-four hour TSP concentration from the proposed source is 25 ug/m^3. Whether this is added to a background of 96 or 113 ug/m^3, the result is less than the secondary twenty-four hour national ambient air quality standard (NAAQS) of 150 ug/m^3. The Agency concluded that the granting of the variance should not cause a violation of NAAQS in the area (Rec. 8). The Agency believes that the petitioner's air quality analysis, along with the Agency's analysis, should satisfy the requirement that the state implementation plan revision will not prevent the attainment or maintenance of NAAQS (Rec. 9).

Previous Agency inspections have noted materials in the stockpile which did not appear to be explosive contaminated waste (PCB 79-176, 37 PCB 319, 321). Explosive wastes are now being separated from uncontaminated waste.

IMC has no alternative but to burn its accumulated waste. In the short run there is no alternative but to burn its current waste. For long term compliance two suggestions have been made. The first is a wet maceration system which would wash the materials from the waste with water. This has been rejected because of difficulties with the disposal of the resulting water. Another long term compliance plan would involve construction of an incinerator. Incinerators are now operating owned by Olin Corporation at Marion, Illinois and by United States military at various locations (R. 21).

Petitioner contends that incineration is not practicable in its case because of the possibility of a large charge accidentally going into the incinerator with the explosive contaminated waste. Hand picking of waste has been suggested as a method of avoiding this (R. 7; Pet. Ex. 1).

IMC has not prepared a detailed compliance plan at this time. It requests only an eighteen month variance and is willing to come forth with a detailed plan at the conclusion of the variance (Pet. Ex. 1, 2).

For the reasons stated above the Board finds that IMC would suffer arbitrary or unreasonable hardship if not allowed to open burn its wastes. The variance will be granted with the conditions noted above together with conditions which appear in the Order.

IMC and its predecessor were aware of the requirement of a variance for open burning of explosive waste in 1971. In 1974 a variance was actually obtained and rejected. IMC was on actual notice of the requirement to obtain a variance prior to conducting open burning. IMC has argued that continuation of its manufacturing operation necessitated open burning. IMC accumulated a stockpile of waste knowing that there was no lawful method of disposing of its except through application to the Board for a variance. The Board rejects IMC's claims of hardship which result from the dangers attendant in the size of the pile and its deteriorating condition. This hardship is self-imposed.

Section 36(a) of the Act in this case requires a performance bond in an amount which shall not exceed the reasonable cost of work to be completed pursuant to this variance. Since the Board is not at this time requiring actual construction of control equipment, the amount of the bond will be based on the cost of providing the berm and other safeguards required during open burning. It is reasonable to expect these to cost in excess of $10,000. IMC will be required to execute a standard form bond acceptable to the Agency. No surety or security will be required.

On December 29, 1980 the Agency filed an amendment recommending grant of the variance with conditions. This was not within the time requirements of Procedural Rule 405(a) and was not accompanied by a motion for leave to file. Since it was filed near the due date, the Board has had little time to consider the pleading.

The Agency now recommends that the variance be granted for three years, conditioned upon full compliance before December 31, 1983, through either construction of control facilities or a rule change. The Agency cites federal regulations as requiring any compliance schedule or revision extending over a period of more than one year

from the date of adoption to provide for legally enforceable increments of progress toward compliance [40 CFR Section 51.1(q)(5)]. The Agency claims this prohibits the variance granted which requires only submission of a plan.

The Board has not in this case ruled that IMC must at some time discontinue open burning. The possibility exists that upon expiration of this variance, IMC may persuade the Board that there is still no available technology. Rule 505 may allow an indefinite succession of variances where progress toward compliance consists only of research and operational improvements. Board rules do not specifically require control technology. The Agency has not informed the Board of any United States Environmental Protection Agency regulations, or any SIP provisions, which require control technology. The Agency has indicated that there will be no violations of air quality standards or emission limitations. There is no indication that the open burning will cause any SIP problems at all. From the facts before the Board it appears that the limitation of 40 CFR Section 51.1(q)(5) is inapplicable.

Several accidental fires have occurred in IMC's waste stockpile (Pet. 4). These may have involved violations of the Act and Board rules, including Section 9 and Rule 502 of Chapter 2. In addition, the stockpiling may have been a violation of Section 21(a) of the Act and Rules 201 and 202 of Chapter 7: Solid Waste. The variance granted will not be construed as excusing any violations which may have occurred in the past.

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

ORDER

Petitioner International Minerals and Chemical Corporation (IMC) is granted pursuant to Rule 505 a variance from Rule 502(a) of Chapter 2: Air Pollution, subject to the following conditions:

1. This variance will expire June 30, 1982.

2. This variance authorizes Petitioner to burn no more than 3600 kg (8000 lbs.) of explosive contaminated waste each week.

3. This variance shall cover only explosive contaminated waste generated by Petitioner's Wolf Lake facility.

4. Petitioner shall segregate explosive and explosive contaminated waste from other waste.

5. Petitioner shall construct and maintain an adequate fire-break around its burning area.

6. Petitioner shall have adequate firefighting equipment on hand during open burning.

7. Petitioner shall construct an earthen berm around its burning area. Petitioner shall not cause or allow rainwater runoff from the burning area, or runoff from firefighting within the berm area, to enter Wolf Lake.

8. Burning shall be conducted under the direction of personnel trained in explosive burning procedures and shall be carried out between the hours of 8 a.m. and 3 p.m. on no more than two days per week and for no more than three hours per day.

9. Petitioner shall notify the Illinois Environmental Protection Agency (Agency) and the United States Forest Service before conducting open burning. Petitioner shall either notify them in advance each day burning takes place, or provide them with a schedule and notify them in advance of deviations from the schedule. Petitioner may elect between the alternatives.

10. Petitioner shall not conduct burning during episodes declared pursuant to Part IV of Chapter 2: Air Pollution.

11. Petitioner shall not conduct burning when atmospheric conditions are not conducive to adequate dispersion or when air quality standards may be violated.

12. Petitioner shall not conduct burning when it is excessively dry or windy so as to present a danger of fire spreading.

13. If ambient air quality or weather conditions are not favorable to burning, the Agency shall have the right to instruct Petitioner to postpone burning.

14. Petitioner shall file quarterly reports with the Illinois Environmental Protection Agency listing the amount of material burned on each specific day that burning took place during the quarterly period.

15. On or before January 1, 1982 IMC shall forward to the Agency a report on the then current technology of explosive contaminated waste disposal. The report shall include a literature search and the results of on-site visits to facilities disposing of explosive contaminated waste by other than open burning or landfilling. The report shall

estimate costs involved if IMC were to discontinue open burning upon expiration of this variance.

16. Within ninety days of the date of this Order Petitioner shall execute and forward to the Agency a performance bond, without surety, in the amount of $10,000, conditioned upon performance by Petitioner of conditions numbered 5, 6 and 7 of this Order.

17. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the Certificate shall be as follows:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order in PCB 80-133, hereby accept that Order and agree to be bound by all of its terms and conditions.

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 22nd day of January, 1981 by a vote of 7-0.

Christan L. Moffett, Clerk
Illinois Pollution Control Board