

ILLINOIS POLLUTION CONTROL BOARD  
January 3, 1974

OLIN CORPORATION, )  
 )  
 Petitioner, )  
 )  
 vs. )  
 ) PCB 73-427  
 ILLINOIS ENVIRONMENTAL PROTECTION )  
 AGENCY, )  
 )  
 Respondent. )

Mr. Thomas Martin, attorney, on behalf of Petitioner.  
Mr. Dale Turner, Assistant Attorney General on behalf of  
Respondent.

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

On October 9, 1973, Petitioner, Olin Corporation, filed its Petition for Variance seeking variance from the provisions of Section 9(c) of the Illinois Environmental Protection Act and Section 502(a), Part V, Chapter 2 of the Illinois Pollution Control Board Rules and Regulations prohibiting open burning. A public hearing was held in this matter on November 15, 1973.

Petitioner requests that a variance be granted to permit the open burning of the quantity of scrap primers which Petitioner has on hand on the date of this Board's Order in excess of 3,150 pounds; but that Petitioner be limited to open burning of such material in maximum quantities of 1,400 pounds per day.

Petitioner operates a plant, consisting of an area of approximately 1,732 acres at East Alton, County of Madison, Illinois, where it manufactures, inter alia, shot shell ammunition and primer explosives. Approximately 5,700 employees are currently employed at Petitioner's East Alton location.

Reference is made to PCB case Numbers 70-11 and 71-7 which were Orders granting to Petitioner extensions of its existing variance, originally granted on May 18, 1967, by the Air Pollution Control Board, to continue disposal of Petitioner's explosive trade wastes by open burning. In December, 1971, Petitioner commenced operation of a new incinerator, rotary popper incinerator and air pollution control equipment designed to permit the burning of its explosive wastes in compliance with the air pollution regulations for incinerators. The Illinois Environmental Protection Agency (Agency) on March 12, 1973, issued to Petitioner an operating permit for the aforementioned equipment.

Petitioner alleges that because of higher than anticipated quantities of explosive trade wastes during 1973, and particularly because of maintenance problems with respect to the aforementioned equipment resulting in approximately 52 working days of down time from January through September, 1973, the following approximate quantities of explosive trade waste have accumulated as of October 5, 1973:

- (a) 7,000 pounds of scrap primers. (12,600 pounds as of November 15, 1973. R,5)
- (b) 500,000 pounds of scrap shot shells (both empty and loaded).
- (c) 250,000 pounds of scrap loaded metallic ammunition (rifle and pistol cartridges).

The foregoing accumulation allegedly has occurred in spite of the fact that the present incinerator equipment is being operated five days a week on a three shift basis and one shift on Saturday. For safety reasons, the scrap primers are presently burned in small quantities together with scrap shot shells in the incinerator. The scrap primers are not burned in the rotary popper. It is conceivable that in the next few months it might be possible for Petitioner to dispose of its accumulation of scrap primers in the incinerator without the necessity for open burning, but Petitioner considers this to be unlikely in view of its experience with maintenance problems and shut downs during the preceding months of 1973. Based on this experience, Petitioner forecasts a continuation of some maintenance problems and down time with respect to the incinerator, with the result being an inability to reduce the accumulated quantity of scrap primers and, very possibly, an actual increase in such accumulation.

The average generation rate of scrap primers from Petitioner's manufacturing operations is 1,050 pounds per day. Petitioner's Loss Prevention Department has determined that it is unsafe to store quantities of scrap primers in excess of a normal three day accumulation (3,150 pounds). The scrap primers must be kept wet, under water, and not be allowed to freeze. They are currently stored in ten quart buckets and require daily inspection to insure that the water cover has not leaked out or evaporated. If these scrap primers were allowed to dry, due to a leaking bucket or for some other cause, they could easily be set off by impact or spark with a resultant high order detonation. This excess accumulation represents a severe hazard to the employees and to the property of Petitioner.

As noted above, there are large backlogs of scrap shot shells and metallic ammunition which represent something of a fire and security hazard, but Petitioner believes that these accumulations can be held in storage pending Petitioner's ability to dispose of same in the present incinerator and rotary popper. For this reason, Petitioner does not seek a variance to open burn the scrap shot shells and metallic ammunition.

In order to solve the safety and backlog problems, Petitioner has developed plans for additional facilities, as follows:

- (a) Additional vertical incinerator for rapid, safe disposal of scrap primers. This will eliminate the present system of destroying them in small quantities along with scrap shot shells in the existing incinerator. This unit will also be used for the disposal of loaded metallic ammunition. The rotary popper has proven to be unsatisfactory for loaded rounds because of necessity for frequent removal of lead.
- (b) Additional pollution control equipment to remove particulates from the effluent from the vertical incinerator. In view of the short life expectancy of the scrubber now in use on the scrap ammunition incinerator, it is considered advisable to install one new scrubber with capacity to handle the effluent from the new vertical incinerator, the present rotary popper incinerator, and the present scrap ammunition incinerator. This would probably be a high energy Venturi scrubber, replacing the medium energy Taylor CVX scrubber now in use. Such a scrubber would represent the best currently available technology for removing particulates from burning scrap explosives and ammunition.

During the period of installation of the new scrubber, it will be necessary to shut down the incinerator which is presently being used for the disposal of the scrap primers and scrap shot shells. During this shut down period, there will be no other way to legally dispose of scrap primers unless the variance for open burning herein requested is granted (the scrap shot shells and metallic ammunition will be allowed to accumulate during this period).

The quantity and type of raw materials which would be open burned per day, assuming the open burning of a quantity of 1,400 pounds of scrap primers per day, is as follows:

Steel	726 pounds/day
Brass	596 pounds/day
Explosives (primer mix consisting of normal lead styphnate, tetracene, pentaerythritol tetranitrate, barium nitrate, antimony sulfide, and aluminum).	78 pounds/day

Petitioner argues that pending the installation of the proposed explosive trade waste destruction equipment, the existence of the large excess quantity of scrap primers presents an imminent and continuing danger to Petitioner's employees and property. Petitioner states that it knows of no safe method of eliminating this accumulation of scrap primers other than open burning. The Agency agrees with this contention. Therefore, Petitioner contends that compliance with the prohibition against open burning of this excess accumulation of scrap primers constitutes an arbitrary and unreasonable hardship. If the requested variance is not granted, Petitioner is faced with the likelihood that it will not be able to reduce the large excess accumulation of scrap primers to the safe level of 3,150 pounds in the near future, and it is also likely that because of future probably maintenance problems with the incinerator, an increase in this accumulation will occur.

The Agency is of the opinion that prolonged storage of the subject material could create a fire and safety hazard, and the material should be disposed of as rapidly as possible. Petitioner states that this material will be burned in a vertical incinerator fired by low sulfur oil.

Petitioner, in its proposed timetable for installation of the new control device, states that construction will occur between November 15, 1974 and December 31, 1974. It is assumed that the existing incinerators will be down at that time, and Petitioner will be required to open burn all explosive waste generated.

Based on stack tests performed in 1970, the vertical incinerators Petitioner plans to burn the explosive waste in will emit 5.68 and 5.51 grains per SCF. When burning 1,400 pounds of explosive waste, the Agency calculates that the following emissions can be expected:

Contaminant

Nitrogen oxides	5 ppm	0.15 lbs/day
Sulfur trioxide	122 ppm	3.5 lbs/day
Sulfur dioxide	65 ppm	1.9 lbs/day
Total particulates		167 lbs/day
Lead		28 lbs/day
Barium		7 lbs/day
Zinc		37 lbs/day
Copper		15 lbs/day
Antimony		9 lbs/day

Air quality readings in the East Alton, Alton and Wood River areas are as follows:

	<u>ug/m<sup>3</sup></u> <u>Maximum 24 hr. Average</u>	<u>ug/m<sup>3</sup></u> <u>Geometric Mean</u>
Alton	54	46
Wood River	82	68

The 1975 primary federal air quality standard for particulates is 75 ug/m<sup>3</sup>. It is the Agency's opinion that one year of burning explosive waste will not greatly deteriorate the air in the Alton-Wood River area. The Agency has received no objections from citizens concerning the grant of this Variance.

In view of the substantial threat to the safety of Petitioner's employees and those persons in the proximity of Petitioner's facility, we are disposed to grant Petitioner variance to permit open burning of the quantity of accumulated scrap primers which Petitioner has on hand on the date of this Order. However, Petitioner will be limited to open burning said material to maximum quantities of 1,400 pounds per day.

Petitioner further requests a variance for a period of one year or until such time as Petitioner has placed into operation the above-detailed incinerators and control equipment (whichever first occurs) to permit the open burning of quantities of scrap primers which may accumulate in excess of 3,150 pounds due to maintenance problems with its present incinerator and during the shutdown necessitated by the installation of the new scrubber. The Agency is of the opinion that Petitioner's compliance schedule is reasonable. Petitioner's request will be granted.

This Opinion constitutes the findings of fact and conclusions of law of the Board.

ORDER

IT IS THE ORDER of the Pollution Control Board that Petitioner, Olin Corporation, be granted variance from the provisions of Section 9(c) of the Illinois Environmental Protection Act and Section 502(a), Part V, Chapter 2 of the Rules and Regulations until December 31, 1974 or until its proposed incinerators are operational (whichever first occurs) subject to the following conditions:

1. Petitioner shall be allowed to open burn quantities of scrap primers in excess of 3,150 pounds. Open burning shall occur in a vertical incinerator fired by low sulfur oil. Petitioner shall not open burn more than 1,400 pounds of scrap waste per day;
2. Petitioner shall incinerate the maximum allowable amount of scrap primers in the existing incinerators whenever it is operational. When operational, the existing incinerator shall be operated for three shifts a day, seven days a week, if feasible. When operational, the existing incinerator must be operated for three shifts a day, five days a week, with an additional shift on Saturday.
3. Petitioner shall limit open burning to such times when atmospheric conditions will readily dissipate the contaminants;
4. Petitioner shall obtain all necessary Construction and Operating Permits for its proposed new incinerator and its existing incinerators;
5. By December 31, 1974, or upon completion of the new incinerator system (whichever first occurs) Petitioner shall cease open burning of explosive trade waste.

IT IS SO ORDERED.

Mr. Henss was not present.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted on the 3<sup>RD</sup> day of January, 1974 by a vote of 4 to 0.

Christan L. Moffett