



conditions are such that the products of burning would be directed away from residential areas. Petitioner's plant is located in a primarily industrial area. Petitioner states that accumulation of hazardous magnesium waste will create a severe condition of danger to personnel and plant as well as adjacent properties.

The Environmental Protection Agency recommended that the petition be denied, principally because of the lack of progress made by Petitioner and its predecessor, Dow Chemical Co., since 1967, when an open burning variance had been granted. The recommendation details the efforts to install a chip compactor over a five-year period with a complete lack of affirmative success. The Agency notes also a lack of progress in developing alternative methods of on-site disposal and absence of exploration of other potential means of disposing of its explosive wastes. Notwithstanding the written recommendation urging a denial of the variance, at the hearing the Agency modified its position and recommended a six-month variation during which Petitioner would aggressively pursue a program to develop alternatives to its present open burning. A bond in the amount of \$10,000.00 to be forfeited in the absence of showing of satisfactory progress was also proposed. A penalty in the amount of \$1,000.00 was suggested.

The testimony at the hearing related principally to the generation of the magnesium scrap and the absence of suitable alternatives to open burning. The scrap is generated principally by the sawing of magnesium slabs. Two types of magnesium particles result; the larger pieces can be remelted and ultimately used in the manufacturing process. A percentage, however, is either too small for remelting or contaminated with lubricant, both of which circumstances prohibit remelting. Efforts made to remelt these products create the possibility of fires and explosions. Alternative methods of cutting such as shearing or torch cutting are not deemed suitable for compliance with industry standards. The waste material produced by the cutting is in ribbon form and when gathered resembles steel wool. It was this material that was used in the chip compactor with the hope that these materials, when compressed, would form a solid bar.

According to the evidence, the likelihood of danger from the cutting process itself is slight because of the heat absorption in the parent plate and the use of coolant sprays. Occasionally, however, fines may become ignited. Burnable and meltable fines are sifted out and the meltable fines are put in a melting pot creating a flux excluding air and preventing burning. Burnable chips cannot be put in the melting pot because they would ignite on contact. Approximately 150 to 250 pounds of fines are generated every day. The compacting efforts were unsuccessful and to some extent dangerous because of heat generated by the pressure and the possible resulting ignition.

A flux melting process uses a large steel melting pot in which magnesium chloride and potassium chloride salts are melted which flux is mixed with the non-meltable magnesium chips. While the burnable chips are disposed of, the result is a "5,000 pound pot full of some kind of what used to be flux and is now sludge". According to the witness, this alternative procedure was "the most promising of the failures" (R.49).

Testimony also indicated that improved housekeeping practices could minimize the waste products from the cutting operation. A method of digestion of magnesium was also considered as well as submersion of magnesium in sulfuric acid, which is believed to have inherent danger. Likewise, burial was considered unsuitable because of the potential danger.

The burning process was described. Fines are burned by ignition from a railroad fuse and only when the wind is from the east or southeast to prevent impact on residential properties. The actual burning by petitioner was seen by an employee of the Environmental Protection Agency. White smoke was generated by the burning and was dispersed over 100 yards or less from the burning site. In the opinion of this witness, the product of this combustion is not toxic although there might be respiratory hazards that result from any particulate emission. This witness, who recorded some amount of complaints from adjacent neighbors, did not have any suggestions on alternative means of disposal. At the hearing, the Agency modified its recommendation to permit the granting of the variation for a six-month period during which time Petitioner would pursue an aggressive program to develop an alternative means of disposal.

This case is similar to previous cases considered by the Board involving disposal of explosive waste. (See 'Environmental Protection Agency v. Olin Corporation, East Alton, Illinois, #70-11'; and 'Olin Corporation v. Environmental Protection Agency, #70-25'.)

While the product is not one manufactured as an explosive, the potential danger of enclosed burning of the waste is similar. While Petitioner has made no progress since the original variation was granted in devising alternative means, the record does not disclose that suitable alternative means are available. As in the explosive waste cases, we are compelled to hold that the hardship on the petitioner and the community in forbidding open burning is far greater than the burden created by the open burning of the waste, particularly, if precautions are taken to minimize the impact of emissions on adjacent properties. Obviously, insistence on compliance with the open burning regulations would have attributes of danger which this Board could not insist on. However, we will require that Petitioner submit to this Board and the Agency monthly progress reports indicating what steps it is pursuing in order to seek alternative methods. We will extend this variance

only upon satisfactory showing that efforts are being aggressively pursued to find alternative means of disposal. The circumstances do not call for the imposition of a fine or the requirement of a bond.

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

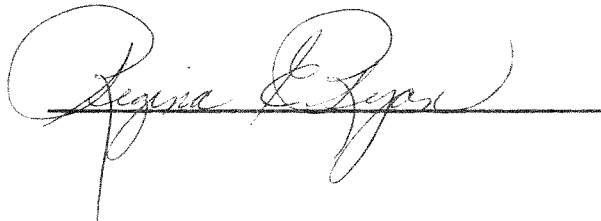
IT IS THE ORDER of the Pollution Control Board that petitioner be granted a variance for six months from the date hereof during which time it may burn its magnesium waste in the open, subject to the following terms and conditions:

1. No pile of waste ignited shall exceed 750 pounds and not more than two such piles shall be burned in any one week. All burning shall take place during daylight hours.

2. Burning shall take place only when weather conditions and wind direction are such so as to minimize the impact on adjacent residential properties.

3. Petitioner shall submit to the Agency and to the Board monthly reports indicating what steps it is pursuing to find alternative means of disposal to open burning.

I, Regina E. Ryan, Clerk of the Board, certifies that the above Opinion was adopted by the Board this 23rd day of June, 1971.

A handwritten signature in cursive script, appearing to read "Regina E. Ryan", is written over a horizontal line.