

ILLINOIS POLLUTION CONTROL BOARD  
October 1, 1987

IBS, INC., )  
Petitioner, )  
 )  
v. ) PCB 87-143  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

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

This provisional variance request comes before the Board upon a September 30, 1987, Recommendation of the Illinois Environmental Protection Agency (Agency) and an October 1, 1987, addendum to that Recommendation. The Agency recommends that because of an arbitrary and unreasonable hardship, IBS, Inc., be granted a provisional variance to enable it to participate in a study funded by the Agency and the United States Environmental Protection Agency (USEPA). IBS seeks variance from Section 9(b) of the Illinois Environmental Protection Act (Act), which requires that no person shall operate an emission source in violation of any permit condition.

One of the special permit conditions of the company's current permit prohibits it from burning any PVC coated wire in its wire burning incinerator. IBS would like to participate in the study described above by burning assorted wires now on-site for the purposes of a 2-3 day trial burn. The Agency states that, while IBS, Inc. has visually identified wire which it believes to the best of its knowledge do not contain PVC material, it cannot completely guarantee that it will be complying with the special permit condition on its current permit. It is for this reason that IBS seeks the provisional variance.

The Agency stated that it has recently become aware that burning PVC material in an oxygen-starved environment such as that found in a wire burning incinerator may produce dioxins and furans which can be of concern to the environment. In an effort to study the problem, the Agency and the USEPA are funding projects designed for further study of this problem.

The study is designed to two phases, as follows: Phase 1: IBS now seeks provisional variance for its participation in Phase 1. Phase 1 involves site assessments to obtain operating data from wire reclaiming incinerators. The Agency and USEPA have requested that existing ash be cleaned out of the incinerators.

Phase 1 requires that the incinerator be operated for a period of 1-3 days. IBS believes that it will be burning wire with non-vinyl chloride insulation during the Phase 1 burn, but IBS will be burning wire which has the same combustion characteristics. During a test burn, it will be necessary to keep the soil around the wire burning incinerator unit dampened to avoid stirring up any dust. During Phase 1 of the study, an EPA contractor would set up temperature monitoring equipment and take gas samples throughout 1 or 2 operating cycles. This 2-3 day test burn would be conducted during the week of October 12, 1987. Because one company believes that PVC coated wire can be visually identified with certainty, Phase 1 of the study will also include a portion addressed to methods of identification of wires coated with PVC-containing insulation. Phase 2: The location of the Phase 2 portion of this study has not yet been determined. However, the Phase 2 portion of this study would involve a stack emissions test for dioxin which would be performed using the parameters obtained during the Phase 1 portion of this study. Phase 2 would be conducted using ordinary and normal operating conditions, which might include burning wire with PVC insulation.

The purpose of Phase 1 and Phase 2 of the study is to assess the quantity, if any, of dioxin likely to be emitted into the air from wire reclamation incinerators, and to identify conditions under which the units could be safely operated. As stated previously, the Agency has requested that existing ash be cleaned out of the IBS incinerator prior to operation of the incinerator. The Agency has made specific recommendations to IBS for the removal of the ash and has required proper disposal methods as set forth to the company in correspondence to them.

Ash and soil samples were taken by the USEPA as part of the Tier Four of the National Dioxin Strategy. For analysis purposes, the Agency's information regarding levels of concern for 2,3,7,8-TCDD dioxin equivalents would be one part per billion in residential areas and 0.006 ppb's (or six parts per trillion) in grazing areas. Levels of concern for non-residential areas are determined on a case-by-case basis, but the majority of levels of concern for non-residential sites fall in the range of 5-15 parts per billion. IBS is located in a highly developed commercial and industrial area.

As a result of the receipt of test results at IBS in the Tier Four National Dioxin Strategy, the Agency collected samples from 12 sites in Illinois. Some concentrations were found at all sites at which samples were taken; however, concentrations were less than levels of concern at all but five sites in Illinois.

As a result of the ash samples taken by USEPA at IBS, USEPA determined that it would take soil samples of the soil surrounding the IBS wire burning incinerator.

Upon receipt of the first results of sampling at the IBS incinerator, IBS was requested to and has ceased operation of the incinerator on site. Further, the incinerator and the process area have been secured by allowing no personnel in the secured area, preventing disturbance of the soil or anything else in the area, identifying ash on site and securing it, and identifying any recovered wire or other material processed through the incinerator on site. In addressing the expected emissions as a result of the test burn at the IBS site, the Agency stated that it believes that if the ash is properly removed from the incinerator and non-PVC containing wire is burned, it is extremely unlikely that any emissions of dioxins would ensue. Any emissions would likely be primarily particulates.

However, IBS and other facilities have stated that while they believe they are able to visually identify wire coated with PVC insulation, they cannot be 100% certain that visual identification will identify such wire. If some PVC coated wire escapes detection and is charged into the incinerator, it is possible that some PCDD's may be generated. Some small amount may escape destruction in the afterburner and be emitted into the atmosphere. To estimate the potential quantity of PCDD that may be emitted, a comparison may be made to a somewhat similar unit that has been tested for PCDD emissions under a USEPA contract. This particular unit is allowed by its operating permit (issued by the State of Georgia) to burn up to 200 lbs/hour of PVC wire but typically only burns about 20 lbs/hr. An average of three test runs disclosed an average emission of 114 micrograms per hour of total PCDD's. Currently USEPA is engaged in dispersion modeling and population risk assessment studies to attempt to determine the significance of wire reclaiming incinerators emissions to public health and welfare. However, since the purpose of the Phase 1 and Phase 2 testing by USEPA and IEPA is to assess the quantity, if any, of dioxin likely to be emitted into the air from wire reclamation, the Agency stated that it cannot state with certainty the expected amount of emissions. It is this which Phase 2 of the study will ultimately determine.

Pursuant to Section 35(b) of the Act, the Board hereby grants the provisional variance as recommended.

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

#### ORDER

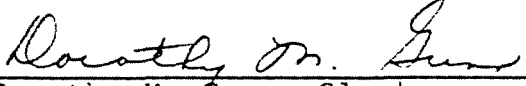
IBS, Inc., is hereby granted a provisional variance from Section 9(b) of the Illinois Environmental Protection Act, as recommended by the Illinois Environmental Protection Agency.

IT IS SO ORDERED.

Board Member M. Nardulli abstained.

Board Members J. Anderson and R. Flemal were absent.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 1<sup>st</sup> day of October, 1987 by a vote of 4-0.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board