ILLINOIS POLLUTION CONTROL BOARD
April 27, 1984

FORD MOTOR COMPANY,	)	
	)	
Petitioner,	)	PCB 83-105
	)	
v.	)	
	)	
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	

Respondent.

MS. CAROLYN A. LOWN AND MR. SHELDON ZABEL (SCHIFF, HARDIN & WAITE) APPEARED ON BEHALF OF FORD MOTOR COMPANY;

MR. PETER E. ORLINSKY (ATTORNEY-AT-LAW) APPEARED ON BEHALF OF THE ENVIRONMENTAL PROTECTION AGENCY.

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

This matter comes before the Board upon an August 4, 1983 petition, an August 10, 1983 amended petition and a December 2, 1983 amended petition for variance filed on behalf of the Ford Motor Company. The Illinois Environmental Protection Agency (Agency) filed a recommendation on March 6, 1984 recommending that variance be granted in part. Hearing was held on March 15, 1984 at which both parties were represented, and which largely involved the admission of a Stipulation of Facts. On April 5, 1984, the Board entered an Interim Order requesting the parties to address the applicability of 35 Ill. Adm. Code 203.207(f) to Ford's request for variance from the New Source Review Regulations to which Ford responded on April 24, 1984, and to which the Agency responded on April 26, 1984.

Ford requests that the Board grant it a variance from 35 Ill. Adm. Code §215.204(a)(1) [formerly Rule 205(n)(1) of Chapter 2: Air Pollution] until such time as the Board either corrects the mistake of fact which underlies Section 215.204(a)(1) or finds that 35 Ill. Adm. Code Part 215 presently contains a mechanism by which relief may be granted from the mistake. Ford also requests that it be granted a variance from the regulations for major stationary source construction and modification contained in 35 Ill. Adm. Code 203 (New Source Review Regulations) if the Board determines that the New Source Review Regulations do apply to certain modifications Ford is undertaking

to achieve compliance with RACT I.*

On December 23, 1983, the Agency filed a motion to dismiss that part of Ford's variance request pertaining to 35 Ill. Adm. Code 215.204(a)(1) to which Ford responded on January 3, 1984. The Agency stated its agreement with Ford that "when the Board adopted 35 Ill. Adm. Code §215.204(a)(1) in R78-3,-4, it relied on a mistake in the record," that mistake being that the United States Environmental Protection Agency (USEPA) based its Control Technique Guidelines for surface coating on a 40% transfer efficiency rather than the subsequently determined 30% efficiency (see USEPA memos regarding transfer efficiency in Ex. A of Ex. A of Ford's December 2, 1983 Amended Petition for Variance).

On March 8, 1984 the Board entered an Order in which it stated:

> When R78-3,-4 was adopted, the limitations of Section 215.204(a)(1) were intended to track the federal guidelines . . . [which] were based upon a mistake of fact, upon which the Board, in turn, relied. . . . The simplest solution to this problem is to allow the Agency to construe Section 215.204(a)(1) consistently with the federal guidelines. This is especially true since the Ford plant is the only plant affected by the rule.
>
> Unfortunately, were the Board to accept the Agency's position, the Board would be condoning the practice of allowing effective rules to mean something other than what they say. While it is somewhat difficult to determine what is intended by the present rules, the Board finds that Ford has properly construed them, and as such, must seek variance or site-specific regulatory relief to avoid possible enforcement by the Agency or any citizen.

Based upon that Order Ford has pursued this variance request in conjunction with site-specific relief in R83-36.

Ford owns and operates an automobile assembly plant located at the intersection of Torrence Avenue and the Calumet River in Chicago in a site which occupies 85.9 acres in a highly industrialized area (Stip. Para. 1 and 2). Approximately 4000 people are currently employed at the plant at which automobiles are assembled from parts manufactured at other locations (Stip. Para. 3 and 4). The assembly process includes welding and sealing of

* RACT I is the set of regulations adopted by the Board in R78-3,4 to control the emissions of volatile organic material through the application of reasonably available control technology to stationary sources. In re Remissions of Volatile Organic Material, PCB R78-3,4, 35 PCB 246 (Aug. 23, 1979).

body components, metal finishing, painting, and final assembly (Stip. para. 4). The plant currently produces 50 vehicles per hour (vph) and has a rated capacity of 60 vph during two 8-hour shifts per day, five days per week, with periods of production of up to two 10-hour shifts per day and occasional Saturday operation (Stip. para. 5).

Vehicle bodies are initially painted with a prime coat by an electrocoat painting process, baked, and then conveyed to a prime surfacer spray booth where they are painted using hand-held conventional (non-electrostatic) and high voltage automatic application (spray) equipment (Stip. para. 6-8). The prime surfacer coating is then applied to improve the surface appearance of the topcoat and to provide additional corrosion protection for the coated surface. The current material usage in the prime surfacer spray booth is about 0.34 gallons of paint spray prime per vehicle and 17 gallons of paint per hour (Stip. para. 8). Subsequent to applying the prime surfacer, the vehicle bodies are conveyed through a bake oven (Stip. para. 8).

The topcoat coating line begins when the production line coming from the prime coat coating line splits to either one or the other of two main enamel spray booths (Booth I and Booth II) and ovens (Stip. para. 9). This is the only point at which the production line is split and the rate of production coming from the main enamel operation cannot be varied unless all other portions of the production line are modified (Stip. para. 10 and 11). Vehicle bodies are painted in the main enamel operation using hand-held conventional and electrostatic spray guns. Material usage in the topcoat coating line is about 2.1 gallons of paint per vehicle and 105 gallons of paint per hour (Stip. para. 12).

Volatile organic materials and particulate are discharged by the prime surfacer coating and topcoat coating lines, and producing the current model at the present rate of production, approximately 68 pounds of volatile organic material and 0.3 pounds of particulate are discharged per hour from the prime surfacer coating line and approximately 546 pounds of volatile organic material and 0.9 pounds of particulate are discharged per hour from the topcoat coating line (Stip. para. 13 and Ex. 3). Ford intends to modify its main enamel operation in order to accommodate the use of high solids enamel needed for meeting the requirements of the RACT I regulations (Stip. para. 17). After modifications are completed, emissions from the prime surfacer and topcoat coating lines will be equivalent to an emission rate of 2.8 pounds per gallon applied at a transfer efficiency of 30 percent (Stip. para. 17). As such, these emissions represent a decrease from the plant's historical emission baseline and will constitute compliance with the requirements of the RACT I regulations well in advance of the prescribed deadline of December 31, 1985 (Stip. para. 14).

In order to avoid a lengthy production shutdown at the plant while undertaking modification, Ford plans to modify Booths I and II sequentially such that the entire production of vehicle bodies will pass through Booth II until modifications are completed to Booth I, at which time production will be shifted to Booth I while Booth II is modified (Stip. para. 17 and 18). Then, production will again may be split between the two portions of the main enamel operation (Stip. para. 18). The rerouting of production in this manner will not change the number of vehicle bodies going into or out of the main enamel operation, and, as such, it will not create any increase in emissions from the overall operation (Stip. para. 18 and Ex. 1). However, there will be a temporary increase in the number of vehicle bodies which will pass through Booth II while Booth I is being modified and vice versa. Thus, there will be an increase in emissions from whichever portion is operational at a given time (Stip. para. 19).

VARIANCE FROM 35 ILLINOIS ADMINISTRATIVE CODE 215.204(a) (1)

Section 215.204(a)(1) limits the emission of volatile organic material from prime surfacer coating and topcoat operations at automobile or light-duty truck manufacturing plants in Cook County to 2.8 pounds of volatile organic material per gallon of coating materials, excluding water, delivered to the coating applicator. Two alternatives to this primary limit are provided in footnotes to Section 215.204(a)(1): one for prime surfacer coating of 3.2 pounds of volatile organic material per gallon of coating materials applied with a transfer efficiency of not less than 55 percent, and the other for topcoat coating of 3.6 pounds of volatile organic material per gallon of coating materials applied with a transfer efficiency of not less than 65 percent.

The limitation of 2.8 pounds per gallon is written simply in terms of the pounds of coating materials delivered. As such, the limitation does not by itself express the emissions which may be expected from the application of that amount of materials. To calculate the emissions, it also is necessary to know the transfer efficiency with which the coating materials are being applied.* The 2.8 pounds per gallon limitation was based on the limitation set forth in USEPA's CTG for various surface coating operations (R. 594, 599 and see see R78-3, -4, In re Emissions of Volatile Organic Material, 35 PCB 257-259, August 23, 1979). USEPA represented in

* The transfer efficiency is the ratio of the amount of coating solids transferred onto the surface of a part or product to the total amount of coating solids used (35 Ill. Adm. Code §211.121).

the CTG that this limitation was the "presumptive norm" that could be achieved through the application of RACT (USEPA, OAQPS Guidelines, Control Of Volatile Organic Emissions From Existing Stationary Sources - Volume II: Surface Coating Of Cans, Coils, Paper, Fabrics, Automobiles, And Light-Duty Trucks at iv and vii (EPA-450/2-77-008 (OAQPS No. 1.2-073) May 1977) which was based on water-borne coating usage by two plants in the United States (CTG For Surface Coating at viii).

Although the CTG For Surface Coating is silent regarding the transfer efficiency upon which it relied, it appears that a transfer efficiency of 40 percent was used based upon a misapprehension of the transfer efficiency which was being achieved at the two plants relied on by the CTG.* Later testing by General Motors at these plants demonstrated that the baseline transfer efficiency actually was 30 percent rather than 40 percent (see Ex. 6). Subsequent to issuing the CTG For Surface Coating, USEPA clarified the baseline for the transfer efficiency and issued a memorandum on July 3, 1979, which stated that it had "reviewed the available data and concluded that present waterborne coating (2.8 lbs/gal less water) is being applied at a transfer efficiency of 30 percent" (Ex. 6).

Thus, Section 215.204(a)(1) appears to have been based on a mistake of fact in that it is based upon a transfer efficiency of 40%, and the Board agrees with the Agency that denial of variance from a rule which is apparently based on a mistake of fact would constitute an arbitrary or unreasonable hardship. The Board, therefore, will grant variance from that rule until such time as the Board takes final action on R83-36 in which the Board will address the consequences of that mistake, or for five years, whichever is shorter.

Variance From 35 Ill. Adm. Code 203

Ford also requests variance from 35 Ill. Adm. Code 203 (New Source Review), arguing, essentially, that its plan for attaining compliance with RACT will result in the imposition of the New Source Review rules, which impose more stringent standards than RACT, and that such a result would impose an arbitrary or unreasonable hardship upon Ford. The Agency agrees that the imposition

* The only portions of §215.204(a)(1) in which transfer efficiency is expressed are in two footnotes which express alternative limits. If it is assumed that these alternatives are intended to be equivalent to the 2.8 pounds per gallon limit set forth as the primary limitation for § 215.204(a)(1), then back-calculating from the alternative limit yields a transfer efficiency of 40 percent for the primary limit of 2.8 pounds per gallon.

of LAER (Lowest Achievable Emission Rate) would constitute such hardship, but disagrees that Ford has demonstrated such hardship concerning the entirety of the New Source Review rules.

The New Source Review rules are permitting rules which apply to new construction or reconstruction of major stationary emission sources and to major modifications of stationary sources in non-attainment areas. If an activity is deemed to be subject to the NSR rules, a permittee is required to provide LAER (Lowest Achievable Emission Rate) and offsets for criteria pollutants, among other things, to insure that the best equipment available is installed and to provide reasonable further progress toward attainment.

In determining whether the NSR rules apply, the first question which must be addressed is what is the source involved. Ford argues that the source is the "Main Enamel Operation" which includes both spray booths while the Agency argues that each booth is a separate source.

In Natural Resources Defense Counsel, Inc. v. Gorsuch, 685 F.2d 718 (D.C. Cir. 1982), cert. granted 103 S. Ct. 2427 (1983) (NRDC), the court considered the USEPA's adoption (as part of its new source review regulations) of a plant-wide definition of emission source as being designed "to shrink to relatively small size mandatory new source review in non-attainment areas" (Id. at 720.) The court concluded that such purpose was impermissible since the non-attainment program was enacted to improve the quality of the ambient air rather than to simply maintain it (Id. at 726-27.)

The Board does not agree that Ford's designation of the "Main Enamel Operation" as a single source comports with NRDC, above, or with the Board's definition of source.

The definition of source goes to "any equipment or facility." This dual definition allows a source to be designated as one or the other, but not something in between as Ford apparently contends. As the Board stated in its Opinion and Order adopting the New Source Review rules, "a source is either an entire plant or an individual piece of process equipment within a plant (R80-16, Docket B, July 14, 1983, pp. 2-3; emphasis added). Despite the fact that Booths I and II normally operate in tandem, they are clearly individual pieces of equipment. The fact that Booth I can operate while Booth II is shut down and vice versa, is indicative of that fact. Thus, in applying the New Source Review Rules, the Board must look at each booth individually.

Both parties agree that even if the spray booths are considered individual sources, that each booth is a major source pursuant to 35 Ill. Adm. Code 203.206. The next question which must be addressed, then, is whether Ford's activity is considered new construction, reconstruction or modification of those sources. Under 35 Ill. Adm. Code 203.207, a major modification is "any physical change, or change in the method of operation of a stationary emission source that would result in a significant net emissions increase of any pollutant, except that a physical change or change in the method of operation shall not include" certain listed activities. New emission determinations are made pursuant to 203.208.

Thus, in order to constitute a major modification, the change in the method of operation must not be an activity which is not exempted and which results in a significant emissions increase. The parties, unfortunately focused on the second.

Neither Ford nor the Agency addressed the first issue, despite the fact that an affirmative answer would be dispositive of the case. Since the record contained insufficient information to determine the applicability of that exemption, the Board entered an Interim Order on April 19, 1984, requesting that the parties respond to that question. Ford stated that, while it had not directly addressed the issue, its "change constitutes the type of activity exempted from the definition of major modification." The Agency, on the other hand, argued that "because the physical modifications to the top coat main enamel operation necessitate the increase (albeit temporary) in the production rate of the individual Main Enamel Booths, the change in production rate is not strictly operational and, consequently, does not fall within the exemption provided by Section 203.207(f)."

The exemption contained in Section 203.207(f) reads as follows:

> An increase in the hours of operation or in the production rate, unless such change would be prohibited under any enforceable permit condition which was established after December 21, 1976 pursuant to 40 CFR 52.21 as amended at 45 FR 52735, August 7, 1980 or this Chapter.

In Ford's case the project involves two emission sources, (i.e., paint booths), each of which emits more than 100 T/yr of hydrocarbons. Therefore, for purposes of New Source Review each is a major source undergoing modification and the project is a major modification because there will be a change in the operation of each source (see the introductory paragraph of Section 203.207).

Both parties agree that Ford's permit does not contain any enforceable permit condition which would bar the application of Section 203.207(f), and Ford submitted an affidavit to that effect in its response to the Interim Order.

The Agency's argument that the change is not strictly operational apparently misconstrues the meaning of source for purposes of New Source Review. Since there are two separate sources for purposes for New Source Review, the Board must examine those sources independently. In so doing, it is clear that no change is being made to the source which is being operated at double its production rate except for increasing that rate. While it is true that modifications are being made to the booth which is out of production, such changes are irrelevant to the exemption of Section 203.207(f) since they are being made to another source. The Board notes that those changes may constitute a major modification in and of themselves, but that question is not before the Board in the present variance request.

The Agency's response regarding the exemption only makes sense if the two booths are considered as one source, which is precisely what Ford has argued throughout this proceeding. The Board notes that if that were the case, it appears that the change would be exempted from New Source Review pursuant to the netting provisions of Section 203.208 since, if both booths are considered as one source, there would be no net emissions increase. Yet, the Agency argued that netting could not be used because both booths constitute separate sources. The Agency cannot have it both ways.

Therefore, the Board finds that Ford's change in operation is exempted from the NSR rules pursuant to Section 203.207(f) and concludes that variance from those rules should be denied as unnecessary.

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

ORDER

1. Ford Motor Company is hereby granted a variance from 35 Ill. Adm. Code 215.204(a)(1) until April 27, 1989 or until final Board action is taken regarding R83-36, subject to the following conditions:

   a) Ford shall not cause or allow the emission of volatile organic materials to exceed the following limitations on coating materials, excluding water, delivered to the coating application:

Automobile or Light Duty Truck Manufacturing Plants

In Cook County	Kg/l	(lb/gal)
Prime coat	0.14	(1.2)
Prime surfacer coat	0.34	(2.8)

(This limitation is based upon a transfer efficiency of 30 percent.)

b) Within 45 days of the date of this Order, Ford Motor Company shall execute a Certification of Acceptance and Agreement to be bound to all terms and conditions of the variance. Said Certification shall be submitted to the Illinois Environmental Protection Agency at 2200 Churchill Road, Springfield, Illinois 62706. The 45-day period shall be held in abeyance during any period that this matter is being appealed. The form of said Certification shall be as follows:

CERTIFICATION

I, Ford Motor Company having read the Order of the Illinois Pollution Control Board in PCB 83-105 dated April 27, 1984, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

_____
Petitioner

_____
By: Authorized Agent

_____
Title

_____
Date

2. Ford Motor Company is hereby denied variance from 35 Ill. Adm. Code 203.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on 27th day of April, 1984 by a vote of 6-0.

Christan L. Moffett, Clerk
Illinois Pollution Control Board