ILLINOIS POLLUTION CONTROL BOARD
April 6, 2000

IN THE MATTER OF:	)	
	)	
PETITION OF FORD MOTOR COMPANY	)	AS 00-6
(CHICAGO ASSEMBLY PLANT) FOR AN	)	(Adjusted Standard - Air)
ADJUSTED STANDARD FROM 35 ILL.	)	
ADM. CODE 218.986	)	

SHELDON A. ZABEL, OF SCHIFF, HARDIN & WAITE, APPEARED ON BEHALF OF PETITIONER FORD MOTOR COMPANY; and

DEBORAH J. WILLIAMS APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by M. McFawn):

Before the Board is a petition for an adjusted standard filed by Ford Motor Company (Ford). Ford seeks an adjusted standard under 35 Ill. Adm. Code 218.986, which sets emissions reduction requirements for miscellaneous sources of volatile organic material (VOM). The adjusted standard Ford seeks would enable it to implement an alternative emissions control plan for solvent clean-up operations at its Chicago assembly plant. The Board finds that Ford has met the requirements for an adjusted standard and grants the petition.

FACTUAL BACKGROUND AND PROCEDURAL HISTORY[1]

Ford operates an automobile assembly plant in Chicago. Pet. at 3. A body shop assembles vehicle bodies using stampings, frames, low VOM adhesives and welding operations. *Id.* The vehicle body is then conveyed into a paint shop where the body is run through the following: a cleaning and chemical coating process, electrodeposition coating (which is oven-dried), application of sealers to seams and areas the vehicle body, prime coating (which is oven-dried), and top coating (which is oven-dried). Pet. at 3-4. The painting operation uses automated paint application equipment and high solids paint. Pet. at 3. Automated application equipment cannot reach all areas of the vehicle body, however; some areas must be painted manually by workers using hand held applicators. Pet. at 5.

Clean-up operations of various types are an integral part of Ford's process. Vehicle bodies pick up oils, grease and dust due to employee contact, ambient air, equipment contact and materials used in manufacturing. Pet. at 4. Due to the high quality finishes demanded by Ford's customers,

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[1] Facts set forth in this section of the Board's opinion are taken from Ford's petition, which was supported by an affidavit of John Baguzis, or from hearing testimony.

solvent clean-up operations are vital to Ford's operations. *Id.* Also, inherent in the paint operation is the need to clean up facility components associated with that operation. *Id.* Eight specific clean-up operations are addressed in Ford's petition:

1. Booth Wall Cleaning: Uncured paint builds up on spray booth walls due to overspray, and must be removed to prevent it from falling onto a vehicle body and marring the finish. Pet. at 4; Pet. App. 2 at 1.

2. Booth Grate Cleaning and Floor Cleaning: Overspray also results in uncured paint building up on the floor grates of the spray booths. This paint interferes with worker mobility in the booths, and gets tracked outside the booths. Pet. at 4-5; Pet. App. 2 at 2, 4.

3. Manual Section Paint Application Hose Cleaning: Uncured paint builds up over time on hoses used in manual application of paint. This causes the hoses to stick to workers' gloves and clothing, interfering with the paint application process. Pet. at 5; Pet. App. 2 at 3.

4. Automated Section Paint Application Equipment Cleaning: Uncured paint builds up on automated application equipment. This can cause equipment failure or defects in finishes if built-up uncured paint falls onto a vehicle body. Pet. at 5; Pet. App. 2 at 3-4.

5. Purge System: Purging of paint applicators is required for every change of color, to avoid mixing colors. In any event, purging is necessary after every 5 or 6 vehicles painted in order to prevent blemishes due to soiled applicator tips. Purging involves blowing out paint with air followed by cleansing with a solvent. Pet. at 5; Pet. App. 2 at 5.

6. Ultra Filter Cleaning: The electrodeposition coating (e-coating) operation is a series of dip tanks where a coating is cathodically applied to the vehicle body. A series of rinse tanks follow to remove any excess material carried over from the process. The rinse material is reused after being cycled through an ultra filter to remove pigment and resin that is carried over from the e-coating process. Periodically, the filter must be cleaned to maintain its efficiency. Pet. at 5-6; Pet. App. 2 at 5-6.

7. Paint Supply System Cleaning: Each paint color has at least one dedicated closed loop paint supply system for main enamel and guidecoat paint systems. Paint flows continuously from a circulating tank to the paint booths and is returned to the circulating tank. Periodically, the circulating system requires cleaning to maintain proper circulation or when a new color is added. Pet. at 6; Pet. App. 2 at 6-7.

8. Vehicle Body Cleaning: At various points in the painting process, vehicle body wiping is required to prevent paint imperfections. Most such work is performed manually with rags and solvents. Pet. at 6; Pet. App. 2 at 7-8.

On June 29, 1990, the United States Environmental Protection Agency (USEPA) promulgated a Federal Implementation Plan (FIP), codified at 40 C.F.R. § 52.741 and effective July 1, 1991, for certain sources of VOM in the Chicago ozone non-attainment area. To cure deficiencies in its State Implementation Plan (SIP), Illinois adopted rules substantially identical to the FIP rules. *In re* RACT Deficiencies in the Chicago Area: Amendments to 35 Ill. Adm. Code Part 215 and the Addition of Part 218 (June 20, 1991), R91-7, slip op. at 2 (supplemental second-notice opinion); *In re* RACT Deficiencies in the Chicago Area: Amendments to 35 Ill. Adm. Code Part 215 and the Addition of Part 218 (July 25, 1991), R91-7 (final order adopting rules). Among the regulations adopted in rulemaking R91-7 was 35 Ill. Adm. Code 218. Section 218.986, which is derived from 40 C.F.R. § 52.741(x), provides in relevant part:

> Every owner or operator of an emission unit subject to this Subpart [TT] shall comply with the requirements of subsection (a), (b), (c), (d), or (e) below.
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> a) Emission capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or
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> * * *
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> c) An equivalent alternative control plan which has been approved by the Agency and the USEPA in federally enforceable permit or as a SIP revision.

(Subsections (b), (d) and (e) are not applicable to the activities involved here.)

On September 3, 1993, USEPA issued a notice of violation to Ford, alleging that the Chicago Assembly Plant had failed to comply with the requirements of the FIP. Pet. at 14. Ultimately, an interim compliance plan was incorporated as part of a federal consent decree entered on February 10, 1998. See Pet. Exh. 2. By this adjusted standard petition, Ford seeks State approval of the interim compliance plan. Pet. at 15.

In the course of negotiations with USEPA and the Illinois Environmental Protection Agency (IEPA) over a compliance plan to address Ford's solvent clean-up operations, Ford performed a Reasonably Available Control Technology (RACT) study at the Chicago Assembly Plant. Pet. at 14. Ford evaluated three separate technologies to meet the capture and control requirement of Section 218.986(a): an afterburner, carbon adsorpers, and a carbon wheel concentrator followed by an afterburner system. Pet. at 7. Ford determined that the afterburner alone could not meet the 81% capture and control requirement from a technical perspective. Pet. at 8. Carbon adsorpers were rejected because their use would have resulted in creation of a hazardous waste. *Id*. The carbon wheel/afterburner system was capable of producing the required 81% emissions reduction, but only at an approximate annualized cost of $45,500 per ton, with total capital investment of $16.2 million and an annual operating cost of $4.75 million. Pet. at 9. Ford thus concluded that the carbon wheel/afterburner system was cost prohibitive. *Id.*

Ford also evaluated other possible means of reducing emissions, in an attempt to develop an "equivalent alternative control plan" that would result in compliance under Section 218.986(c). Although Ford implemented several work practice and material change measures to reduce VOM emissions from solvent cleaning operations, Ford encountered issues such as worker safety, potential damage to equipment and to final product, and general non-feasibility for some of the materials and practices examined. Pet. at 10, Exh. 1 App. 2. The measures Ford was able to implement did not result in the necessary 81% reduction. Pet. at 10. Ford asserts that no other "equivalent" compliance plan is available. *Id.* USEPA specifically acknowledged that Ford's compliance plan will result in the greatest reduction of emissions possible using economically and technologically feasible emissions controls. Pet. Exh. 2 at 16-17.

Ford filed its petition for an adjusted standard on October 6, 1999. Notice of the petition was published in the *Chicago Tribune* on October 18, 1999. On November 30, 1999, the IEPA filed its recommendation, recommending that the Board grant Ford's petition, with one additional condition discussed below. A hearing was held on January 27, 2000, before Board Hearing Officer Amy Muran Felton. One witness, Christopher Romaine, testified at the hearing on behalf of the IEPA. The parties waived filing of post-hearing briefs. The hearing officer set a public comment deadline of February 22, 2000. No public comments were received by the Board.

STATUTORY AND REGULATORY FRAMEWORK

The Board's authority to grant adjusted standards derives from Section 28.1 of the Illinois Environmental Protection Act (Act), 415 ILCS 5/28.1 (1998). Section 28.1(a) provides that a petitioner may request, and the Board may impose, a standard different from that which would otherwise apply to the petitioner as the consequence of the operation of a rule of general applicability. The criteria for granting an adjusted standard are set forth in Section 28.1(c), which provides:

> c. If a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by the petitioner, that:
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> 1. factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to the petitioner;
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> 2. the existence of those factors justifies an adjusted standard;
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> 3. the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and
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> 4. the adjusted standard is consistent with any applicable federal law. 415 ILCS 5/28.1(c) (1998).

DISCUSSION

Criteria for Grant of Adjusted Standard

Ford seeks an adjusted standard from 35 Ill. Adm. Code 218.986. Because Section 218.986 does not specify a different level of justification for an adjusted standard, the Board evaluates Ford's petition using the criteria listed in Section 28.1(c).

Significantly Different Factors

Subpart TT of 35 Ill. Adm. Code 218, which contains Section 218.986, applies to VOM sources with certain characteristics which are not governed by other subparts of Part 218. The Board in adopting Subpart TT did not consider factors relating to any specific industry or practice; the purpose of that subpart was to cover sources that had not been specifically considered. Thus, the factors relating to Ford's cleaning operations were not considered by the Board when it adopted Section 218.986. The first requirement of Section 28.1(c) is therefore met.

Justification for Adjusted Standard

According to Ford's evidence, reducing emissions to the level at which compliance with Section 218.986 would be achieved would cost approximately $45,500 per ton of reduction. This far exceeds the level at which the Board has generally found emissions reduction not economically reasonable. See *In re* Petition of Louis Berkman Co. (December 4, 1997), AS 97-5, *aff'd sub nom* Environmental Protection Agency v. Pollution Control Board, 308 Ill. App. 3d 741, 721 N.E.2d 723 (2d Dist. 1999) (costs of reducing emissions found to be unreasonable where they substantially exceeded $1,734 per ton). The Board also notes that the intent of the regulations promulgated under Part 218 is to implement RACT for VOM sources in the Chicago ozone non-attainment area. See *In re* RACT Deficiencies in the Chicago Area: Amendments to 35 Ill. Adm. Code Part 215 and the Addition of Part 218 (July 25, 1991), R91-7. USEPA, as noted above, has acknowledged that Ford's interim compliance plan, which would be implemented by this adjusted standard, would result in the greatest emissions reduction possible using technologically and economically feasible controls. Granting an adjusted standard in this case would thus be consistent with the goals of Part 218. Accordingly, the Board concludes that an adjusted standard is justified in this case.

Environmental or Health Effects

Subpart TT does not include an emissions cap; as long as a source complies with the 81% reduction requirement, Subpart TT places no restriction on total emissions. In its requested adjusted standard, however, Ford has agreed to a limit on total emissions from its clean-up operations of 390 tons per year. Thus, while relative emissions reductions are less than Subpart TT would have required, total emissions are restricted. Furthermore, Ford asserts (and the IEPA does not dispute) that the adjusted standard it requests would have a negligible impact on air quality. The Board finds that the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting Subpart TT.

Consistency with Federal Law

Section 110 of the federal Clean Air Act, 42 U.S.C. § 7410, grants individual states the authority to promulgate a plan for implementation, maintenance and enforcement of air quality standards, subject to approval by USEPA. A state may revise its SIP, again subject to USEPA approval. *Id.* The Agency has indicated that this adjusted standard will be submitted as a SIP revision. Recommendation at 19. We note that the terms of this adjusted standard have already been approved by USEPA in the context of the consent decree entered in the federal enforcement proceeding. Pet. Exh. 2. The Board finds that this criterion is satisfied..

Conclusion

Because the four requirements of Section 28.1(c) are met, the Board will grant Ford's petition for an adjusted standard.

Conditions on Adjusted Standard

Ford and IEPA have agreed on a number of conditions to be placed on Ford's adjusted standard, including limits on total emissions from cleaning operations and various record keeping and reporting requirements. The Board accepts these conditions and has incorporated them in its order, below.

IEPA also asks that the Board condition its grant of an adjusted standard to Ford on withdrawal by Ford of a pending permit appeal, case number PCB 93-32. That case is an appeal of the IEPA's denial of Ford's application for renewal of its air operating permit for the Chicago Assembly Plant. The IEPA denied renewal of the permit because of Ford's noncompliance with Subpart TT's requirements with respect to its clean-up operations. The IEPA asserts that the issues in the permit appeal will be resolved by the issuance of an adjusted standard. At the hearing Ford's counsel represented that Ford would withdraw the permit appeal, but asked that it not be required to do so until it receives a new permit, to prevent a gap in coverage. Tr. at 12.

The Board will not require Ford to dismiss its permit appeal as a condition of this adjusted standard. Although perhaps practically connected, the two proceedings are legally distinct. The Board will not, on the incomplete information before it, speculate as to whether and when Ford's permit appeal will be rendered moot. If subsequent events moot the pending permit appeal, and Ford does not voluntarily withdraw the appeal, IEPA can seek dismissal by motion.

CONCLUSION

For the foregoing reasons, the Board grants Ford an adjusted standard from 35 Ill. Adm. Code 218.986, in the form set forth below. This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

Ford Motor Company (Ford) is hereby granted an adjusted standard from 35 Ill. Adm. Code 218.986 insofar as that regulation applies to volatile organic material (VOM) emissions from Ford's solvent clean-up operations listed below, subject to the following conditions and terms:

1. Applicability. The provisions of this adjusted standard apply to the following clean-up operations at the Ford's Chicago Assembly Plant (the facility):

    a. Paint booth wall/grate and paint floor cleaning operations;

    b. Automated paint application cleaning (external);

    c. Manual paint application equipment and associated hoses;

    d. Floor cleaning;

    e. Purge system for automated paint application equipment;

    f. Ultra filter cleaning and paint supply system cleaning; and

    g. Vehicle body cleaning.

2. Emission Control Requirements.

    a. Emissions of VOM from the cleaning operations may not exceed 390 tons per year as calculated on a 12 month rolling basis.

    b. The facility may not use spray equipment to apply any cleaning solvent containing in excess of 3.5 pounds VOM per gallon (minus water and exempt compounds) for cleaning paint booth walls, grates, or the exteriors of paint application equipment.

    c. The facility may not utilize VOM-containing materials to remove paint from paint booth grates. This restriction does not prohibit the use of VOM-containing grate coatings which reduce adhesion of uncured paint to grate surfaces.

    d. The facility may not store waste solvent or soiled rags from cleaning operations in open containers when not in use except as necessary to prevent a fire hazard.

3. Record Keeping and Reporting.

    a. For each VOM-containing material utilized in a cleaning operation, the facility must record the following information on a monthly basis:

i. The name and identification of the VOM-containing material;

ii. A listing of the operations in which the VOM-containing material was used;

iii. The pounds of VOM per gallon of the VOM-containing material, calculated using 40 C.F.R. 60, Appendix A, Method 24 (incorporated by reference at 35 Ill. Adm. Code 218.112(d));

iv. The total gallons of VOM-containing material used; and

v. The total gallons of solvent recovered for disposal as calculated in accordance with paragraph (c) below.

b. The facility must also record the following facility-wide information on a monthly basis:

i. The monthly calculated usage of VOM from each cleaning material used in each operation specified in section (1) above;

ii. The monthly calculated emissions of VOM utilizing the information in subparagraph (i) above, and VOM credit as calculated in accordance with paragraph (c) below; and

iii. The 12 month rolling total of VOM emissions calculated in accordance with paragraph (d) below.

c. For each shipment of waste solvent from the purge reclaim tank to a solvent reclaimer, the facility must obtain the weight percent solids, weight percent water, density, total volume in gallons, pounds of VOM per gallon, and pounds of VOM credit. Ford must ensure that the solvent reclaimer utilizes USEPA Method 24 for determining VOM content, weight percent solids, weight percent water, and density.

d. Compliance with the emissions limit of 390 tons per year as calculated on a 12 month rolling total basis is determined by calculating VOM emissions for the previous month and adding emissions for the preceding 11 months, for a 12 month total.

e. Compliance calculations for the emission limit of 390 tons per year as calculated on a 12 month rolling total basis must be performed within 15 days of the end of each month.

f. By April 1 of each year, the facility must obtain from each of its cleaning material suppliers a listing of each VOM-containing cleaning material, its VOM

content, and the quantity of cleaning material delivered to the facility during the previous calendar year.

g. Records required by this section must be retained at the facility, available for inspection by IEPA during regular business hours, for a period of three years.

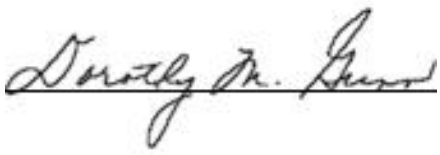
h. Ford must notify IEPA in writing within 15 days of finding that the total VOM emission limitation of 390 tons per year has been exceeded. In any such notification Ford must identify the suspected cause of the exceedance and any measures taken to prevent any future exceedance.

4. Employee Awareness. Ford must make a copy of the requirements of this adjusted standard available to paint shop cleaning personnel and paint shop area managers.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1998)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 172 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 6th day of April 2000 by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board