

BEFORE THE ENVIRONMENTAL APPEALS BOARD
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matter of:)
General Motors Corporation)
PSD Permit No. MI-209-00) PSD Appeal No. 01-30

AMICUS BRIEF OF EPA REGION 5
AND EPA OFFICE OF AIR AND RADIATION

Pursuant to the Environmental Appeals Board Orders dated December 6 and December 21, 2001, the U.S. Environmental Protection Agency's Office of General Counsel and Office of Regional Counsel for Region 5, on behalf of the Office of Air and Radiation and Region 5, respectfully submit this amicus brief in response to the Petition for Review of PSD Permit filed by the Ecology Center and the Michigan Environmental Council ("Petitioners") and the Responses of the Michigan Department of Environmental Quality ("MDEQ") and General Motors Corporation ("GMC").

I. BACKGROUND

Pursuant to 40 CFR § 52.21(u), the MDEQ has been delegated authority by the Regional Administrator for Region 5 to administer the federal program for the prevention of significant deterioration of air quality ("PSD"). See 45 Fed. Reg. 8348

(Feb. 7, 1980). Pursuant to this delegation agreement, MDEQ administers the PSD permit program found in 40 C.F.R. § 52.21 for Michigan¹ in accordance with the permit review requirements in 40 C.F.R. Part 124 Subparts A and C. EPA's Office of Air Quality Planning and Standards has issued a guidance document, the New Source Review Workshop Manual (draft Oct. 1990) ("NSR Manual"), that is widely used in PSD reviews to lend consistency and a framework to Best Available Control Technology ("BACT") determinations being made by permit-issuing authorities. Three Mountain Power, LLC, PSD Appeal No. 01-05, slip op. at 5 (May 30, 2001). The NSR Manual is the most current and authoritative EPA guidance representing national policy on making BACT determinations.² See In re RockGen Energy Center PSD Appeal No. 99-1, slip op. at 9 (EAB, Aug. 25, 1999).

GMC submitted a permit application to MDEQ on June 20, 2000, for the construction of a new vehicle assembly plant³, in Delta

¹ See 40 C.F.R. § 52.1180.

² MDEQ acknowledges that the NSR Manual is the most authoritative guidance on PSD permitting. See October 25, 2000 memo from Lynn Fiedler, Permit Section Supervisor, Air Quality Division, Attachment 5 to the Petition ("Fiedler Memo"), at page 1.

³ The proposed new plant for which GMC sought the permit consists of a body shop, a paint shop, and a general assembly area. The permitted facility would include liquid storage tanks, an electrodeposition ("ELPO") painting process, the application of sealers and adhesives, a guidecoat painting process, a topcoat painting process, a foam process, a sound dampener process, the use of miscellaneous solvents, spot repair/final repair painting processes, natural gas burning, fuel fill operations, and vehicle

Township, Eaton County, Michigan (Permit to Install application No. 209 - 00). In addition, GMC submitted an application on August 11, 2000, for the proposed installation of four 80 MMBtu/hr hot water boilers in the same building (Permit to Install application No. 272 - 00).

The GMC proposal is subject to the Federal PSD rules and regulations for major sources based on the facility's potential emissions of volatile organic compounds ("VOCs"), nitrogen oxides ("NOx") and particulate matter less than 10 microns in diameter ("PM-10"). Therefore, GMC is required by the PSD regulations to demonstrate that it applies BACT on all pollutants that are emitted in significant quantities from the facility. See 40 C.F.R. § 52.21(j).

MDEQ approved both permit applications.⁴ MDEQ issued the GMC vehicle assembly facility a permit (No. 209-00) dated September 26, 2001, and effective on October 30, 2001 ("GMC

testing operations.

⁴ Pursuant to state and federal requirements, MDEQ held a 30-day public comment period, which ended on August 7, 2001, on its proposed conditional approval of the GMC Permit. The opportunity for a public hearing was available, but no request for hearing was made. During the public participation process, Petitioners submitted comments on the proposed permit. MDEQ responded to these comments and made changes to the final permit. These changes include the addition of the body shop operation as an emission unit under the permit, with corresponding emission limits.

Permit").⁵ The BACT levels in the GMC Permit were based on the following control technologies:

to control VOCs: use of waterborne electrodeposition primer with thermal oxidizer control of the dip tank and curing oven exhaust streams; powder guidecoat (primer surfacer); and topcoat system with waterborne basecoat/solvent-borne clearcoat and extensive use of electrostatic applicators. Waterborne basecoat heated flash zones and the topcoat bake ovens exhaust streams are controlled by thermal oxidizer. The exhaust streams from the automated solvent-borne clearcoat

⁵ The GMC Permit is not yet actually in effect since petitioners filed the appeal prior to the effective date and the Board has not yet disposed of the appeal. 40 CFR 124.15(b)(2) and 124.19(f)(1). Because GMC may not begin construction at this time under the permit, GMC claims that its ability to compete has been restricted. Response of General Motors Corporation to the Ecology Center and Michigan Environmental Council's Petition for Reivew of General Motors Corporations's PSD Permit (December 17, 2001) ("GMC Response") at 4. EPA notes, however, that the GMC permit does not address a number of other facilities at the site, including a metal stamping facility, an electrical switchyard facility, an equipment and materials storage facility, a wastewater pumping station, and stormwater drainage ditches and ponds. The latter facilities will serve both the new assembly plant and the stamping facility. According to GMC, the stamping facility will initially serve other GMC facilities some miles away, but will devote at least 40% of its output to the new assembly plant once it is complete. An EPA inspection on May 22, 2001 revealed that actual construction of these facilities was well underway at that time, four months prior to MDEQ's issuance of a PSD permit on September 26, 2001.

In noting that GMC has begun construction, EPA does not intend to suggest that GMC's actions are consistent with the requirements of 40 CFR § 52.21. Section 165(a) of the Clean Air Act and 40 C.F.R. § 52.21(i)(1) provide that no major stationary source subject to PSD may "begin actual construction" unless a permit has been issued for the source. "Begin actual construction" is defined as "initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures." 40 C.F.R. § 52.21(b)(11).

zones of the topcoat spray booths are controlled by carbon concentrator followed by thermal oxidizer. [The exhaust streams from the waterborne basecoat zones of the topcoat spray booths are not controlled.]

to control NOx: use of low NOx burners and flue gas recirculation

to control PM-10: use of dry filters and/or water wash

Petitioners, two environmental groups, appealed the GMC Permit on the BACT determination for the basecoat portion of the coating system. As reflected in their comments on the proposed permit, Petitioners allege in their appeal that MDEQ failed to properly apply BACT to limit emissions from the waterborne basecoat section of the coating system at the GMC facility. The Petitioners argue that MDEQ based its BACT analysis on an improper consideration of economic impacts and general concerns that were unquantified or otherwise improperly evaluated, including as follows:

- That MDEQ improperly rejected controls with average costs within the range deemed acceptable by MDEQ in the past and gave excessive weight to incremental costs in its BACT determination.
- That MDEQ used the "engineering effort required to address technical applicability of controlling waterborne paints" and the secondary impacts of increased NOx emissions from controlling the waterborne basecoat section in its BACT determination without quantifying these impacts.
- That MDEQ has initiated a major policy change regarding the "logical grouping" emissions units for BACT, and that such change is contrary to EPA policy.

We address these issues in the following discussion:

II. DISCUSSION

In determining BACT for the GMC assembly plant, MDEQ rejected the use of add-on controls of the waterborne basecoat zones of the topcoat spray booths. MDEQ explained the basis for its decision in its response to comments:

The AQD (Air Quality Division of the MDEQ) has based the VOC effectiveness determination on GM's cost analysis data. The cost-to-control values are excessive when considering the incremental cost. However, the AQD has not based their BACT determination solely on costs alone. The AQD has considered other factors as follows: secondary impacts, engineering effort required to address technical applicability of controlling waterborne paints; and the inherent pollution prevention technology that waterborne coatings already provide. To use the same cost effectiveness standards for solventborne and waterborne coatings is inappropriate.⁶

In a BACT analysis "[i]n the event that the top [control technology] candidate is shown to be inappropriate, due to energy, environmental or economic impacts, the rationale for this finding needs to be fully documented in the public record." NSR Manual at B.26-9. In looking at costs/economic impacts, "[a]verage and incremental costs are the two economic criteria that are considered in the BACT analysis." NSR Manual at B.30. The principal purpose of the cost analysis is to determine if there are significant cost differences between the applicant and other sources which have adopted the control technology under review. NSR Manual at B.31. However, the cost analysis also

⁶ MDEQ Response to Comments 6 and 10.

shows whether the costs of controls "are disproportionately high when compared to the cost of control for that particular pollutant and source in recent BACT determinations." NSR Manual at B.32; see also B.45.

The permitting authority may also consider energy and environmental impacts in making its BACT determination. Typically, any energy penalties associated with the use of a control technology should be quantified and factored into the economic impacts analysis. NSR Manual at B.30. In addition, the permitting authority may take into account "concerns over the use of locally scarce fuels" which may not be reasonably available to the source in its analysis. NSR Manual at B.31; see In re Kawaihae Cogeneration Project, 7 E.A.D. 107, 131 (EAB 1997). In assessing the environmental impacts associated with a control technology, any significant or unusual environmental impacts should be identified, and the mass and composition of any discharges assessed and quantified to the extent possible. NSR Manual at B.47-8.

A. Analysis of Cost

As MDEQ notes, the EAB has made clear that the economic impacts component of a BACT analysis should include an examination of both the incremental cost and average

effectiveness of a control option.⁷ NSR Manual at B.41. "This type of analysis should demonstrate that a technically and economically feasible control option is nevertheless, by virtue of the magnitude of its associated costs and limited application, unreasonable or otherwise not 'achievable' as BACT in the particular case." NSR Manual at B.45; In re Steel Dynamics, Inc., PSD Appeal Nos.99-4 &99-5, slip op. at 55 (EAB, June 22, 2000); see also In re Masonite Corp., 5 E.A.D. 551 at 564-69 (EAB, 1994). The NSR Manual also notes that:

... undue focus on incremental cost effectiveness can give an impression that the cost of a control alternative is unreasonably high, when, in fact, the cost effectiveness, in terms of dollars per total ton removed, is well within the normal range of acceptable BACT costs.

NSR Manual at B.46.⁸ Moreover, these cost analyses should be performed keeping in mind that the purpose of BACT requirements is to promote the use of the best control technologies as widely as possible. In re Knauf Fiber Glass, GmbH, PSD Appeals Nos. 98-3 to 98-20, slip op. at 26 (EAB, Feb. 4, 1999).

⁷ Response of the Michigan Department of Environmental Quality to the Petition of the Ecology Center and Michigan Environmental Council (December 17, 2001)("MDEQ Response") at 9-10, citing In re Commonwealth Chesapeake Corp., 6 E.A.D. 764, n. 19 (EAB, 1997); In re Masonite Corp., 5 E.A.D. 551, n. 16 (EAB, 1994).

⁸ Based on review of the NSR Manual, MDEQ staff concluded that "[i]t is inappropriate to eliminate a control option solely on the basis of incremental cost." Fiedler Memo at 4.

The average cost effectiveness of the control option selected by MDEQ as BACT - the control of VOC emissions from all of the automated solvent-borne clearcoat zones of the topcoat spray booths - is \$1,637 per ton of VOCs abated.⁹ In making its BACT determination, MDEQ rejected as BACT two additional control alternatives that would have provided for greater control of VOC emissions from the GMC vehicle assembly plant by reducing emissions from all of the automated solvent-borne clearcoat zones of the topcoat spray booths and some or all of the automated waterborne basecoat zones of the topcoat spray booths.¹⁰ The more stringent of these two additional control alternatives would have reduced VOC emissions at an average cost of \$5,554 per ton and an incremental cost of \$21,349 per ton.¹¹ The second control alternative rejected by MDEQ would reduced VOC emissions at an average cost of \$3,604 per ton and an incremental cost of \$10,709 per ton.¹²

MDEQ claims that it correctly considered both average and incremental cost effectiveness in making its BACT

⁹ MDEQ Response at 5-6.

¹⁰ MDEQ Response at 6.

¹¹ MDEQ Response at 6; Petition at 7.

¹² MDEQ Response at 6; Petition at 7. In its brief, MDEQ appears to have mistakenly identified the average cost effectiveness of reducing VOC emissions from all of the clearcoat zones and one basecoat zone containing the air stream with the highest concentration of VOCs as \$3,338. See MDEQ Response, Exh. 2, cost effectiveness of "All CC & BC robot 3 w/shared RTO" versus "All CC & Robot 1 w/shared RTO."

determination.¹³ Despite this claim, however, MDEQ has failed to explain how it considered average cost. In response to comments challenging MDEQ's decision to reject controls of the waterborne basecoat zones of the topcoat spray booths due to high incremental costs, MDEQ stated merely with respect to costs that "[t]he cost-to-control values are excessive when compared to the incremental cost."¹⁴ Such an *ipse dixit* response, as Petitioners note, "fails to adequately explain the standards or policy basis" for its conclusion.¹⁵ A conclusion that cost-to-control values are excessive in light of incremental cost as compared to other similar recent BACT determinations "must be sufficiently detailed to support the determination." In re Inter-Power of New York, 5 E.A.D. at 136.¹⁶ MDEQ has not provided an adequate explanation on the record of its decision to reject the top control alternatives presented in the BACT determination.

Petitioners contend that MDEQ's bare bones response to comments indicates that it improperly relied on incremental costs in its BACT determination.¹⁷ As noted above, MDEQ does not appear to have considered average cost effectiveness in its BACT determination. Similarly, in its response to the petition, MDEQ

¹³ MDEQ Response at 5.

¹⁴ MDEQ Response to Comments 6 & 10.

¹⁵ Petition at 8.

¹⁶ See NSR Manual at 45.

¹⁷ Petition at 8.

focuses exclusively on the incremental costs associated with the rejected control options in its discussion of cost. As the NSR Manual indicates, reliance on only incremental cost could "give an impression that the cost of control alternative is unreasonably high." NSR Manual at 46. That seems to be the case here where MDEQ has not explained its rejection of controls with an average cost effectiveness that apparently fall well within the cost range for VOC controls that MDEQ has found acceptable in previous BACT determinations.¹⁸ Although a permitting authority may reject a control technology on the grounds of incremental costs, see In re Genesee Power Station, 4 E.A.D. 832, 847-8 (EAB, Oct. 22, 1993) (an additional \$5 million to reduce emissions by 23 tons per year was found not to be cost effective), such a determination must be supported by a reasoned explanation, including in most instances some consideration of average cost effectiveness.

Petitioners further argue that MDEQ's BACT analysis was flawed because the incremental costs associated with the two alternative control options are not relevant "given the average cost is well within the MDEQ historic cost effective range."¹⁹ However, as GMC notes, such an approach to the consideration of average and incremental cost "would essentially eliminate the

¹⁸ See MDEQ Response to Comment 10; GMC Response at 12.

¹⁹ Petition at 8.

consideration of incremental cost in any BACT analysis."²⁰ As the NSR Manual points out, average and incremental costs should both be "factored into this type of analysis." NSR Manual at B.45.

B. Consideration of Controls at Other Facilities in the Industry.

In support of its BACT determination, MDEQ points to the fact that other facilities in the auto industry have not been required to bear the costs of add-on controls to abate VOC emissions from waterborne basecoat spray booth exhaust,²¹ and that "no automotive painting operations have been required to bear the high costs of add-on controls for waterborne coatings."²² Information as to the type of controls in use at similar facilities can be relevant in a BACT analysis; for example, the fact that VOC emissions from waterborne basecoat spray booth exhaust at other automotive facilities are not controlled demonstrates a lack of any presumption that such controls are economically feasible. See NSR Manual at B.44. However, the lack of a presumption does not show that such controls are *not* economically feasible.

The mere fact that no automotive painting operations have been required to bear the costs of add-on controls for waterborne

²⁰ See GMC Response at 12.

²¹ MDEQ Response at 6.

²² MDEQ Response at 7.

coating spray booth exhaust does not demonstrate the validity of MDEQ's BACT determination in this case. Nonetheless, MDEQ uses this fact to argue that it "correctly determined that the costs of add-on controls for waterborne basecoat booths were not within the range of costs being borne by other sources of the same type to control," citing In re Inter-Power of New York, Inc., 5 E.A.D. 130, 149 (1994) ("cost effectiveness is determined in most cases by showing that a control option or combination of options is either within or outside the range of costs being borne by similar sources under recent BACT determinations").

In this case, there is no evidence that MDEQ considered the range of costs being borne by other automotive facilities as a result of recent BACT determinations in its permit decision. Although the lack of such information may not be fatal to a BACT determination, it does make a cost effectiveness determination "vulnerable to attack." Inter-Power, 5 E.A.D. at 149;²³ see

²³ The danger of ignoring the range of costs being borne by similar sources under recent BACT determinations is demonstrated by GMC's Response, Exhibit 1 (Recent BACT Determinations for Topcoat Process). In Exhibit 1, GMC provides information on other PSD applications and BACT determinations for coating operations at automotive facilities. According to Exhibit 1, none of the facilities identified have been required to control waterborne basecoat spray booth exhaust. Exhibit 1 is accordingly meant to show the consistency of MDEQ's decision with other recent BACT analyses. See GM Response at 8. Although a review of Exhibit 1 does not reveal the actual range of costs borne by these facilities under recent BACT determinations, it does show that the costs of controlling waterborne basecoat spray booth exhaust at these other facilities may significantly exceed the cost of such controls at the GMC plant. For example, the costs of controlling the waterborne basecoat spray booth exhaust was found to be "well in excess of \$15,000/ton of VOC removed" for the Chrysler facility in Ohio, and \$78,264/ton for the Honda facility

Masonite, 5 E.A.D. at 567(BACT analysis based on type of control technologies in use at other facilities defective where permitting authority failed to take into account differences in cost effectiveness of controls). A lack of such information is especially problematic where, as here, the cost effectiveness of the control options under consideration allegedly falls well within the range of costs that the permitting authority has found acceptable in past BACT determinations.

In its brief, MDEQ does cite to a BACT analysis for a similar facility, the GM Grand River assembly plant in Lansing, Michigan, to support its BACT determination in this case. Although not a part of the record below, the BACT analysis for the Grand River plant provides some indication of the range of costs that MDEQ has previously found to be excessive for the control of VOC emissions from waterborne basecoat spray booth exhaust.²⁴ Comparing the Grand River BACT determination to the BACT determination for the GMC facility at issue in this case, MDEQ argues in its Response that the incremental costs of control

in Alabama. These costs are significantly greater than the \$3,604 and \$5,555 average, per ton cost at issue in this case. Because of this apparent significant cost disparity, these other BACT analyses may not be particularly relevant to the BACT determination for the GMC plant.

²⁴ MDEQ Response at 6-7. However, a finding that certain incremental or average costs of control were considered economically infeasible in a *single*, previous permit does not establish that similar costs are per se unreasonable in a subsequent BACT determination (even for a very similar facility) and should not end the analysis of whether the proposed controls are BACT for the source under review.

technologies it rejected for the GMC Permit are higher than, or similar to, the incremental costs for the Grand River facility.²⁵ However, the relevance of the Grand River BACT determination to this case is not clear. The average and incremental cost effectiveness of controls at the two facilities are not directly comparable. In particular, the \$3,604/ton average cost of the second alternative considered and rejected by MDEQ in the GMC Permit is substantially less than the \$7,000/ton average cost for the control of the waterborne basecoat spray booth exhaust considered at the Grand River facility. Similarly, the \$5554/ton average cost of the top alternative rejected in this case falls below the average cost of controls considered in the prior permit decision. Moreover, even the \$10,709/ton incremental cost of the second alternative is somewhat less than the \$12,000 incremental cost rejected in the Grand River determination. As a result, it is not clear that MDEQ's conclusion that the costs of controlling the waterborne basecoat spray booth exhaust at the Grand River facility were excessive would extend to this case.

BACT must be determined on a case-by-case basis, specific to the particular source under review. 42 U.S.C. § 169(3). Moreover, as the Board has noted, the purpose of BACT is to promote the use of the best control technologies. Knauf, slip op. at 26. Thus, the absence of controls for waterborne basecoat at other facilities, or the MDEQ's 1999 BACT determination at a

²⁵ MDEQ Response at 6-7.

similar facility (even if it were analogous), are not dispositive. First, the cost effectiveness of a control may vary greatly from facility to facility. Second, control technologies evolve and generally become more cost effective over time. As a result, a BACT determination made several years ago may have little relevance to one made today. If a control option is technologically, economically, and otherwise feasible at a facility, the control option may be BACT even if no other facility in the industry has previously been required to utilize it.²⁶

C. Consideration of Costs Associated With Engineering Effort to Control Waterborne Basecoat Spray Booth Exhaust

Petitioners argue that MDEQ erred by basing its BACT determination on a general conclusion as to "the engineering effort required to address technical applicability of controlling waterborne paints."²⁷ In a BACT determination, a permitting agency must first decide if a control technology is technically feasible, and then determine in a subsequent stage of the requisite "top down" analysis whether a technologically feasible

²⁶ See In re Spokane Regional Waste-to-Energy, PSD Appeal 88-12, slip op. at 18 (EAB, June 9, 1989).

²⁷ Petitioners' reference to control of waterborne "paints" is better understood as control of waterborne basecoat spray booth exhaust.

control technology is cost effective.²⁸ NSR Manual at B.2; In re RockGen Energy Center, PSD Appeal No. 99-1 , slip op. at 9-10 (EAB, August 25, 1999).

A demonstration of technical infeasibility is based on a technical assessment considering physical, chemical and engineering principles and/or empirical data showing that this technology would not work on the emissions unit under review, or that unresolvable technical difficulties would preclude the successful deployment of the technique.

NSR Manual at B.20. MDEQ's BACT determination was not based on a finding of technical infeasibility. Likewise, although GMC attempts to argue that the BACT process does not require "a facility to develop a new technology for its application," its brief makes clear that the issue with respect to controlling waterborne basecoat spray booth exhaust is not one of technical feasibility but of overall control efficiency.²⁹

Here, MDEQ did not claim that the control of waterborne basecoat spray booth exhaust was technically infeasible, nor did it attempt to quantify the additional costs associated with this "engineering effort." Rather, MDEQ appears to argue in its Response that the "engineering effort" required for controlling waterborne basecoat spray booth exhaust will further increase the

²⁸ See Fiedler Memo at 2.

²⁹ That is, although the control of VOC emissions from automotive waterborne basecoat spray booth exhaust is technically feasible, GMC alleges that the capture efficiency of such technology is uncertain. If GMC did, in fact, overestimate the capture efficiency, then it may have underestimated the cost per ton to control VOCs. See GMC Response at 16.

costs of applying this technology. Similarly, GMC suggests that the costs of controlling VOC emissions from the waterborne basecoat booths would, in fact, be greater than it predicted in its own prior cost estimates submitted to MDEQ.³⁰ However, there is nothing in the record, or in the briefs to the Board, that explains whether or how these engineering concerns affected GMC's cost estimates. Similarly, there has been no attempt to quantify in any way the magnitude of these increased costs.

In a BACT analysis, a permitting authority may not be required to perform a detailed cost effectiveness analysis of every factor. As the Board has explained, "this is because the cost of employing a particular technology may be so obviously excessive in relation to the removal efficiency of the technology that the [permitting authority] need not perform a detailed, comprehensive calculation of cost effectiveness to determine that the technology should be rejected." Masonite, 5 E.A.D. at 566. Given the average and incremental costs of controlling waterborne basecoat spray booth exhaust at the GMC plant provided by GMC, and the lack of any evidence as the magnitude of any additional costs associated with the engineering effort, it cannot be concluded that the cost of employing this technology is "obviously excessive." Thus, MDEQ's very general concern regarding possible additional costs associated with "engineering

³⁰ GMC Response at 15.

effort" does not provide an adequate basis for rejecting the top and second control alternatives.

D. Standards For Inherently Lower Polluting Processes

MDEQ attempts to further support its BACT determination by pointing out that "the application of low-VOC coatings is an inherently lower polluting process."³¹ In responding to comments, MDEQ also noted that "[t]o use the same cost effectiveness standards for solventborne and waterborne coatings is inappropriate."³²

The fact that a given production technology implemented is "inherently" lower polluting than other technologies plainly does not end a BACT analysis. If an additional control option is technologically and economically feasible, it should be required as BACT even if the production technology is lower polluting than other technologies. See Masonite, 5 E.A.D. at 568; NSR Manual at B.14.³³ As the NSR Manual notes, "[c]ombinations of inherently lower-polluting processes/practices . . . and add-on controls are likely to yield more effective means of emissions control than either approach alone." NSR Manual at B.15. Thus, according to the NSR Manual, the top-down BACT analysis (at step one) should

³¹ MDEQ Response at 8.

³² MDEQ Response to Comments 6 and 10.

³³ See Fiedler Memo at 2 and 4.

include consideration of not only add-on controls and inherently lower-polluting processes, but also combinations of these controls. NSR Manual at B.10. In turn, the permit applicant may incorporate the lower emissions from use of an inherently lower polluting processes in its BACT analysis by assuming lower baseline emissions³⁴, NSR Manual at B.37, an assumption that would be then reflected in the analysis of economic impacts.

Nothing in the CAA or PSD regulations indicates that facilities utilizing lower polluting technologies should not be required to meet all applicable BACT requirements. Similarly, there is nothing to suggest that such technologies should be subject to a different cost effectiveness standard. To the contrary, the expression of all production processes and control technologies in terms of dollars per ton of pollutant removed provides a common framework for analysis of the full range of BACT options.

E. Environmental Impact Analysis

MDEQ also cites as support for its BACT determination the "secondary impacts" from controlling VOC emissions from the waterborne basecoat spray booth exhaust. In its Response, MDEQ argues that it is an "uncontroverted fact" that the control of VOCs from waterborne basecoat spray booth exhaust would result in

³⁴ See Fiedler Memo at 3.

increased NOx emissions.³⁵ Petitioners object to MDEQ's failure to quantify these secondary emissions, which Petitioners estimate to be "roughly 3.5 tons of NOx per year."³⁶

The secondary impacts of control technologies on the emission of other pollutants should be assessed in a BACT analysis, and such assessments should be based on quantified estimates of the actual levels of the secondary impacts to the extent possible. See NSR Manual at B.47-8³⁷ Without estimates of levels of secondary impacts, it is difficult to evaluate their actual effect and to determine whether there is clearly "an overriding concern over the formation and impact of the secondary

³⁵ MDEQ Response at 12.

³⁶ Petition at 14-15.

³⁷ The EAB has noted that if application of a control system results directly in the release (or removal) of other pollutants, that may be taken into consideration in making the BACT determination. In re North County Resource Recovery Associates, 2 E.A.D. 229, 230 (Adm'r 1986). However, "the primary purpose of the collateral impacts clause is 'to temper the stringency of the technology requirements whenever one or more of the specified 'collateral' impacts-energy, environmental or economic-renders use of the most effective technology inappropriate." In re Kawaihae Cogeneration Project, 7 E.A.D. 107, 116-17 (EAB 1997), citing In re Old Dominion Electric Cooperative, 3 E.A.D. 779, 792 (EAB 1992) ("While collateral environmental impacts are relevant to the BACT determination, their relevance is generally couched in terms of discussing which available technology, among several, produces less adverse collateral effects, and, if it does, whether that justifies its utilization even if the technology is otherwise less stringent."). The clause allows rejection of the most effective technology as BACT only in limited circumstances.

pollutant." NSR Manual at B.50. Thus, unquantified factors carry less weight when challenged.

In this case, Petitioners' provide a rough calculation that the secondary NOx impacts would be only a few tons per year. Given a reasonable estimate that the increase in NOx emissions would be so small, MDEQ' statement that the controls at issue "would result in increased NOx emissions" adds little to the BACT analysis. Without some estimate of the size and significance of this increase in NOx emissions, any comparison of the environmental benefits of a control against the secondary impacts is essentially meaningless.³⁸

MDEQ also cites "recent cost increases, supply limitations, and potential future shortages of natural gas" as further support for the conclusion to reject add-on controls for the waterborne zones.³⁹ Although a permitting authority may take into account concerns over the use of a locally scarce fuels, see Kawaihae Cogeneration Project, 7 E.A.D. at 131, there is no evidence in the record that natural gas is likely to be a scarce fuel in

³⁸ It is also notable that MDEQ made no analysis of the NOx emissions associated with control of VOC emissions elsewhere at the plant. This suggests that the NOx emissions issue was used here selectively to bolster the economic analysis.

³⁹ MDEQ Response at 12.

Michigan. In the absence of such evidence, such vague concerns should be accorded no weight in the BACT determination.⁴⁰

F. "Logical Grouping" of Portions of the Coating Process

Petitioners argue that the permit at issue could be interpreted to "establish precedent that a 'logical grouping' does not exist between basecoat and clearcoat emission units [in the automobile coating industry] when water-based paints are used."⁴¹ EPA policy is that "each new or modified emission unit (or logical grouping of new or modified emissions units) subject to PSD is required to undergo BACT review." NSR Manual at B.10.⁴² Permitting authorities should continue to evaluate "logical grouping" of emission units in each industry on a reasonable case-by-case basis, focused on analysis of technical feasibility and control effectiveness. See NSR Manual at 10.

Petitioners' argument on this issue is based on a policy memorandum issued by the Director of MDEQ, Russell Harding (Exhibit 1 to the Petition). However, as Petitioners concede, the Harding memorandum did not by its terms apply to the GMC

⁴⁰ In addition, as with NO_x disbenefits, (see supra fn. 36), MDEQ has not explained why price and availability is of concern with respect to control of waterborne basecoat emissions but not elsewhere at the plant.

⁴¹ Petition at 16.

⁴² See Fiedler Memo at 4.

Permit.⁴³ Moreover, there is no evidence that MDEQ applied the policy set forth in the Harding memorandum regarding the "logical grouping" of emissions units in its BACT analysis for the GMC plant.⁴⁴ Accordingly, Petitioners' concerns that this permit, or the Board's decision in this case, might establish precedent supporting an improper grouping of emissions units should not be borne out.

III. CONCLUSION

We respectfully request that the Board evaluate the GMC Permit under review in light of the principles set forth above and in the NSR Manual, and remand it to MDEQ to further explain

⁴³ Petition at 17.

⁴⁴ See MDEQ Response at 13.

its BACT analysis and/or to perform additional analysis as appropriate.

Respectfully submitted,

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