

November 13, 2008

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**Re: COMMENTS ON DRAFT OAC 3745-21-25 CONTROL OF VOLATILE ORGANIC
COMPOUND EMISSIONS FROM REINFORCED PLASTIC COMPOSITES
PRODUCTION OPERATIONS**

The American Composites Manufacturers Association (ACMA) is pleased to submit comments to Ohio EPA (OEPA) on the subject Ohio rule. This rule has been proposed by OEPA as part of a sweeping overhaul of Ohio Administrative Chapter 3745-21 regulating emissions of volatile organic compounds (VOC). Since 2005, ACMA has been actively involved in this effort as an advocate for affected members.

INTRODUCTION AND EXECUTIVE SUMMARY

In December 2006, ACMA submitted to OEPA a white paper, *Reinforced Composites NESHAP vs Cost-Based Control Technology Requirements for VOC in Ohio: Evaluation of Technical Equivalence*, prepared by David Lipiro of ECRM. The paper asserted that emission units subject to and complying with the “Maximum Achievable Control Technology” (MACT) standard for reinforced plastic composites (RPC) production (40 CFR 63 Subpart WWW) were providing a level of VOC reduction equivalent to Federally-defined Reasonably Available Control Technology (RACT) and Ohio-defined Best Available Technology (BAT). On this basis, ACMA asked OEPA to promulgate an RPC RACT rule formalizing that equivalence, i.e. RACT = MACT, and has organized visits to RPC plants by William Juris of OEPA to help the agency better understand this industry.

Our comments should be understood within the context of that request, and are summarized below.

- The proposed rule would regulate existing and new sources statewide, and as such appears to set both RACT and BAT for affected sources. We believe this should be stated explicitly. We concur that the proposed rule fairly regulates existing MACT-affected sources with actual VOC emissions from listed operations less than 100 TPY, though minor adjustment to language of the cleanup provisions is needed.
- OEPA has overreached by applying the substantive provisions of existing-source MACT to minor sources of hazardous air pollutants (HAP). This was never considered or intended by USEPA, which exempted all minor HAP sources from the RPC MACT. Moreover, for reasons explained in these comments, minor-source RPC

manufacturers would find it virtually impossible to comply with the proposed rule. Further, OEPA would be unable to process the PTI modifications it would be deluged with if minor HAP sources were covered.

- In like manner, OEPA seeks to arbitrarily impose 95% VOC control on RPC sources with actual VOC emissions from listed operations of 100 TPY or more. Such control was considered by USEPA in its MACT rulemaking, and rejected as unjustifiable for most facilities based on criteria analogous to those used to set RACT and BAT. OEPA should instead require facilities emitting 100 TPY or more from affected RPC units to conduct site-specific control cost studies to determine what level of reduction beyond MACT (if any) is justified.
- By referencing sections of the RPC MACT verbatim rather by citation, OEPA has guaranteed that its rule will diverge from the MACT provisions on which it is based. The RPC MACT allows sources to petition USEPA for new emission factor equations to be used to determine MACT compliance when using materials and equipment not considered when MACT was set. ACMA is aware of two such petitions, and expects more as technology advances. Further, the rule in general is complex, has already been modified once for clarification by USEPA, and should be expected to evolve further. The SIP revision process is too slow and unwieldy to ensure that the RPC RACT and RPC MACT rules remain harmonized, as they must to avoid the burden of maintaining dual compliance.
- Proposed language on emission factors and threshold calculations is inconsistent with current permitting practice and the most recent version of AP-42.

SPECIFIC COMMENTS

The comments below are organized by proposed rule sections (**bold text**).

A. Applicability

Consistency with RACT, BAT, and Title V provisions: The proposed rule would regulate existing and new sources statewide, and as such appears to set both RACT and BAT for affected sources. We believe this should be stated explicitly. Though we do not believe this rule should apply to HAP minor sources, if the final rule does regulate such sources, OEPA should clarify that this would not affect their status with respect to Title V permitting.

Relationship to 3745-21-07: The ultimate form of rule 21-07 is uncertain due to USEPA rejection of the current version as a SIP revision. However, both the original and revised versions of 21-07 exempt sources regulated under 21-09, the Ohio RACT provisions. In like manner, we ask that sources subject to 21-25 be specifically exempted from 21-07. We understand this exemption would not apply to existing sources that already have installed controls to meet 21-07, or that are subject to alternative limits approved under the current provisions of 21-07(G)(9)(g).

Applicability to HAP minor sources: Because the proposed rule does not exempt HAP minor sources, it would in effect impose the requirements of the RPC MACT standard (40 CFR 63 Subpart WWWW) on sources USEPA never intended to so regulate. Under A(2)(d), the proposed rule does exempt facilities using less than 1.2 TPY total resin and gelcoat, a threshold adopted directly from 63.5785(d) of the MACT rule. ACMA believes OEPA may have misinterpreted this exemption to mean that USEPA concluded all facilities using more than the threshold could meet MACT requirements.

USEPA in fact did not involve minor HAP sources when setting that usage threshold. The agency set MACT based on a “floor” analysis of its database of RPC plants. The agency did not knowingly include minor HAP sources. But even if it did, those sources would not have commented on the MACT rule, since they were specifically exempted by 63.5785(a). As noted in the Preamble (FR Vol 68, No. 76, p 19391), the usage threshold was set primarily to exempt “those uses [that are] ... incidental to a completely different manufacturing operation.” This is consistent with the fact that any plant using less than 1.2 TPY resin and gelcoat must be doing mostly something other than RPC manufacturing to be a major HAP source. However, that fact says nothing about which HAP minor sources could meet MACT.

Although precise numbers are lacking, ACMA believes that many (and perhaps a majority of) RPC plants in Ohio are totally or partially custom manufacturers (job shops). As such they are characterized by an unpredictable production mix dictated entirely by the nature of orders in hand at any given time. MACT-affected job shops are particularly challenged by the requirements set forth in Table 3 of the MACT rule, which OEPA has included in Table 2 of the proposed rule.

Customer specifications inevitably require that job shops employ some “noncompliant” combinations of material and application technique, so compliance can only be achieved through averaging. But unless a shop is large enough to have many products in process at any given time, averaging may not ensure continuous compliance. For this reason, many smaller RPC shops that would otherwise be major HAP sources have opted to avoid MACT by taking synthetic minor permits. [One example is the RL Industries plant visited by OEPA last year.] The burden would be much worse for RPC shops that are small enough to be “natural” minor sources; for most of them successful averaging would clearly be impossible. But even if it were, the extensive material usage recordkeeping required would overwhelm the very limited resources of such small companies.

HAP synthetic minors made subject to proposed 21-25 would face another problem if they currently employ open molding - they would be effectively prohibited from migrating production to lower-emitting closed molding processes by the averaging provisions of the MACT rule. Since closed molding cannot be averaged with open molding to demonstrate compliance with MACT open molding emission limits, as processes migrate to closed molding, it becomes increasingly difficult to average the remainder successfully. This is another reason why RL Industries obtained a synthetic minor permit.

OEPA should also consider the size of the affected minor source community. ACMA has estimated that in Ohio there are between 200-500 minor HAP sources using more than 1.2 TPY resins and gelcoats, all of which would be required to apply for PTIs enforcing the rule. This is inconsistent with recent OEPA initiatives to streamline operations by reducing the number and complexity of minor source permits.

OEPA’s proposed rule would imperil minor RPC sources, effectively negate synthetic minor permits without justification, and create needless work for an agency already strapped for resources. For these reasons, OEPA should exempt minor HAP sources from its rule.

D. VOC Control Requirements

Incorporation of RPC MACT provisions: ACMA believes that OEPA has needlessly complicated its rulemaking by incorporating current MACT language verbatim. Any changes to the RPC MACT rule after 21-25 is promulgated would render the two rules inconsistent. Each time this happens, the only way to avoid the burden of dual compliance would be to modify the Ohio rule and submit it as a SIP revision, an awkward and time-intensive process OEPA would surely wish to avoid. Yet the nature of the RPC MACT rule ensures that it will change.

The RPC MACT allows sources to petition USEPA for new emission factor equations to be used to determine MACT compliance when using materials and equipment not considered when MACT was set. ACMA is aware of two such petitions, and expects more as technology advances. Beyond that, the rule in general is complex, has already been modified once for clarification by USEPA, and should be expected to evolve further.

ACMA recommends that OEPA either specify intended sections of the MACT rule by citation only (greatly preferred), or include language overriding any requirement based on a MACT provision that changes. For convenience, current requirements could be listed in an informational summary outside the regulation, in the same way that informational text is appended to permits.

Sources under 100 TPY: For plants with actual VOC emissions from listed processes under 100 TPY, Tables 1 and 2 of the proposed rule essentially impose the requirements set forth in Tables 4 and 3 respectively of the RPC MACT rule. ACMA strongly agrees that MACT-affected sources complying with Subpart WWWW are indeed providing RACT and BAT for VOC. However, the language of the cleanup provisions in Table 1 prohibiting use of cleanup solutions containing VOC is not supported by the MACT rule. Though many facilities use nonVOC solvents such as acetone and methyl acetate for cleanup, others use aqueous cleaners containing low-volatility VOCs or use VOC solvents in closed systems. Both these practices should also be allowed.

Sources over 100 TPY: For sources with actual emissions of 100 TPY or more from listed processes, OEPA imposes a 95% VOC reduction, to be achieved by add-on controls or by the alternative limits of MACT Table 5 (21-25, Table 3). The MACT exemptions from control for production of large open-molded and pultruded parts are retained in the proposed rule. But otherwise, for existing MACT sources besides centrifugal casting or continuous lamination processes, 21-25 would require controls where MACT does not.

OEPA gives no basis for assuming that 95% control is “reasonably available” or constitutes BAT for such sources. Nothing in the history of the RPC MACT rule supports this position. In fact, USEPA considered and rejected such “above-floor” control requirements as unjustifiable. Even for open molding, the RPC process with the highest relative emission rates, the agency found that control of emissions is cost-effective only at new facilities emitting over 100 TPY, because they can be engineered to maximize emission capture at minimal airflows consistent with workplace safety.

However, ACMA agrees that at some threshold level, an individual plant might find VOC controls cost-effective, though not necessarily at 95%. We believe that 100 TPY actual emissions for listed processes is a reasonable (though arbitrary) threshold to identify facilities that should explore the feasibility of emission reduction. Therefore, in place of the 95% control requirement, 21-25 should require RPC facilities emitting more than 100 TPY actual from sources specified in F(1) other than those making large parts to perform an analysis of cost and noneconomic impacts, which would determine the level of control (if any) above MACT that would meet 21-25.

Facilities exceeding the threshold should be given 120 days past the exceedance date to submit the control determination study. Implementation of any such beyond-MACT reductions should be required no earlier than one year after approval by OEPA of the control determination.

E, F. Emission Factors and Threshold Calculations

Reduction clarification for pultrusion: (5)(b) of the proposed rule specifies that “(f)or purposes of the average per cent reduction calculation, wet area enclosures reduce VOC emissions by sixty per cent, and direct die injection and preform injection reduce VOC emissions by ninety per cent.” However, section F of the rule is silent on how VOC emissions for pultrusion should be calculated for purposes of comparing actual emissions to the 100 TPY

rule threshold. Though F(3)(a) allows the use of emission factor equations set forth in Table 1 of the MACT rule, none of them apply to pultrusion. Consistent with I(5)(b), we request that the following text be added to either section E or F(3)(a): *“For pultrusion operations employing enclosures or resin injection (direct or preform), actual emissions may be calculated as 60% and 90% respectively of open line emissions, where open line emissions are calculated as specified in air permits covering these operations.”*

Acceptability of MACT emission factors: Sections E and F of the proposed rule cite Table 1 of the MACT rule as an appropriate source for emission factors. However, Footnote (h) to Table 4.4-2 on RPC emissions in the May 2008 version of AP-42 references instead “... the emissions factors contained in the ANSI/ACMA/ICPA UEF-1-2004 Estimating Emission Factors from Open Molding Composite Processes (“UEF”) document. ... The UEF factor equations and all available supporting documentation regarding the development and validation of the UEF are available at <http://www.acmanet.org/ga/reg-emissions.cfm>.”

The ANSI UEF is a consensus standard periodically updated by expert review panels that include EPA and state representatives. The equations in the MACT rule are suitable to determine MACT compliance, and hence to determine analogous compliance under section D of the proposed rule. But for VOC threshold determinations, emission factor equations in the ANSI UEF rather than MACT table 1 equations should be cited by OEPA in the proposed rule.

Acceptability of emission factors specified in permits: For RPC processes other than open molding, centrifugal casting, and continuous lamination, there are neither MACT Table 1 equations nor ANSI UEF equations. For such sources, emission factors incorporated within current facility permits should be accepted as a basis for threshold calculations, to maintain consistency with those permits. In such cases, there is no reason for facilities to provide proof that USEPA has accepted the emission factor. USEPA reviews all major source permit applications prior to issuance, so the agency’s acceptance of proposed permits should be taken as de facto acceptance of emission factors contained therein.

However, ACMA agrees that USEPA acceptance of emission factors is appropriate whenever the RPC MACT rule requires it. Users of equipment or techniques not covered under the current MACT Table 1 equations must petition USEPA for approval of associated emission equations, which the agency may subsequently adopt as administrative changes to Table 1. Incorporation of the RPC MACT by citation in 21-25 would properly cover such circumstances.

Calculation of Actual Emissions: 21-25(F) requires facilities to calculate a resin-weighted emission factor which is then multiplied by resin usage over the prior 12-months to calculate actual emissions over that period. But for operations such as pultrusion and mixing of resin pastes and BMC, permits typically require that emissions be calculated from monomer usage, not resin usage. As proposed, 21-25(F) would require these operations to calculate emissions from monomer usage, divide those emissions by resin usage to obtain the specified emission factor, and then multiply resin usage by that factor to calculate the emissions again. ACMA recommends that 21-25(F) be modified to require calculation of emissions by whatever method is consistent with the calculations required in permits for the associated sources.

Special considerations for SMC machine emissions: Recent emission tests have invalidated emission factors previously accepted for SMC machines in air permits. For tested machines, the proposed rule properly recognizes that test data may be used to document emissions. Based on regression analysis of those test results, ACMA will soon propose an SMC machine emission equation for incorporation within the UEF ANSI standard. In the interim, facilities with untested machines will need an emission factor. ACMA recommends that the language of

E(1) be modified to make it clear that OEPA will accept site-specific emission factors based on evaluation of emission test data from similar sources at other RPC plants.

Thank you for considering our comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Schweitzer".

John Schweitzer
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