Rule Summary and Fiscal Analysis (Part A)

Ohio Environmental Protection Agency
Agency Name

Division of Air Pollution Control (DAPC) **Alan Harness**
Division Contact

50 West Town Street, Suite 700 PO Box 1049 **614-644-3020**
Columbus OH 43216-1049
Agency Mailing Address (Plus Zip) Phone Fax

3745-21-24 **NEW**
Rule Number TYPE of rule filing

Rule Title/Tag Line **Flat wood paneling coatings.**

RULE SUMMARY

1. Is the rule being filed consistent with the requirements of the RC 119.032 review? **No**

2. Are you proposing this rule as a result of recent legislation? **No**

3. Statute prescribing the procedure in accordance with the agency is required to adopt the rule: **119.03**

4. Statute(s) authorizing agency to adopt the rule: **3704.03(E)**

5. Statute(s) the rule, as filed, amplifies or implements: **3704.03(A), 3703.03(E)**

6. State the reason(s) for proposing (i.e., why are you filing,) this rule:

This rule is being proposed to meet federal requirements for reasonably available control technology requirements for several source categories of VOC in moderate nonattainment areas.

7. If the rule is an AMENDMENT, then summarize the changes and the content of the proposed rule; If the rule type is RESCISSION, NEW or NO CHANGE, then summarize the content of the rule:

This is a new rule establishing emission control requirements for sources of VOC's

in the flat wood paneling coating industry.

8. If the rule incorporates a text or other material by reference and the agency claims the incorporation by reference is exempt from compliance with sections 121.71 to 121.74 of the Revised Code because the text or other material is **generally available** to persons who reasonably can be expected to be affected by the rule, provide an explanation of how the text or other material is generally available to those persons:

This rule contains references to the Ohio Administrative Code (OAC). While copies of these rules and statutes are generally available to the public through libraries and on-line sources, including the Ohio EPA website, ORC 121.76(A) exempts such references from the provisions of ORC 121.71 through 121.75.

9. If the rule incorporates a text or other material by reference, and it was **infeasible** for the agency to file the text or other material electronically, provide an explanation of why filing the text or other material electronically was infeasible:

Not Applicable.

10. If the rule is being **rescinded** and incorporates a text or other material by reference, and it was **infeasible** for the agency to file the text or other material, provide an explanation of why filing the text or other material was infeasible:

Not Applicable.

11. If **revising** or **refiling** this rule, identify changes made from the previously filed version of this rule; if none, please state so:

Not Applicable.

12. 119.032 Rule Review Date:

(If the rule is not exempt and you answered NO to question No. 1, provide the scheduled review date. If you answered YES to No. 1, the review date for this rule is the filing date.)

NOTE: If the rule is not exempt at the time of final filing, two dates are required: the current review date plus a date not to exceed 5 years from the effective date for Amended rules or a date not to exceed 5 years from the review date for No Change rules.

FISCAL ANALYSIS

13. Estimate the total amount by which *this proposed rule* would **increase / decrease** either **revenues / expenditures** for the agency during the current biennium (in dollars): Explain the net impact of the proposed changes to the budget of your agency/department.

This will have no impact on revenues or expenditures.

$0

Not Applicable.

14. Identify the appropriation (by line item etc.) that authorizes each expenditure necessitated by the proposed rule:

Not Applicable.

15. Provide a summary of the estimated cost of compliance with the rule to all directly affected persons. When appropriate, please include the source for your information/estimated costs, e.g. industry, CFR, internal/agency:

This rule concerns facilities involved with flat wood paneling coating operations. See attached fiscal analysis.

16. Does this rule have a fiscal effect on school districts, counties, townships, or municipal corporations? **No**

17. Does this rule deal with environmental protection or contain a component dealing with environmental protection as defined in R. C. 121.39? **Yes**

You must complete the Environmental rule Adoption/Amendment Form in order to comply with Am. Sub. 106 of the 121st General Assembly.

Environmental Rule Adoption/Amendment Form

Pursuant to Am. Sub. H.B. 106 of the 121st General Assembly, prior to adopting a rule or an amendment to a rule dealing with environmental protection, or containing a component dealing with environmental protection, a state agency shall:

(1) Consult with organizations that represent political subdivisions, environmental interests, business interests, and other persons affected by the proposed rule or amendment.

(2) Consider documentation relevant to the need for, the environmental benefits or consequences of, other benefits of, and the technological feasibility of the proposed rule or rule amendment.

(3) Specifically identify whether the proposed rule or rule amendment is being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal environmental law or to participate in a federal environmental program, whether the proposed rule or rule amendment is more stringent than its federal counterpart, and, if the proposed rule or rule amendment is more stringent, the rationale for not incorporating its federal counterpart.

(4) Include with the proposed rule or rule amendment and rule summary and fiscal analysis required to be filed with the Joint Committee on Agency Rule Review information relevant to the previously listed requirements.

(A) Were organizations that represent political subdivisions, environmental interests, business interests, and other persons affected by the proposed rule or amendment consulted ? **Yes**

Please list each contact.

Ohio EPA invited interested parties to comment on this rule during the period of October 14 to November 14, 2008. A request to extend the comment period for an additional 14 days to November 28, 2008 was granted. Comments received were considered and appropriate revisions to the rules were made. A list of interested parties will be furnished upon request.

(B) Was documentation that is relevant to the need for, the environmental benefits or consequences of, other benefits of, and the technological feasibility of the proposed rule or amendment considered ? **Yes**

Please list the information provided and attach a copy of each piece of documentation to this form. (A SUMMARY OR INDEX MAY BE ATTACHED IN LIEU OF THE ACTUAL DOCUMENTATION.)

Clean Air Act.

Federal Control Technology Guideline (CTG) documents.

Comments from interested parties.

LSC Style and Formatting Manual.

(C) Is the proposed rule or rule amendment being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal environmental law or to participate in a federal environmental program ? **Yes**

Is the proposed rule or rule amendment more stringent than its federal counterpart ? **No**

(D) If this is a rule amendment that is being adopted under a state statute that establishes standards with which the amendment is to comply, is the proposed rule amendment more stringent than the rule that it is proposing to amend? **No**

Not Applicable

Fiscal Analysis
Chapter 3745-21 of the Administrative Code
"Carbon Monoxide, Photochemically Reactive Materials, Hydrocarbons, and Related Materials Standards"

Background:

Chapter 3745-21 has been in the Ohio Administrative Code (OAC) since 1972. The rules have evolved over the years to address requirements in the Clean Air Act to develop regulations as part of an effort to achieve the National Ambient Air Quality Standards for carbon monoxide and tropospheric ozone within the state. These rules and additional technical support were submitted to U.S. EPA for review and approval as part of the State Implementation Plan.

This Chapter has been modified over the years to incorporate requirements for categories of sources for which U.S. EPA has indicated that reasonably available control technology (RACT) should apply. In general, the levels of control that are available have been evaluated and presented in a series of 'Control Technology Guidelines' (CTG) issued by U.S. EPA

These RACT rules address several source categories. The rules are being adopted and will be applicable in the eight-county Cleveland- Akron eight-hour ozone non-attainment area.

Specific rules cost of compliance:

The following are the specific rules in this chapter with a discussion of the cost of compliance with each rule to all affected entities: including school districts, counties, townships and municipal corporations. This chapter affects a wide variety of regulated entities; which could include, for example, small painting and parts cleaning operations, gasoline dispensing facilities and large automobile assembly facilities, each of which may have emission units subject to the requirements of these rules. The following discussion is relevant to the existing and proposed rules.

3745-21-01 Definitions

There is no cost of compliance associated with this rule. This rule contains definitions applicable to the chapter.

3745-21-04 Attainment Dates and Compliance Time Schedules

There is no cost of compliance. This rule establishes attainment dates and compliance time schedules.

3745-21-09 Control of Emissions of Volatile Organic Compounds from Stationary Sources

Paragraph (F) of this rule: Paper coating lines.

Cost effectiveness analysis for the amendments to this rule was provided in U.S. EPA's CTG for "Paper, Film, and Foil Coatings", dated September, 2007. The cost-effectiveness analysis is summarized below.

Cost effectiveness of the recommendations in this CTG are based on information collected during the development of the 2002 National Emission Standards for Hazardous Air Pollutants (NESHAP). Although there is limited cost information available, U.S. EPA believes that the cost estimates and other related studies developed for the 2002 NESHAP are appropriate for estimating the cost impact of our recommendations in the CTG for the following reasons. The recommended level of control covers the same processes as the 2002 NESHAP (i.e., all coating applicators and any associated drying/curing equipment between the unwind/feed station and the rewind/cutting station). In addition, both the 2002 NESHAP emission limits and the recommended limits are based on the use of similar control measures (i.e., product substitution/reformulation, add-on control systems, or a combination of these two options). Finally, the 2002 NESHAP cost data is the most recent available.

The cost effectiveness is estimated to be $1,300 per megagram (Mg) ($1,200 per ton) of VOC. In addition, work practice recommendations in this CTG will result in a net cost savings. Implementing work practices reduces the amount cleaning materials used by reducing the amount that evaporates and is wasted.

Paragraph (I) of this rule: Surface coating of metal furniture.

Cost effectiveness analysis for this amendment was provided in U.S. EPA's CTG for "Metal Furniture Coatings", dated September, 2007. The cost-effectiveness analysis is summarized below.

The recommendations in this CTG are similar to the South Coast regulations governing metal furniture surface coating operations. The cost effectiveness related to the implementation of these regulations was not estimated during their development. Therefore, cost-effectiveness estimates for the recommended control levels were determined using the approach used during the 2003 NESHAP development. Although the 2003 NESHAP regulates organic HAP, the 2003 NESHAP cost estimates are relevant to this CTG's recommended levels of control because they are based on the use of the similar control measures (i.e., product substitution/reformulation and work practices) for metal furniture coatings and cleaning materials as those recommended in this CTG.

In the analysis of the impacts of implementing the recommended levels of control in this CTG, U.S. EPA assumes that all metal furniture surface coating facilities will choose to

utilize the low-VOC coating materials alternative. This assumption is made for two reasons. First, that low-VOC coating materials that can meet the levels of control recommended in this CTG are already widely available at a cost that is not significantly greater than the cost of coating materials with higher VOC contents. Secondly, the use of add-on controls to reduce emissions from typical spray coating operations is a more costly alternative.

According to studies performed for the development of the 2003 NESHAP, the cost averaged across all sizes of facilities, was as high as $1,670 per facility. U.S. EPA also believes that this estimate also represents the cost of implementing this CTG's recommended VOC limits because the NESHAP is based on similar control measures. For the 143 facilities we identified as emitting more than 6.8 kg/day (15 lb/day) in ozone nonattainment areas, we therefore estimate the total annual cost to be $240,500. U.S. EPA estimates that the recommendations in this CTG will reduce VOC emissions from metal furniture coating by about 35 percent. This is a reduction of 1,100 Mg/year (1,200 tpy of VOC) from the 143 facilities. Therefore, the cost-effectiveness is estimated to be about $220 per Mg ($200 per ton) of VOC emission reduction.

In addition, the work practice recommendations in this CTG will result in a net cost savings. Implementing work practices reduces the amount cleaning materials used by reducing the amount that evaporates and is wasted.

Paragraph (K) of this rule: Surface coating of large appliances.

Cost effectiveness analysis for this rule was provided in U.S. EPA's CTG for "Large Appliance Coatings", dated September, 2007. The cost-effectiveness analysis is summarized below.

The recommendations in this CTG are similar to the South Coast regulations governing large appliance coating operations. Unfortunately, the cost effectiveness of these regulations was not estimated during those regulations' development. Therefore, cost-effectiveness estimates for the recommended control levels were determined based on information collected during the 1977 CTG and the 2002 NESHAP development. Although the 2002 NESHAP regulates organic HAP, the 2002 NESHAP cost estimates are relevant to this CTG's recommended levels of control because they are based on the use of the similar control measures (i.e., product substitution/reformulation and work practices) for large appliance coatings and cleaning materials as those recommended in this CTG. In addition, the 2002 NESHAP provides data regarding large appliance coating facilities that are more current than the 1977 CTG.

During the development of the 2002 NESHAP, it was estimated that no facility within the industry would install add-on control devices as a result of the standard. The capital costs and annual operating costs of add-on control devices usually make them less desirable than other compliance options for reducing VOC emissions from spray coating operations.

In the 1977 CTG, the cost effectiveness for a medium-sized facility using waterborne prime and higher solids topcoat was estimated to be $141 per megagram (Mg) ($128 per ton) of VOC reduced. This would be approximately $425 per ton in 2006 dollars based on historical CPI data from www.inflationdata.com. The 2002 NESHAP presented a control cost of $480,000 for 1,191 tons of HAP reduction from 74 facilities expected to be subject to the rule ($403 per ton HAP reduced, about $480 per ton in 2006 dollars). For, the recommendations in this CTG, we therefore estimate a cost-effectiveness of $500 per ton of VOC reduced. U.S. EPA estimates the total annual cost of the estimated 1,000 tpy of emission reduction to be $500,000.

Paragraph (Y): Flexographic, packaging rotogravure and publication rotogravure printing lines.

Cost effectiveness analysis for this amendment was provided in U.S. EPA's CTG for "Flexible Package Printing", dated September, 2007. The cost-effectiveness analysis is summarized below.

Emissions data are available for most of the facilities identified. The emissions data include VOC data for those facilities identified in the 2002 NEI database. The VOC data available from the 2002 NEI were supplemented with additional HAP data available from the 1996 NESHAP where appropriate. For facilities identified as part of the 1996 NESHAP only, the HAP data from the NESHAP were used. In the instance that only HAP data are available for a specific facility, the assumption was made that VOC emissions are equal to HAP emissions, with the recognition that most facilities use and emit some VOC that are not HAP. (HAP emissions data from the 1996 NESHAP reflect pre-implementation levels of that rule and do not account for reductions made to comply with the NESHAP.) In addition, the VOC data obtained from the NEI are the total emissions from the source and may include VOC emissions data from other source categories at the facility in addition to emissions from flexible package printing.

Baseline VOC emissions are estimated at 28,000 tons/year for 390 of the 582 facilities identified with available emissions data. The average VOC emissions per facility were 71 tons/year. An upper bound on the nationwide baseline VOC emissions for flexible package printing can be estimated by assuming that there may be up to 1,071 facilities and that the facilities with emissions data are representative of the total population. In this case, nationwide baseline VOC emissions from flexible package printing would be approximately 76,000 tons/year. As a lower bound on the nationwide baseline VOC emissions, it was estimated that there are approximately 582 facilities. In this case, nationwide baseline VOC emissions from flexible package printing would be approximately 42,000 tons/year. Therefore the nationwide baseline emissions range from approximately 42,000 to 76,000 tons/year. Nonattainment area VOC emissions from flexible package printing facilities (based on April 2004 designations) are estimated to range from 8,636 to 16,364 Mg/year (9,500 to 18,000 tons/year).

Many facilities located in ozone nonattainment areas are already meeting the control levels being recommended in this CTG. These facilities may be using capture and

control systems or low VOC content inks, coatings, and adhesives. The costs for facilities not using low VOC content inks, coatings, and adhesives that are not already using control equipment will vary depending on the flow rate, hourly solvent use rate, and operating hours. Although we do not have detailed information for the industry as a whole, we have information for some sources from which we can estimate the likely emissions reductions and costs for a typical source subject to control for the first time (see Appendix B). For a press exhausting approximately 5,800 cubic feet per minute, operating 2000 hours per year, and achieving 70 percent capture efficiency, we estimate the VOC emission reduction to range from 30 to 60 Mg/year (33 to 66 tons/year) and the cost effectiveness to range from $1,400/Mg to $3,100/Mg ($1,300/ton to $2,800/ton) depending on the average hourly solvent use rate. At lower solvent use rates, the cost per ton of emission controlled would likely be higher. Increasing the hourly solvent use rate, annual operating hours, or capture efficiency of this size press would increase the annual VOC emission reduction and improve the cost effectiveness. Larger presses with proportionately larger hourly solvent use rates would also have larger annual VOC emission reductions and better cost effectiveness than smaller presses.

3745-21-11 Reasonably Available Control Technology Studies for Ozone Nonattainment Areas

Ohio EPA will be rescinding this rule. This rule required facilities emitting greater than one hundred tons per year of unregulated VOC emissions to perform a study and implement controls consistent with the results of that study. No new RACT studies have been received by Ohio EPA in over 10 years, in addition to the fact that newly promulgated VOC RACT rules now cover several miscellaneous VOC emission sources. The Ohio EPA feels this rule is no longer necessary.

The intent of this option is to provide a lower cost solution for the affected entity than the cost of compliance with the emission limits prescribed. While this rule was in effect the cost associated with this option to conduct a RACT study was estimated to be less than $30,000 to complete the study.

3745-21-14 Control of Volatile Organic Compound Emissions from Process Vents in Batch Operations

During the interested party review it became apparent that a minor amendment to the applicability section of this rule was needed. As such, DAPC revised the wording of the applicability section of this rule to better clarify for intent and purpose. There is no additional cost of compliance for these changes, however, the overall cost of compliance with this rule is summarized below.

Ohio EPA is proposing to amend this rule and extend the geographic applicability to the Cleveland-Akron non-attainment area. Costs associated with this rule are limited to the sources located in the Cleveland-Akron non-attainment area. There is a cost associated with the introduction of a control technology under this rule depending on the control technology chosen. This capital cost, which includes, equipment cost, instillation cost

with construction, testing and personnel, i.e. engineers, supervisors this is based on a facility with a flow rate of 150 scfm which is estimated to be $250,000. The estimated personnel cost, annually, is $15,000 which includes, operating labor, supervision, administration, and maintenance, plus material. The estimated annual operating cost, is $15,000 this includes utilities. The estimated, annual indirect/other cost which includes the costs of overhead like, property taxes, insurance, administrative charges is $20,000. These cost estimates are based on a study conducted by the USEPA Guideline Series Control of Volatile Organic Compound Emissions from Batch Processes-Alternative Control Techniques Information Document, February, 1994. The dollar amounts have been calculated to reflect 2002 buying power.

3745-21-16 Control of Volatile Organic Compound Emissions from Industrial Wastewater

During the interested party review it became apparent that a minor amendment to the applicability section of this rule was needed. As such, DAPC revised the wording of the applicability section of this rule to better clarify for intent and purpose. There is no additional cost of compliance for these changes, however, the overall cost of compliance with this rule is summarized below.

There is a cost associated with the introduction of a control technology under this rule depending on the control technology chosen. This estimated capital cost, which includes, equipment cost, instillation cost with construction, testing and personnel, i.e. engineers, supervisors this is based on a facility with a wastewater flow of 300 liters per minute; which is estimated to be $750.000 depending on the size of steam stripping technology needed which is based on flow. The estimated personnel cost, annually, is $30,000 depending on the size of steam stripping technology needed which is based on flow. Personnel cost includes, operating labor, supervision, administration, and maintenance, plus material. The estimated annual operating cost**,** the control equipment ranges from $250,000 again, depending on the size of steam stripping technology needed which is based on flow. The estimated annual indirect/other cost, which includes the costs of overhead like, property taxes, insurance, and administrative charges which is estimated to be $150,000. These cost estimates are based on a study conducted by the USEPA Guideline Series Control of Volatile Organic Compound Emissions from Industrial Wastewater, September, 1992. The dollar amounts have been calculated to reflect 2002 buying power.

3745-21-18 Commercial Motor Vehicle and Mobile Equipment Refinishing Operations

This rule is currently effective in the Cincinnati and Dayton, Ohio area. The applicability of this rule is being proposed to be extended to the eight-county non-attainment area located in the Cleveland and Akron, Ohio area. There is no cost of compliance associated with this rule.

3745-21-21 Storage of Volatile Organic Liquids in Fixed Roof Tanks and External Floating Roof Tanks

During the interested party review it became apparent that a minor amendment to the applicability section of this rule was needed. As such, DAPC revised the wording of the applicability section of this rule to better clarify for intent and purpose. There is no additional cost of compliance for these changes, however, the overall cost of compliance with this rule is summarized below.

This rule identifies requirements for tanks which store volatile organic liquids (other than petroleum) in the Cleveland-Akron non-attainment area. However, there are no costs associated with this rule because no affected facilities were identified in the Cleveland-Akron non-attainment area.

3745-21-22 Lithographic and Letterpress Printing

Cost effectiveness analysis for this rule was provided in U.S. EPA's CTG for "Offset Lithographic Printing and Letterpress Printing", dated September, 2006. The cost-effectiveness analysis is summarized below.

In the 1993 draft CTG, U.S. EPA estimated baseline emissions from the offset lithographic printing industry in ozone nonattainment areas, based on 1990 data, to be 820,000 tons per year (with 62,000 tons/year. coming from ink, 631,000 tons/year from fountain solution and 126,000 tons/year from cleaning). In the 1993 draft CTG, EPA also conducted a model plant analysis, in which it evaluated VOC emissions associated with different kinds of printing processes, the VOC emission reduction capabilities of various control options, and the costs of such controls. The model plants were developed to represent a range of sizes and emissions.

Commenter's on the 1993 draft CTG asserted that the alcohol content (17 percent) used to generate this estimate was too high and that the assumed ratio of fountain solution usage to ink usage was also too high. Baseline VOC emissions from fountain solution may have been overestimated in 1993 by a factor of 2 to 3, which would mean that industry-wide baseline emissions in 1990 ranged from approximately 400,000 to 500,000 tons/year.

U.S. EPA believes that the model plant analysis in the 1993 draft CTG is representative of current operations in the offset lithographic printing industry and current control options. The significant control approaches addressed in the 1993 draft CTG are the same approaches that are available today, and those approaches continue to represent the most effective means of controlling VOC emissions from offset lithographic printers.

U.S. EPA also believes that the model plant analysis accurately presents the costs associated with the control approaches identified in the 1993 document. U.S. EPA recognizes, however, that the costs in that draft document are presented in first quarter 1990 dollars and must be adjusted to represent current costs. Accordingly, for purposes

of estimating the cost-effectiveness of the recommended control approaches in this document, U.S. EPA escalated the 1990 costs in the 1993 draft CTG, to 2005 costs using a cost index. The escalated costs are as follows:

a. $2,010/ton of VOC removed for heatset inks; and
b. $855/ton of VOC removed for cleaning materials.

In addition, the reduction in alcohol used or conversion to alcohol substitutes for fountain solutions results in a cost savings.

Because of the similarities between offset lithographic printing and letterpress printing in terms of the nature of the processes at issue, the sources of VOC emissions and available control approaches, it is reasonable to assume that the cost-effectiveness estimates for heatset inks and control of VOC from cleaning materials apply equally to the letterpress printing industry.

3745-21-23 Industrial Cleaning Solvents

Cost effectiveness analysis for this rule was provided in U.S. EPA's CTG for "Industrial Cleaning Solvents", dated September, 2006. The cost-effectiveness analysis is summarized below.

EPA used studies published by the Bay Area Air Quality Management District (AQMD) to estimate the cost of compliance for the measures recommended in this CTG. According to these estimates, EPA believes that affected sources may either incur minimal additional costs or realize a savings on a case-by-case basis, depending primarily on facts such as how much they currently spend to operate high-VOC content solvent - based parts cleaners, and the cost of organic solvent disposal. The Bay Area AQMD studies indicate that there is a cost savings associated with replacing high-VOC cleaning materials with low-VOC, water-based cleaning materials.

Costs associated with switchover to aqueous parts cleaners (cleaning systems or washers) include the initial cost of equipment, solvent costs, filters, electricity, and waste disposal costs. Many of these costs are also incurred when operating higher VOC solvent cleaners. A study on parts cleaners, for example, has shown typical annual costs for mineral spirits parts cleaners as $1,453. Estimates on annual costs for aqueous parts cleaners, in comparison, range from $1,171 to $1,480, thus showing that facilities could either face a slight increase in cleaning costs or realize a cost savings as a result of the switchover.

Facilities may either incur minimal additional costs or realize a savings on a case by-case basis, depending primarily on how much they currently spend to operate the high VOC content solvent-based parts cleaners, the cost of organic solvent disposal, and air emission fees levied for VOC emissions. A study provided by the California Bay Area AQMD shows that the cost-effectiveness for meeting the 50 grams of VOC per liter of cleaning material limit for a parts cleaner is estimated at $1,832/Mg (1,664/ton). This represents the annual cost of compliance (industry wide) for parts cleaners. We

determined that replacing high VOC content cleaning materials with low VOC water-based cleaning materials for the other cleaning (unit) operations (e.g., cleaning of large manufactured surfaces, tank cleaning, and gun cleaning, etc.) would result in an estimated cost savings of $1,460/Mg. For this calculation we only considered the cost-difference in cleaning material cost and cost difference in waste disposal cost. The savings is a result of lower cost of aqueous cleaners which offset the increase in waste disposal cost for aqueous cleaners.

3745-21-24 Flat Wood Paneling Coatings

Cost effectiveness analysis for this rule was provided in U.S. EPA's CTG for "Flat Wood paneling Coatings", dated September, 2006. The cost-effectiveness estimates were determined based on South Coast district studies and on studies performed by EPA during development of the 2003 NESHAP and summarized below.

The surface coating of wood building products NESHAP applies to various operations, including flat wood paneling coatings. The NESHAP sets requirements for emissions of hazardous air pollutants (HAP) and includes the use of low-HAP material as a compliance option. The majority of HAP are VOCs. In developing the NESHAP, EPA estimated in 1998 dollars, the cost-effectiveness of using low-HAP materials. The facilities used in developing the NESHAP were also analyzed for VOC emissions so the cost effectiveness is described in terms of HAP and VOC. The cost of compliance for six facilities in the interior wall paneling and tileboard category was estimated to be $760,000 and result in VOC reductions of 480 tons ($1,600 per ton of VOC) in 1998 dollars.

Using the Marshall and Swift Index, the costs in 1999 and 1998 dollars, respectively, were scaled to estimate 2005 dollars. The resulting cost effectiveness estimate, in 2005 dollars, for the California flat wood paneling facility that manufactures exterior siding is $2,600 per ton of VOC. Escalating the NESHAP figures to 2005 dollars, the cost effectiveness is $1,900 per ton of VOC for interior paneling/tileboard. The cost effectiveness of controls for exterior siding operations could vary substantially for facilities already complying with the 2003 NESHAP.