White Paper on Amendment of OAC Rule 3745-21-07

by Division of Air Pollution Control, Ohio EPA (November 2007)

The purpose of this white paper is to explain the basis for amending Rule 3745-21-07 of the Ohio Administrative Code (OAC).

A question and answer format is employed to provide information under the following sections:

A. Background on Rule 3745-21-07
B. Background on Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18
C. Comparison of Rule 3745-21-07 with Rule 3745-21-09, Rules 3745-21-12 through -16 , and Rule 3745-21-18
D. Problems with Rule 3745-21-07
E. Resolution of Problems with Rule 3745-21-07
F. Ozone SIP and Role of USEPA in Rule Amendment
G. Effect of Amendment of Rule 3745-21-07 on Permits-to-Install (PTIs)
H. Effect of Amendment of Rule 3745-21-07 on PTOs and Title V Permits
I. New Ozone NAAQS and Related Future Rules

1. Background on Rule 3745-21-07

1. When was this Rule 3745-21-07 initially promulgated?

Rule 3745-21-07 was initially promulgated as regulation AP-5-07 by the Ohio Air Pollution Control Board on January 28, 1972 and became effective on February 15, 1972. The Ohio Air Pollution Control Board and its technical support staff at the Air Pollution Unit, Ohio Department of Health are the predecessors to the Ohio Environmental Protection Agency (Ohio EPA) and its Division of Air Pollution Control (DAPC).

2. What NAAQS was addressed by Rule 3745-21-07?

Rule 3745-21-07 was enacted to reduce the emission of organic compounds that contribute to the formation of photochemical oxidants in the lower atmosphere. Under the 1970 Clean Air Act (CAA), states were required to develop a state implementation plan (SIP) to reduce air pollution in areas not meeting the national ambient air quality standards (NAAQS). The NAAQS associated with the adoption and SIP submission of Rule 3745-21-07 was the photochemical oxidant NAAQS, which was expressed as 0.08 ppm photochemical oxidants as a 1-hour average. Ozone was the predominant photochemical oxidant being measured in areas throughout the United States that had experienced high air pollution levels commonly known as photochemical smog. Because ozone was the air pollutant being measured to determine compliance with the photochemical oxidant NAAQS, the photochemical oxidant NAAQS can be considered a 1-hour 0.08 ppm ozone air quality standard. The SIP for Ohio addressed the achievement and maintenance of

attainment of the photochemical oxidant (ozone) NAAQS for five air quality control regions (AQCRs) in Ohio. The five AQCRs, which included the major urban areas associated with Cincinnati, Cleveland-Akron-Canton-Lorain, Columbus, Dayton, and Toledo, were determined to have air quality levels that exceeded the photochemical oxidant (ozone) NAAQS based on ambient air quality data measurements, or in the absence of any measured data that met the photochemical oxidant (ozone) NAAQS, based on the AQCR having a 1970 urban population exceeding 200,000.

3. What was the basis for Rule 3745-21-07?

Rule 3745-21-07 was based on existing regulations pertaining to photochemical smog (such as “Rule 66" of Los Angeles), federal guidelines contained in the Federal Registers of April 7, 1970 and August 14, 1970, and comments submitted to the Ohio Air Pollution Control Board at hearings on proposed Rule 3745-21-07 during 1971. Paragraph (G) of Rule 3745-21-07 is not identical to "Rule 66" of Los Angeles in several aspects, the most significant of which is that "Rule 66" regulates emissions from organic solvents and paragraph (G) regulates emissions from liquid organic materials, which include organic solvents and organic chemicals.

4. What pollutants are regulated by Rule 3745-21-07?

The pollutants regulated by Rule 3745-21-07 are organic compounds that contribute to the photochemical formation of ozone in the lower atmosphere. Rule 3745-21-07 pertains almost solely to the regulation of operations and activities that employ, store, transfer, process, or dispose of a photochemically reactive material (PRM) or substances containing a PRM. A PRM is a liquid organic material that contains one or more organic compounds which exceed any of the percent by liquid volume criteria specified in the definition under Rule 3745-21-01(C)(5). The percent by liquid volume criteria for a PRM, based on relative ozone-forming reactivity are: 5 percent for organic compounds with the highest reactivity (namely olefinic compounds), 8 percent for organic compounds with a lower reactivity (namely aromatic compounds having 8 or more carbons, other than ethyl benzene), 20 percent for specified organic compounds having an even lower reactivity (i.e., ethyl benzene, toluene, trichloroethylene, and branched ketones), and 20 percent for organic compounds classified under the previously described 5, 8, and 20 percent levels.

By regulating operations and activities that employ, store, transfer, process, or dispose of a PRM, Rule 3745-21-07 regulates the emission of the more reactive organic compounds, but not all reactive organic compounds.

The one exception to this regulatory scheme on PRM comes under Rule 3745-21-07(G)(1), which regulates the emission of organic compounds from liquid organic compounds (e.g., liquid chemicals) and substances containing liquid organic compounds (e.g., coatings and inks) in operations involving heat-curing, heat-polymerization, or flame-contact. The rationale for this exception is that such operations could emit organic compounds that are considered more reactive or more smog polluting (e.g., eye irritant compounds or “nuisance” compounds) due to chemical reactions associated with curing

and polymerization and due to incomplete combustion associated with flame-contact.

5. What was the impact of Rule 3745-21-07?

The original projected impact of Rule 3745-21-07 on ambient air quality levels was based on the projected percent reduction of the organic compound emissions (referred to as hydrocarbon emissions) and a modeling methodology that relied on the reduction model contained in Appendix J to 40 CFR 51.14. In the 1972 State Implementation Plan[1], Rule 3745-21-07 was projected to provide the following hydrocarbon emission reductions:

- overall average 80 percent reduction for certain processes (based on 90 percent control for solvent drying at elevated temperature, conversion to floating roof tanks at refineries and tank farms, control of oil/water separators, and exemption of small sources),
- 50 percent reduction in solvent losses, and
- 30 percent reduction in gasoline handling losses (due to floating roof tanks and submerged fill).

Regarding the estimated 50 percent reduction for solvent losses, the following is stated in the 1972 State Implementation Plan (SIP):

> "A higher degree of control will not be achieved because many processes will switch to exempt solvents."

Thus, the 1972 SIP acknowledged that switching to exempt solvents (i.e., solvents not classified as PRM) would have no impact on hydrocarbon emission reduction and a lower degree of emission reduction was thereby projected.

6. What types of emissions units are regulated by Rule 3745-21-07, and, in general, how are they regulated?

The types of stationary sources regulated by Rule 3745-21-07 are:

- storage tanks,
- liquid loading operations,
- effluent water separators,
- operations using liquid organic materials (including coating, printing, and cleaning operations and various chemical manufacturing processes),
- disposal and evaporation of solvents,
- waste gas disposal, and
- architectural coatings.

[1] Implementation Plan for the Control of Suspended Particulates, Sulfur Dioxide, Carbon Monoxide, Hydrocarbons, Nitrogen Dioxide, and Photochemical Oxidants in the State of Ohio, by The Air Pollution Unit, Ohio Department of Health (January 1972)

The following is a general description of the control requirements under Rule 3745-21-07 for the above-listed types of stationary sources.

Storage tanks with a capacity greater than 65,000 gallons and storing PRMs having a vapor pressure of 1.5 psia or greater (e.g., crude oil, JP-4 fuel, and gasoline) are required to be equipped with a floating roof and closure seals between the floating roof and tank wall, or a vapor recovery system that reduces organic compound emissions by at least 90 percent, or other means of air pollution control approved by Ohio EPA (and USEPA). Also, storage tanks with a capacity greater than 500 gallons and storing PRMs having a vapor pressure of 1.5 psia or greater are required to be equipped with submerged fill, or be loaded by means of a portable tube inserted below the liquid level, or be a pressure tank, or be equipped with a vapor recovery system that reduces organic compound emissions by at least 90 percent.

Liquid loading operations that load, in any one day, more than 40,000 gallons of any PRM having a vapor pressure of 1.5 psia or greater into any tank, trailer or railroad tank car are required to be equipped with a control system that recovers at least 90 percent of the organic compound emissions, or a control system that directs all organic compound emissions to a fuel gas system, or other air pollution controls approved by the Ohio EPA (and USEPA).

Effluent water separators that recover 200 gallons or more per day of any PRM having a vapor pressure of 1.5 psia or greater are required to be equipped with a sealed, solid cover, or a floating cover with closure seals between the floating cover and the separator wall, or a control system that controls emissions of organic compounds by at least 90 percent, or other means of air pollution control approved by the Ohio EPA (and USEPA).

Operations using liquid organic materials, and not otherwise subject to or exempted by the storage tank, liquid loading, or effluent water separator requirements, are subject to the following requirements:

(1) If the operation (an article, machine, equipment, or other contrivance) is a baked, heat-cured, or heat-polymerized operation or if the liquid organic material contacts flame within the operation, then the emission of organic compounds is required to not exceed 3 pounds per hour and 15 pound per day, unless the emission is reduced by at least 85 percent.

(2) If the operation (an article, machine, equipment, or other contrivance) is not the type of operation described in item (1) above, but employs a PRM, then the emission of organic compounds is required to not exceed 8 pounds per hour and 40 pounds per day, unless the emission is reduced by at least 85 percent.

(3) If the operation consists of a series of articles, machines, equipment or other contrivances described in item (1) or item (2) that processes a continuously moving web, sheet, strip, or wire, then:

(a) if a PRM is employed, the limits of item (2) apply collectively to the item (1) and item (2) operations; and

(b) if no PRM is employed, the limits of item (1) apply collectively only to the item (1) operations.

For the previously described operations using liquid organic materials, there are provisions pertaining to the inclusion within the organic compound limit of any organic compound emissions from a cleanup material that is a PRM, a required minimum 90 percent destruction efficiency for the incineration of organic compound emissions, the exclusion of water-based materials and high-solids materials that meet certain material specifications, the exclusion of liquid organic materials with very high boiling points that are not exposed to temperatures above 220 degrees F, the exclusion of any organic compound emission that is not photochemically reactive (i.e., essentially no reactivity for the specific organic compound), and the exclusion of spraying of insecticides, pesticides, and herbicides.

For disposal and evaporation of solvents, a person may not dispose of, by evaporation, a total of more than 1.5 gallons per day of any PRM having a vapor pressure of 1.5 psia or greater.

For waste gas disposal from a ethylene producing plant or other ethylene emissions source, the waste gas is required to be burned at a minimum of 1,300 degrees F for 0.3 seconds or more in a direct-flame afterburner or an equally effective control approved by the Ohio EPA (and USEPA). For waste gas disposal of organic compounds in a flare system, the flare system is required to be a smokeless flame or an equally effective control approved by Ohio EPA (and USEPA).

An architectural coating in a container greater than 1 gallon capacity could not be sold or employed if the coating contained a PRM. Also, the thinning or dilution for application of an architectural coating with a PRM was not allowed. The original requirements on architectural coatings were rescinded (deleted) in 1999 to avoid conflicts with a national VOC rule pertaining to architectural coatings that was promulgated by USEPA.

7. What geographical areas are covered by Rule 3745-21-07?

Rule 3745-21-07 was originally adopted in 1972 and it applied to existing sources within five air quality control regions (AQCRs) listed as Priority I for photochemical oxidants[2] and to new sources statewide.

8. Are there many emissions units regulated by Rule 3745-21-07?

[2]The five AQCRs are Cincinnati, Cleveland (including Akron, Canton, and Lorain), Columbus, Dayton, and Toledo.

Rule 3745-21-07 regulates thousands of emissions units. Many of the emissions units are exempted based on size, capacity, or maximum emission level. Many emissions units comply by means of uncontrolled emissions that meet the applicable hourly and daily mass emission rates. Most emissions units comply by not employing a photochemically reactive material, or in the case of storage tanks and loading operations, by not employing a volatile photochemically reactive material. There are hundreds of emissions units that comply with the requirements of Rule 3745-21-07 by means of add-on controls or pollution control measures.

9. Was Rule 3745-21-07 ever amended?

Rule 3745-21-07 was amended in 1979 to exclude sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 (i.e., sources which are regulated by Rule 3745-21-09). Because a source (or emissions unit) has source emissions from one or more source activities or source categories, the intent of the 1979 exclusion was to exclude from Rule 3745-21-07 those source emissions that are in compliance with or specifically exempted from the applicable requirements of Rule 3745-21-09.

Rule 3745-21-07 was also amended in 1999 to provide an exclusion for foundry core-making and mold-making operations that have specified state-of-the-art systems with low organic compound emissions.

1. Background on Rule 3745-21-09, **Rules 3745-21-12 through -16, and Rule 3745-21-18**

10. Why was the regulatory approach changed under Rule 3745-21-09?

Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 regulate the emission of volatile organic compounds (VOCs). A VOC is any organic compound that contributes to the photochemical formation of ozone in the lower atmosphere. After the full implementation of Rule 3745-21-07 and other control measures in the SIP, Ohio continued to have areas that exceeded the 1-hour 0.08 ppm ozone standard. As a result, Rule 3745-21-07, which pertained primarily to PRM and not all VOC, was considered to be inadequate. For specific source categories of VOC emissions, USEPA developed control techniques guideline (CTG) documents that prescribed VOC control requirements based on reasonably available control technology (RACT). Ozone SIPs submitted to USEPA were required to regulate various categories of stationary sources of VOC emissions in accordance with the CTG documents. This was accomplished through Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18.

11. Which CAA amendment required this change? What NAAQS is addressed by Rule 3745-21-09 ,Rules 3745-21-12 through -16, and Rule 3745-21-18*?*

Under the CAA amendments of 1977, USEPA revised the ozone NAAQS and increased it

from 0.08 ppm ozone (1-hour average) to 0.12 ppm ozone (1-hour average). States with areas that exceeded the 0.12 ppm ozone NAAQS were required to develop a SIP to reduce the emission of VOC to levels that would provide attainment and maintenance of the ozone NAAQS. Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 were subsequently enacted to reduce the emissions of VOC from stationary sources.

12. When were the various requirements of Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 *promulgated?*

USEPA developed CTGs for various source categories and distributed them to the states during 1977 through 1984. For the CTG source categories found in Ohio, Ohio EPA enacted associated RACT requirements within Rule 3745-21-09 under three separate rulemaking actions:

(1) Actions effective 10-19-79

RACT requirements for VOC emissions were promulgated for the following source categories:

- surface coating of automobile & light-duty trucks
- surface coating of cans
- surface coating of coils
- surface coating of paper
- surface coating of fabric
- surface coating of vinyl
- surface coating of metal furniture
- surface coating of magnet wire
- surface coating of large appliances
- storage of petroleum liquids in fixed roof tanks
- refinery vacuum producing systems, wastewater separators, and process unit turnarounds
- use of cutback asphalt and emulsified asphalts for roads
- solvent metal cleaning
- bulk gasoline plants
- bulk gasoline terminals
- gasoline dispensing facilities (Stage I)

(2) Actions effective 3-27-81

RACT requirements for VOC emissions were promulgated for the following source categories:

- leaks from petroleum refinery equipment
- surface coating of miscellaneous metal parts and products
- gasoline tank trucks
- synthesized pharmaceutical manufacturing

- rubber tire manufacturing
- flexographic printing, packaging rotogravure printing, and publication rotogravure printing
- storage of petroleum liquids in external floating roof tanks
- perchloroethylene dry cleaning

(3) Actions effective 5-9-86

RACT requirements for VOC emissions were promulgated for the following source categories:

- petroleum dry cleaning
- polystyrene resin manufacturing
- leaks from process units that produce organic chemicals
- air oxidation processes that produce organic chemicals

Under the CAA amendments of 1990, USEPA also required additional RACT regulations and SIP submittals from states with areas not meeting the 0.12 ppm ozone NAAQS. Additional RACT regulations were required for facilities (plants) that have potential VOC emissions of 100 tons or more per year from sources not already subject to RACT emission requirements under Rule 3745-21-09. These additional RACT regulations are categorized as non-CTG RACT regulations.

Ohio EPA promulgated non-CTG RACT regulations under rule 3745-21-09 for specific facilities during 1988 and 1993.

Also, Ohio EPA promulgated a RACT regulation pertaining to Stage II vapor controls at gasoline dispensing facilities, effective June 1, 1993, in accordance with USEPA's CTG for this source category.

Additionally, Ohio EPA promulgated the following RACT regulations effective May 27, 2005 for the Cincinnati area:

-	Rule 3745-21-12	Bakery Ovens at Commercial Bakery Facilities.
-	Rule 3745-21-13	Reactors and Distillation Units at Synthetic Organic Chemical Manufacturing Industry (SOCMI) Facilities.
-	Rule 3745-21-14	Batch Operations at Chemical Manufacturing Facilities.
-	Rule 3745-21-15	Wood Furniture Manufacturing Operations.
-	Rule 3745-21-16	Industrial Wastewater Operations.

To further reduce VOC emissions in the Cincinnati and Dayton areas, Ohio EPA promulgated operational requirements for motor vehicle refinishing operations under Rule 3745-21-18 (Commercial Motor Vehicle and Mobile Equipment Refinishing Operations) effective February 10, 2006.

Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 are VOC RACT regulations that pertain to, and thereby supersede, Rule 3745-21-07 for many sources.

The VOC emission reductions projected under Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 were included, where appropriate, in the SIP submissions for the ozone nonattainment areas under the requirements of the CAA amendments of 1977 and 1990. There were no additional VOC emission reductions projected under Rule 3745-21-07 for SIP submissions required under the CAA amendments of 1977 and 1990.

2. Comparison of Rule 3745-21-07 with Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18

13. How do the pollutants regulated by Rule 3745-21-07 differ from those regulated by Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18*? What is the relationship between PRMs, organic compounds, and VOC?*

With two exceptions, Rule 3745-21-07 regulates the emission of organic compounds consisting of and containing PRM. Some non-PRM organic compounds are regulated indirectly due to the inclusion of non-PRM organic compounds under the organic compound limits for regulated sources. However, sources that employ only non-PRM organic compounds in tanks, loading operations, effluent water separators, and other operations (that utilize liquid organic materials or substances containing liquid organic materials) are essentially unregulated (i.e., no organic compound emission limit or control requirement). Nearly all of these unregulated organic compound emissions are reactive in the formation of ozone, i.e., they are, by definition, VOC emissions and precursors to the formation of ozone. The highly reactive organic compound emissions, those associated with the classification of liquid organic materials as PRMs (such as olefins, toluene, xylene, MIBK, etc.), tend to be reduced or controlled by Rule 3745-21-07; however, they are only a subset of what is defined as VOC.

The two exceptions in Rule 3747-21-07 regulating the emission of organic compounds consisting of and containing PRM are the following: operations in which a liquid organic material or substance containing a liquid organic material comes into contact with flame or is baked, heat-cured, or heat-polymerized; and waste gas flare systems emitting organic compounds.

Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 regulate VOC, i.e., any organic compound that is photochemically reactive. There is no classification level based on relative degree of reactivity. Only the organic compounds classified as exempt (i.e., non-VOC) by USEPA based on negligible reactivity are not regulated under Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18.

14. Do the requirements of Rule 3745-21-07 conflict with the requirements of Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18*?*

The requirements of existing Rule 3745-21-07 can conflict with the requirements of Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18. In many situations, existing Rule 3745-21-07 allows a much greater emission of OC or VOC due to the use of materials that are essentially exempted based on not being or containing a PRM. Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18 have limits and requirements that pertain to all ozone-forming organic compounds (i.e., VOC). Sources (or source emissions) regulated under Rule 3745-21-09, -12, -13, -14, -15, -16, or -18 are exempted from existing Rule 3745-21-07 to avoid potential conflicts in simultaneously meeting the two rules. An example of a potential conflict would be a coating operation meeting a non-PRM compliance strategy under existing Rule 3745-21-07 and a low-VOC content compliance strategy under existing Rule 3745-21-09.

15. Has Rule 3745-21-07 had a significant impact in achieving the NAAQS for ozone?

There are many situations where Rule 3745-21-07 supplements the VOC emission reductions of Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18. These situations involve the use of add-on control technology (e.g., thermal incinerators or carbon adsorbers) or pollution prevention control measures (e.g., floating roofs with seals) for Rule 3745-21-07-regulated sources (or source emissions) that are not regulated under Rule 3745-21-09, Rules 3745-21-12 through -16, or Rule 3745-21-18. The emission reductions associated with the add-on controls and pollution prevention control measures under Rule 3745-21-07 are considered to be significant in achieving the NAAQS for ozone.

Due to this supplemental VOC emission reduction by Rule 3745-21-07, changes to Rule 3745-21-07 should be avoided for Rule 3745-21-07-regulated sources (or source emissions) equipped with such add-on controls or pollution prevention control measures and where there is no applicable VOC regulation under Rule 3745-21-09, Rules 3745-21-12 through -16, or Rule 3745-21-18.

3. Problems with Rule 3745-21-07

16. What are the problems with Rule 3745-21-07 that make it difficult to interpret and apply?

There are several problems with Rule 3745-21-07 involving the lack of definitions for some regulatory terms, the lack of compliance test methods, the lack of clearly written exemptions, the difficulty in determining whether or not a material is a PRM, and the resultant ambiguities and divergent interpretations. Most of the problems pertain to paragraph (G) of Rule 3745-21-07. The following is a listing of specific problems by paragraph:

Paragraph (D) - Storage of volatile PRM

- no specified test method or procedure for determining an organic liquid's vapor pressure for applicability
- lack of a clearly described exemption

- no specified test method and test conditions for determining compliance with the emission limit
- no specified procedure for determining whether or not an organic liquid is a PRM

Paragraph (E) - Volatile PRM loading facilities
- no specified test method or procedure for determining an organic liquid's vapor pressure for applicability
- lack of a clearly described exemption
- no specified test method and test conditions for determining compliance with the emission limit
- no specified procedure for determining whether or not an organic liquid is a PRM

Paragraph (F) - Effluent water separator
- no specified test method or procedure for determining an organic liquid's vapor pressure for applicability
- lack of a clearly described exemption
- no specified test method and test conditions for determining compliance with the emission limit
- no specified procedure for determining whether or not an organic liquid is a PRM

Paragraph (G) - Operations using liquid organic material
- no specified test method and test conditions for determining compliance with the emission limit
- no specified procedure for determining whether or not an organic liquid is a PRM
- lack of definitions for the terms "baked, heat-cured or heat-polymerized"
- reliance on burdensome hourly record keeping for compliance with hourly limits
- the provision for exemption from this paragraph based on "exemption" from paragraph (D), (E) or (F) is not clear due to paragraphs (D), (E), and (F) not having clearly described exemptions

Paragraph (I) - Disposal and Evaporation of Solvents
- no specified test method or procedure for determining a solvent's vapor pressure for applicability
- no specified procedure for determining whether or not a solvent is a PRM

The resolution of issues associated with the lack of certain definitions, the lack of clearly described exemptions, or the lack of test methods can evolve into different applicability determinations and different limits for similar operations when the resolution is conducted principally as site-specific determinations by air permit review staff located in the various offices and agencies throughout Ohio. Also, potentially affected facilities, out of frustration with such site-specific determinations by Ohio EPA, may challenge the determinations by means of permit appeals.

With the amendment of Rule 3745-21-07, the difficulties in determining whether or not a liquid organic material is a PRM will be completely eliminated. Additionally, the lack of test methods and procedures to determine compliance will be eliminated with the amendment

of Rule 3745-21-07 that incorporates the test methods and procedures of OAC rule 3745-21-10, the use of USEPA-approved emission factors (e.g.,"Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources (AP-42), and the use of emission factors derived from emissions test data from similar sources or operations.

17. Are there any negative environmental impacts being caused by this rule?

The Printing Industry Association of Northern Kentucky and Ohio (PIANKO) has expressed its concerns with the requirements of paragraph (G) of the existing rule that have resulted in burdensome record keeping by printing facilities to document actual hourly emissions. Also, PIANKO has stated that requiring cleanup materials to be formulated as non-PRM increases the amount of cleanup-related organic compound emissions compared to cleanup materials allowed to be PRM. PIANKO has suggested that Ohio EPA allow the use of low vapor pressure cleanup materials, that may be classified as PRM, but would emit less organic compounds than the traditional non-PRM cleanup materials having a higher vapor pressure. USEPA's guidance document on lithographic printing[3] supports the use of low vapor pressure cleanup materials as a means of reducing organic compound emissions. In addition, the existing rule may, in some cases, prevent the conversion to lesser amounts of hazardous air pollutants (this is similar to the no-PRM and low-VOC conflict described under question 14).

18. What has prompted the amendment of Rule 3745-21-07 at this time?

Two recent issues regarding the applicability of paragraph (G)(2) of Rule 3745-21-07 highlight the concern of industrial facilities with Ohio EPA's permit actions. The two applicability issues pertain to: (1) transfer operations handling liquid organic materials classified as PRM and (2) mixing operations involving one or more liquid organic materials classified as PRM. It is Ohio EPA's position that "transfer" and "mixing" are not considered "employing" as it relates to employing any photochemically reactive material or substance containing such photochemically reactive material in OAC rule 3745-21-07(G)(2) based upon the Ohio Supreme Court case of Ashland Chem. Co. v. Jones, 92 Ohio St.3d 234, 2001-Ohio-184.

Also, Ohio EPA has determined that an amendment of Rule 3745-21-07 is needed to meet the five-year rule review requirements under Ohio Revised Code 119.032.

5. Resolution of Problems with Rule 3745-21-07

19. How are we proposing to amend Rule 3745-21-07? Why doesn't the Ohio EPA simply delete Rule 3745-21-07 in its entirety and rely on Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18*?*

[3] Alternative Control Techniques Document: Offset Lithographic Printing, Office of Air Quality, Planning and Standards, USEPA (June 1994), EPA-453/R-94-054.

In order to resolve the previously identified problems with Rule 3745-21-07, Ohio EPA is proposing to replace this rule with facility-specific and general control requirements for sources (emissions units) currently complying with Rule 3745-21-07 by means of control equipment or operational restrictions. This would ensure continued operation of such control equipment or operational restrictions that effectively reduce the emission of organic compounds, which are all essentially VOC. These controlled or restricted sources are not subject to VOC control requirements under Rule 3745-21-09, Rules 3745-21-12 through -16, and Rule 3745-21-18; so simply deleting Rule 3745-21-07 would not ensure continued, effective operation of such controls and restrictions and would cause large increases in VOC emissions.

If Rule 3745-21-07 were eliminated in its entirety, sources that currently have specific control requirements would no longer be subject to those requirements. In other words, any controls would be "voluntary" if not specifically required by Rule 3745-21-07.

It might be argued that sources with the Rule 3745-21-07 control requirements (controls or operational restrictions) would continue to be regulated under Chapter 3745-31 of the Ohio Administrative Code. The rationale would be that if a source were no longer required to maintain Rule 3745- 21-07 control requirements, and the owner/operator chose to change the operation of any controls in a way that significantly reduced the control efficiency, or removed any controls entirely, or operated without operational restrictions, the result would be an increase in emissions. That change would constitute a "modification" and would be subject to Rule 3745-31-02. (Under Rule 3745-31-01(AAA), "modify" or "modification" is defined as (1) "any physical change in, or change in the method of operation of: (a) any air contaminant source that: (i) results in an increase in the allowable emissions . . . .(emphasis added)). If a permit-to-install were required pursuant to Rule 3745-31-02, then best available technology (BAT) would also be required pursuant to Rule 3745-31-05(A)(3), and that most likely would be as stringent or more stringent a control requirement as the Rule 3745-21-07 requirement.

However, if Rule 3745-21-07 is deleted from the Ohio Administrative Code, the allowable for these sources could no longer be based on Rule 3745-21-07 rule requirements. Instead, each allowable would be equal to the source's potential to emit (PTE). If a source's allowable is equal to its PTE, then the reduction in control efficiency or the removal of a specific control device or the removal of an operational restriction would result in an increase in actual emissions, but that increase would NOT result in a "modification" as defined in Chapter 3745-31 because there would not be an increase in the source's allowable emissions. Therefore, without a continuation of the Rule 3745-21-07 control requirements, these sources could increase emissions and would not be subject to regulation. This result would violate the Clean Air Act.

20. Why are we not requiring entities, by rule, to maintain emission levels at 8 lbs/hour and 40 lbs/day? Will this cause an increase in unregulated emissions?

It should be noted that the organic compound emission limits of 8 lbs/hour and 40 lbs/day

under paragraph (G)(2) of Rule 3745-21-07 are not being retained in the proposed amendment of Rule 3745-21-07 for uncontrolled sources, except as noted below for sheet molding compound manufacturing operations. Such limits for uncontrolled sources are considered by Ohio EPA as not effective in reducing the emission of VOC for the following reasons: (1) sources emitting above such limits are already equipped with control equipment, which will be regulated under the proposed amendment of Rule 3745-21-07; (2) sources emitting below such limits are not expected to increase VOC emission by means of physical modifications, and in some cases by means of operational modifications, without first applying for and obtaining a permit-to-install (PTI) or PTI modification, either of which requires meeting "best available technology" under the PTI rule for sources emitting more than 10 tons per year; and (3) many sources are currently subject to these limits, or lower limits, in current PTIs, and such PTI-limits would continue to be enforced. Therefore, Ohio EPA does not expect a significant increase in VOC emissions by the removal of the 8 lbs/hour and 40 lbs/day limits for uncontrolled sources.

Regarding sources that are sheet molding compound (SMC) manufacturing operations, the limits under paragraph (G)(2) of Rule 3745-21-07 are being retained in new paragraph (M)(3)(g). Due to updated information on organic compound emissions associated with the development of the MACT standard for reinforced plastic composites production and due to recent emission testing at an uncontrolled SMC manufacturing operation in Ohio, uncontrolled emissions of organic compounds can exceed 8 pounds per hour or 40 pounds per day. The organic compound emissions are principally styrene emissions that have evaporated within the SMC manufacturing operation from styrene monomer, a photochemically reactive material, used to produce the SMC, Due to the nature of the SMC manufacturing operation, the styrene monomer must be used (i.e., it is not possible to reformulate to a non-PRM). Therefore, the emission limits of paragraph (G)(2) of Rule 3745-21-07 should be retained for SMC manufacturing operations to ensure state and federal compliance with either the 21-07(G)(2) limits or an alternative limit, based upon the application of control technology that is reasonably available considering technological and economic feasibility pursuant to paragraph (G)(9)(g) of Rule 3745-21-07. The provisions of paragraph (G)(9)(g) of Rule 3745-21-07 are being retained in new paragraph (M)(5)(e).

21. What if the Ohio EPA discovers, after the proposed amendment is approved, that it has missed some emissions units that have been controlled pursuant to Rule 3745-21-07? How will those emissions units be addressed?

In the event a controlled source currently subject to Rule 3745-21-07 is not included in the proposed and/or approved amendment of Rule 3745-21-07, Ohio EPA will take steps to include such source in a future amendment of Rule 3745-21-07. The amendment of rule 3745-21-07 contains a requirement under paragraph (M)(3) to ensure that controlled sources using liquid organic materials and not subject to Rule 3545-21-09, -12, -13, -14, -15, 16, or -18 will continue to comply with control requirements. (Note that the proposed amendment of Rule 3745-21-07 provides a reporting exemption for controlled sources that are not listed within the rule and have an uncontrolled organic compound emission not exceeding 40 pounds per day.)

6. Ozone SIP and Role of USEPA in Rule Changes

22. What is the "savings clause" of the CAA? How does it affect any changes we would propose to make to this rule?

Rules 3745-21-07, -09, -12, -13, -14, -15,-16, and -18, as well as numerous other air pollution emission rules, are included in Ohio's state implementation plan (SIP). Such rules in the SIP have been reviewed and approved by USEPA as meeting the SIP requirements. An amendment of such SIP-approved rules must be approved by USEPA in order for the amended parts to be included in the SIP. Any SIP-approved rule can be enforced by USEPA.

One of the SIP requirements for rule amendment is the General Savings Clause under the Clean Air Act, Section 113. The General Savings Clause reads:

> "Each regulation, standard, rule, notice, order and guidance promulgated or issued by the Administrator under this chapter, as in effect before November 15, 1990, shall remain in effect according to its terms, except to the extent otherwise provided under this chapter, inconsistent with any provision of this chapter, or revised by the Administrator. No control requirement in effect, or required to be adopted by an order, settlement agreement, or plan in effect before November 15, 1990, in any area which is a nonattainment area for any air pollutant may be modified after November 15, 1990, in any manner unless the modification insures equivalent or greater emission reductions of such air pollutant."

This federal regulation prohibits the deletion of Rule 3745-21-07 in its entirety.

23. How will the amended rule comply with the "savings clause" of the CAA? Will the amended rule result in an increase in OC emissions throughout the State and thereby exacerbate the existing nonattainment problem for ozone?

Ohio EPA believes the proposed amendment of Rule 3745-21-07 meets the General Savings Clause because:

(1) the areas for which Rule 3745-21-07 was originally enacted are now attainment for the 1-hour ozone standard;

(2) the amendment of Rule 3745-21-07 would not increase the emission of VOC in these areas; and

(3) the amendment of Rule 3745-21-07 would require the continued operation of currently installed add-on controls and pollution prevention control measures.

Also, any potential increases in VOC emissions by new stationary sources would continue to be subject to the requirements of Ohio EPA's permit to install rules.

Therefore, the proposed amendment of Rule 3745-21-07 would not increase the emission of OC or VOC throughout Ohio and would not exacerbate the existing nonattainment problem for ozone.

7. Effect of Amendment of Rule 3745-21-07 on Permits-to-Install (PTIs)

24. How will the amended Rule 3745-21-07 affect existing PTIs that cite the requirements of this rule?

For existing PTIs that currently cite the requirements of Rule 3745-21-07, an amended Rule 3745-21-07 would not change such requirements for controlled sources. The controlled sources would be specifically listed in amended Rule 3745-21-07 with the control requirements derived from existing Rule 3745-21-07. If the PTI has organic compound emission limits cited under Rule 3745-31-05(A)(3) and typically expressed in lbs/hour, lbs/day, lbs/month, tons/year, and any other similar mass emissions rates, an amended Rule 3745-21-07 would not change such organic compound emission limits. Also, if the PTI has an annual or monthly organic compound emission limit that is derived from 40 pounds per day (e.g., 7.3 tons per year, which is based upon 40 times 365), an amended Rule 3745-21-07 would not change such organic compound emission limit. Sources seeking to increase such PTI limits must obtain a modified PTI. However, if the PTI has organic compound emission limits cited under Rule 3745-21-07, which are typically expressed as 8 lbs/hour and 40 lbs/day, an amended Rule 3745-21-07 would cause such PTI limits to be void (i.e., no longer applicable). Also, for PTIs that specify no use of PRM or no emission of PRM, such requirements on PRM would no longer be applicable. Because otherwise allowed non-PRM would include the use and emission of VOC, it would not be reasonable to simply replace PRM restrictions with VOC restrictions.

See Appendix A for examples of the effect of amended Rule 3745-21-07 on permits, which include PTIs, PTOs, Title V permits, and permits-by-rule.

25. How will new sources of OC, that are not regulated by Rule 3745-21-09, -12, -13, -14, -15, -16, or -18 be regulated by the Ohio EPA after the proposed amendment of Rule 3745-21-07 is adopted?

For newly issued PTIs, the amendment of Rule 3745-21-07 will not have any significant effect on organic compound emissions. Organic compound emissions would still be subject to the "best available technology" requirement in Ohio EPA's PTI rule for sources that emit greater than 10 tons per year, in accordance with SB 265. Some BAT requirements for specific types of sources are specified in Engineering Guides of the Division of Air Pollution Control. Such BAT guidelines would generally remain. Also, BAT requirements, if applicable, and PTI requirements for non-BAT sources cannot be less stringent than what is otherwise required by any applicable Ohio air pollution rule and federal air pollution rule. For organic compound emissions, the applicable Ohio air pollution rule is Rule 3745-21-09*, -12, -13, -14, -15, -16*, or 18 for VOC, and the applicable federal air pollution rules are the new source performance standards under 40 CFR Part 60 and the national emission standards for hazardous air pollutants under 40 CFR Parts

61 and 63. Also, for new sources of organic compound emissions, Ohio EPA continues to apply its air toxics policy, which will be replaced by an air toxics rule pursuant to SB 265.

8. Effect of Amendment of Rule 3745-21-07 on PTOs , PTIs, and Title V Permits

26. How will the amended Rule 3745-21-07 affect existing operating permits that cite the requirements of this rule?

For sources listed in amended Rule 3745-21-07 (i.e., with controls), there would be little or no immediate effect on permits to operate (PTOs) and Title V permits. Any restrictions within the permits on not allowing the use of PRM would no longer be enforced. Also, any record keeping and reporting associated with PRM usage would no longer be enforced. Upon renewal or modification of such permits, the applicable rule citation under Rule 3745-21-07 would have to be changed, along with removal of any restriction on PRM.

For sources without controls (i.e., not listed in amended Rule 3745-21-07), any emission limits or operational restrictions within the permits pertaining to organic compounds or PRMs would no longer be enforced, except for:

(1) emission limits or operational restrictions pertaining to organic compound emissions (or VOC emissions) cited within a permit-to-install under Rule 3745-31-05(A)(3) and not under Rule 3745-21-07;

(2) sources in which liquid organic material comes into contact with flame or is baked, heat-cured, or heat-polymerized in the presence of oxygen [i.e., new paragraph (M)(4) essentially replaces paragraph (G)(1)]; and

(3) sheet molding compound manufacturing operations (i.e., new paragraph (M)(3)(g) essentially replaces paragraph (G)(2) for such operations).

Also, any record keeping and reporting associated with limits or restrictions that are no longer enforced would not be enforced.

Some facilities may have relied upon the 40 pounds per day limitation of paragraph (G)(2) to establish a potential to emit for specific sources (operations) in order to avoid major source (Title V) permitting. With the discontinuance of the 40 pounds per day limitation, such facilities should reevaluate their potential to emit, and where appropriate apply for different permits, such as federally enforceable state operating permits (FESOPs) or a synthetic minor permit-to-install, to assure that major source thresholds are not exceeded.

There will be permit situations in which the discontinuance of limits, restrictions, record keeping and reporting may not be clear to the permit holder. Ohio EPA suggests that the permit holder contact the Ohio EPA District Office or local air agency having jurisdiction for clarification. In some cases, the permit may have to be modified prior to permit renewal.

See Appendix A for examples of the effect of amended Rule 3745-21-07 on permits, which

include PTIs, PTOs, Title V permits, and permits-by-rule.

27. How will the amended Rule 3745-21-07 affect newly issued operating permits?

For newly issued state permits-to-operate (PTOs) and newly issued permits-to-install (PTIs) at non-Title V facilities, the new rule will apply. Also, any permit-by-rules that refer to 3745-21-07 will be amended to remove requirements pertaining to photochemically reactive materials

For newly issued Title V permits and newly issued PTIs at Title V facilities, the current rule language (i.e, the current rule language in the Ohio SIP) will be included within the State/Federal part, and the new rule language will be included within the State-only part. Also, language will be included within the Title V permit or PTI indicating that as soon as the new rule is acceptable to USEPA as part of the Ohio SIP, the new rule requirements will become federally enforceable and the current rule requirements will no longer be enforceable by USEPA.

When the new rule is approved by USEPA as part of the Ohio SIP, any newly issued Title V permits and newly issued PTIs at Title V facilities will include language from only the new rule.

1. New Ozone NAAQS and Related Future Rules

28. How will the amendment of Rule 3745-21-07 affect future rules that will be required to achieve the new NAAQS for ozone? What is the new NAAQS for ozone?

On July 18, 1997, USEPA promulgated a new ozone NAAQS, which is 0.08 ppm ozone (8-hour average). For this 8-hour ozone NAAQS, USEPA will require states with nonattainment areas to submit a SIP to attain and maintain compliance with it.

Ohio EPA has a large number of areas that do not meet the 8-hour ozone NAAQS. As part of any SIP submittal to USEPA, Ohio EPA will include additional VOC rules and requirements as needed. Any new reductions of VOC emissions from stationary sources will be included in Rule 3745-21-09 or other rules under Chapter 3745-21. Also, due to nitrogen oxides emissions being an ozone precursor, any new reductions of nitrogen oxides emissions from stationary sources would be enacted as required or needed.

The amendment of Rule 3745-21-07 would not affect the future control strategies for VOC emission reductions. An amended Rule 3745-21-07 would continue the operation of control equipment already installed for the reduction of organic compound emissions, which are essentially all VOC emissions. An amended Rule 3745-21-07 would not increase VOC emissions and, thereby, would not contribute to nonattainment of the 8-hour ozone NAAQS.

Appendix A

The following are examples of the effect of amended Rule 3745-21-07 on permits that were issued prior to the effective date of amended Rule 3745-21-07. The term "void" means not enforceable due to no longer being in effect.

PTI means permit-to-install.
PTO means permit-to-operate.
TVP means Title V permit

Example #1A

A facility has a permit (PTI, PTO, or TVP) for a coating (or printing) operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The coating (or printing) operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of 8 pounds/hour and 40 pounds/day from coating (or printing) excluding cleanup, 8.0 tons OC/year from coating (or printing) including cleanup;

(b) operational restrictions of 8 gallons/day for coating (or printing), 1 gallon/day for cleanup, 2,000 gallons/year for coating, 250 gallons/year for cleanup, and no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limits and operational restrictions.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) OC emission limits of 8 pounds/hour and 40 pounds/day from coating (or printing) excluding cleanup;

(b) operational restriction of no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limits and operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Example #1B

A facility has a permit (PTI, PTO, or TVP) for a coating (or printing) operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The coating (or printing) operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of 8 pounds/hour and 25 pounds/day from coating (or printing) excluding cleanup, 6.0 tons OC/year from coating (or printing) including cleanup;

(b) operational restrictions of 5 gallons/day for coating (or printing), 1 gallon/day for cleanup, 1,500 gallons/year for coating, 250 gallons/year for cleanup, and no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limits and operational restrictions.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) OC emission limits of 8 pounds/hour from coating (or printing) excluding cleanup;

(b) operational restriction of no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limit and operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Example #1C

A facility has a permit (PTI, PTO, or TVP) for a coating (or printing) operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The coating (or printing) operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of 50 pounds/day from coating (or printing) excluding cleanup, 10.0 tons OC/year from coating (or printing) including cleanup;

(b) operational restrictions of 10 gallons/day for coating (or printing), 1 gallon/day for cleanup, 2,500 gallons/year for coating, 250 gallons/year for cleanup, no PRM for coating (or printing) material, and no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limits and operational restrictions.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restrictions of no PRM for coating (or printing) materials and no PRM for cleanup; and

(b) record keeping and reporting associated with the above operational restrictions.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Example #1D

A facility has a permit (PTI, PTO, or TVP) for a coating (or printing) operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The coating (or printing) operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of:
- 10 pounds/hour on any day in which a PRM is not employed;
- 8 pounds/hour and 40 pounds/day on any day in which a PRM is employed;
- 20 tons per year (or 20 tons per rolling 12-month period);
- 5.0 lbs/gallon of coating;

(b) operational restriction requiring use of high volume low pressure spray; and

(c) record keeping and reporting associated with the above OC limits and operational restriction.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) OC emission limits of 8 pounds/hour and 40 pounds/day on any day in which a PRM is employed; and

(b) record keeping and reporting associated with the above emission limits.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #1D: The OC emission limit of 10 pounds per hour and the

record keeping and reporting associated with that OC emission limit would apply for all days. The PTI for this operation would most likely be modified by Ohio EPA to clarify these requirements, but such modification may not occur for some time due to limited resources.

Example #2A

A facility has a permit (PTI, PTO, or TVP) for an operation which cites OAC rule 3745-21-07(G)(9)(c). The operation employs a process material and a cleanup material. The operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limit of 3 tons OC/year from the operation including cleanup;

(b) operational restrictions:

(i) volatile content of the process material, consisting of water and liquid organic material, shall contain a liquid organic material that comprises not more than 20 percent by volume of the volatile content and said volatile content shall not be a PRM; and

(ii) cleanup material shall not be a PRM; and

(c) record keeping and reporting associated with the above OC limit and operational restrictions.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restrictions on the volatile content of the process material and the use of no PRM for cleanup; and

(b) record keeping and reporting associated with the above operational restrictions.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #2A: If the above operation is subject to paragraph (M)(4) of amended OAC rule 3745-21-07, the exemption under paragraph (M)(5)(d)(i) may be appropriate as an operational restriction for the process material.

Example #2B

A facility has a permit (PTI, PTO, or TVP) for an operation which cites OAC rule 3745-21-

07(G)(9)(d). The operation employs a process material and a cleanup material. The operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limit of 3 tons OC/year from the operation including cleanup;

(b) operational restrictions:

(i) volatile content of the process material shall not exceed 20 percent by volume of the process material and the volatile content shall not be a PRM; and

(ii) cleanup material shall not be a PRM; and

(c) record keeping and reporting associated with the above OC limit and operational restrictions.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restrictions on the volatile content of the process material and the use of no PRM for cleanup; and

(b) record keeping and reporting associated with the above operational restrictions.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #2B: If the above operation is subject to paragraph (M)(4) of amended OAC rule 3745-21-07, the exemption under paragraph (M)(5)(d)(ii) may be appropriate as an operational restriction.

Example #3A

A facility has a permit (PTI, PTO, or TVP) for an operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The operation has an incineration-type control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is listed within paragraph (M)(1) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) limitation on controlling non-cleanup OC emissions from the operation by means of a control system that reduces such OC emissions from the operation by at least 85 % and that uses an incineration-type control device with an efficiency of at least 90%;

(b) operational restrictions on when the control system is to be operated, the minimum

combustion temperature of the incineration-type control device, and no PRM for cleanup;

(c) combustion temperature monitoring; and

(d) record keeping and reporting associated with the above OC limits, operational restrictions, and monitoring requirements.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restriction of no PRM for cleanup, and

(b) record keeping and reporting associated with the above operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #3A: If the above "controlled operation" is not listed within paragraph (M)(1) of amended OAC rule 3745-21-07 and there is no applicable federal regulation or BAT limit requiring a greater control of the OC emissions, then Ohio EPA should be notified immediately about such operation pursuant to paragraph (M)(3)(b) of amended OAC rule 3745-21-07. Also, the operation may be subject to paragraph (M)(3)(a) or (M)(4) of amended OAC rule 3745-21-07.

Example #3B

A facility has a permit (PTI, PTO, or TVP) for an operation which cites OAC rule 3745-21-07(G) or a sub-paragraph of OAC rule 3745-21-07(G). The operation has an incineration-type control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is listed within paragraph (M)(1) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) limitation on controlling non-cleanup OC emissions from the operation by means of a control system that reduces such OC emissions from the operation by at least 85% or reduces such OC emissions to not exceed 40 pounds per day, and that uses an incineration-type control device with an efficiency of at least 90%;

(b) OC emission limits of 7.3 tons per year (or 7.3 tons per rolling 12-month period), excluding cleanup and 1.0 tons per year (or 1.0 tons per rolling 12 month period) for cleanup;

(c) operational restrictions on when the control system is to be operated, the minimum combustion temperature of the incineration-type control device, and no PRM for cleanup;

(d) combustion temperature monitoring; and

(e) record keeping and reporting associated with the above OC limits, operational restrictions, and monitoring requirements.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) OC emission limit of 40 pounds per day;

(b) operational restriction of no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limit and operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #3B: If the above "controlled operation" is not listed within paragraph (M)(1) of amended OAC rule 3745-21-07 and there is no applicable federal regulation or BAT limit requiring a greater control of the OC emissions, then Ohio EPA should be notified immediately about such operation pursuant to paragraph (M)(3)(b) of amended OAC rule 3745-21-07. Also, the operation may be subject to paragraph (M)(3)(a) or (M)(4) of amended OAC rule 3745-21-07.

Example #4A

A facility has a permit (PTI, PTO, or TVP) for an operation which cites OAC rule 3745-21-07(G) or (G)(1). The operation employs a liquid organic material or substance containing liquid organic material that comes into contact with flame or is baked, heat-cured, or heat-polymerized, in the presence of oxygen. The operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (M)(1) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of 3 pounds/hour and 15 pounds/day, excluding cleanup, and 4.0 tons OC/year including cleanup;

(b) operational restriction of no PRM for cleanup; and

(c) record keeping and reporting associated with the above OC limits and operational restriction.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restriction of no PRM for cleanup; and

(b) record keeping and reporting associated with the above operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Special Note on Example #4A: If the operation is not listed in paragraph (M)(1) of amended OAC rule 3745-21-07, the OC emission limits of 3 lbs/hour and 15 pounds/day that are associated with paragraph (G)(1) of previous OAC rule 3745-21-07 would remain pursuant to paragraph (M)(4) of amended OAC rule 3745-21-07.

Example #5A

A facility has a permit (PTI, PTO, or TVP) for a operation which cites OAC rule 3745-21-07(D), (E), or (F). The operation stores, loads, or recovers a liquid organic material that is not a volatile photochemically reactive material. The operation does not have a control device for OC emissions, does not have an applicable requirement under OAC rule 3745-21-09, -12, -13, -14, -15, -16, or -18, and is not listed within paragraph (K)(1) or (L)(1) of amended OAC rule 3745-21-07. The permit specifies the following requirements:

(a) OC emission limits of 20 pounds/day and 4.0 tons/year;

(b) operational restriction of no volatile photochemically reactive material; and

(c) record keeping and reporting associated with the above OC limits and operational restriction.

Upon the effective date of amended OAC rule 3745-21-07, the following requirements in the permit* would be void:

(a) operational restriction of no volatile photochemically reactive material; and

(b) record keeping and reporting associated with the above operational restriction.

* If the permit is a Title V permit, then the listed requirements would not be void until the new rule is approved by USEPA in the Ohio SIP.

Example #6A

A printing facility has a permit-by-rule pursuant to OAC rule 3745-31-03(A)(4)(k) or (A)(4)(l). Under OAC rule 3545-31-03(A)(4)(k) or (A)(4)(l), that is effective on 7/29/05, there are requirements on qualifications, applicable emission limitations, monitoring an/or record keeping, and reporting. The requirements pertaining to photochemically reactive materials would be void. The permit-by-rule will be amended to remove the requirements pertaining to photochemically reactive materials.