3745-21-09 **Control of emissions of volatile organic compounds from stationary sources and perchloroethylene from dry cleaning facilities.**

[Comment: For dates and availability of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of rule 3745-21-01 of the Administrative Code titled "Reference to materials."]

(A) Applicability.

(1) In Ashtabula, Butler, Clark, Clermont, Cuyahoga, Delaware, Franklin, Geauga, Greene, Hamilton, Lake, Licking, Lorain, Lucas, Mahoning, Medina, Miami, Montgomery, Portage, Stark, Summit, Trumbull, Warren and Wood counties, the requirements of paragraphs (C) to (M), (O)(2)(a) to (O)(2)(d), (O)(3) to (O)(6), (P), (Q), (R), (T), (U), and (W) to (EE) of this rule shall apply to all sources regardless of date of construction or modification.

(2) The requirements of paragraphs (N) and (V) of this rule shall apply state-wide.

(3) For sources located in counties not listed in paragraph (A)(1) of this rule:

(a) The requirements of paragraphs (C) to (M), (O)(2)(a) to (O)(2)(d), (O)(3) to (O)(6), (P), (Q) and (R) of this rule shall apply to all sources:

(i) For which the construction or modification commenced on or after October 19, 1979; or

(ii) Which are located at a facility having the potential to emit a total of one hundred tons or more of VOC per calendar year.

(b) The requirements of paragraphs (T), (U), and (W) to (AA) of this rule shall apply to all sources:

(i) For which the construction or modification commenced on or after March 27, 1981; or

(ii) Which are located at a facility having the potential to emit a total of one hundred tons or more of VOC per calendar year.

(c) The requirements of paragraphs (BB) to (EE) of this rule shall apply to all sources:

(i) For which the construction or modification commenced on or after May 9, 1986; or

(ii) Which are located at a facility having the potential to emit a total of one hundred tons or more of VOC per calendar year.

(4) The requirements of paragraph (DDD) of this rule shall apply to all sources, regardless of date of construction or modification, that are located in Ashtabula, Butler, Clark, Clermont, Cuyahoga, Geauga, Greene, Hamilton, Lake, Lorain, Medina, Miami, Montgomery, Portage, Summit, or Warren county.

(5) The requirements of paragraph (O)(2)(e) of this rule shall apply to any facility that has sources regardless of date of construction or modification that are located in Ashtabula, Butler, Clark, Clermont, Cuyahoga, Geauga, Greene, Hamilton, Lake, Lorain, Medina, Miami, Montgomery, Portage, Summit, or Warren county.

(6) The requirements of paragraph (HH) of this rule shall apply to all coating lines for automotive/transportation plastic parts and/or for business machine plastic parts if the facility containing said coating lines meets all of the following criteria:

(a) The facility is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county; and

(b) The facility has a combined total potential to emit for VOC emissions equal to or greater than one hundred tons of VOC per calendar year on or after August 25, 2008 from all of the following:

(i) Surface coating of automotive/transportation plastic parts and/or business machine plastic parts;

(ii) All non-CTG sources; and

(iii) Unregulated emissions from CTG sources except sources regulated under Subparts BBB, III, NNN, and RRR of 40 CFR Part 60 and sources regulated under Subpart T of 40 CFR Part 63.

For the purpose of this paragraph, a source shall be considered regulated by a paragraph or rule if it is subject to the limits of that paragraph or rule. A source is not considered regulated by a paragraph or rule if it is not subject to the limits of that paragraph or rule. For example, if the source is covered by an exemption in the paragraph or rule, or the applicability criteria of the paragraph or rule are not met, then the source is not subject to that paragraph or rule. A source is also not considered regulated by a CTG if there is no rule contained in this chapter regulating the source category corresponding to that CTG.

(7) Additional requirements or requirements which are more stringent than those specified in this rule may be applicable to new sources pursuant to rule 3745-31-05 of the Administrative Code.

(B) General provisions.

(1) Compliance with the limitations specified in paragraphs (C) to (K), (S), (U), (Y), (FF), (HH), (II), (OO), (PP) and (XX) of this rule is based upon a weighted average by volume of all coating materials employed in the coating line or printing line in any one day. The VOC contents and densities of the coating materials subject to paragraphs (C) to (K), (S), (U), (Y), (FF), (HH), (II), (OO), (PP) and (XX) of this rule shall be determined in accordance with paragraph (B) of rule 3745-21-10 of the Administrative Code. The VOC emission rate, capture efficiency and control efficiency for coating lines or printing lines subject to paragraphs (C) to (K), (S), (U), (Y), (FF), (HH), (NN), (PP), and (XX) of this rule shall be determined in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code. The averaging of VOC emissions over two or more coating lines and/or printing lines in order to demonstrate compliance with an applicable emission limitation (i.e., cross-line averaging) is prohibited except as otherwise provided in this rule.

(2) Any approval granted by the director in accordance with paragraphs (I)(2), (K)(3), (L)(1)(a)(ii), (O)(2)(c)(iii), (O)(3)(c)(v), (O)(4)(a)(iii), (T)(4), (W)(1)(a)(ii), (W)(1)(c)(ii), (Z)(1)(a)(vii), (Z)(1)(b)(ii)(e), (Z)(1)(b)(iii)(c), (DD)(3)(e), (DD)(16), and (DD)(17)(b)(iii) of this rule must be approved by the USEPA as a revision of the state implementation plan.

(3) Recordkeeping and reporting requirements for coating lines and printing lines.

(a) Except as otherwise provided by this rule, the owner or operator of a coating line or printing line subject to paragraphs (C) to (K), (S), (U), (Y), (FF), (HH), (II), (NN) to (PP), or (XX) of this rule, or subject to rule 3745-21-24 or 3745-21-26 of the Administrative Code shall demonstrate the ongoing status of compliance with the applicable emissions limitations and/or control requirements by means of one of the recordkeeping and reporting requirement alternatives specified in this paragraph.

(b) Any owner or operator of a coating line which is exempt from the emission limitations specified in paragraph (I) or (U) of this rule because the combined VOC emissions from all such coating lines at the facility are less than fifteen pounds of VOC per day (before add-on controls) shall collect and record the information each day and maintain the information at the facility for a period of three years:

(i) The name and identification number of each coating, as applied.

(ii) The mass of VOC per volume (excluding water and exempt solvents) and the volume of each coating (excluding water and exempt solvents), as applied, used each day.

(iii) The total VOC emissions at the facility, as calculated using the following equation:

$$T = \sum_{i=1}^{n} A_i B$$

where:

T = Total VOC emissions from the combined coating lines before the application of capture systems and control devices, in units of pounds per day;

n = Number of different coatings applied in the coating lines at the facility;

i = Subscript denoting an individual coating;

A_i = Mass of VOC per volume of coating (i) (excluding water and exempt solvents), as applied, used at the facility, in units of pounds VOC per gallon; and

B_i = Volume of coating (i) (excluding water and exempt solvents), as applied, used at the facility, in units of gallons per day. The instrument or method by which the owner or operator accurately measured or calculated the volume of each coating, as applied, shall also be described in the certification to the director.

(c) Any owner or operator of a coating line referenced in paragraph (B)(3)(b) of this rule shall notify the director of any daily record showing that the combined VOC emissions from all such coating lines at the facility are equal to or greater than fifteen pounds of VOC per day (before add-on controls). A copy of such record shall be sent to the director within forty-five days after the exceedance occurs.

(d) Any owner or operator of a coating line which is exempt from the emission limitations specified in paragraph (U)(1) of this rule, pursuant to paragraph (U)(2)(e) of this rule, shall collect and record the following information each day for each such coating line and maintain the information at the facility for a period of three years:

(i) The name and identification number of each coating employed in the coating line.

(ii) The volume, in gallons, of each coating employed in the coating line.

(iii) The total volume, in gallons, of all of the coatings employed in the coating line.

(e) Any owner or operator of a coating line referenced in paragraph (B)(3)(d) of this rule shall notify the director of any daily record showing that the coating line employs more than the applicable maximum daily coating usage limit. A copy of such record shall be sent to the director within forty-five days after the exceedance occurs.

(f) Any owner or operator of a coating line or printing line who elects to demonstrate the ongoing status of compliance with the applicable emission limitation by means of the use of complying coatings (i.e., each coating complies with the applicable emission limitation as applied) shall collect and record the following information each month and maintain the information at the facility for a period of three years:

(i) The name and identification number of each coating, as applied.

(ii) The mass of VOC per volume of each coating (excluding water and exempt solvents), as applied.

This information does not have to be kept on a line-by-line basis. Also, if an owner or operator mixes complying coatings at a coating line, it is not necessary to record the VOC content of the resulting mixture.

(g) Any owner or operator of a coating line or printing line referenced in paragraph (B)(3)(f) of this rule shall notify the director of any monthly record showing the use of noncomplying coatings. A copy of such record shall be sent to the director within thirty days following the end of the calendar month.

(h) Any owner or operator of a coating line or printing line who elects to demonstrate the ongoing status of compliance with the applicable emission limitation by means of a daily volume-weighted average VOC content shall collect and record the following information each day for the coating line or printing line and maintain the information at the facility for a period of three years:

(i) The name and identification number of each coating, as applied.

(ii) The mass of VOC per volume (excluding water and exempt solvents) and the volume of each coating (excluding water and exempt solvents), as applied.

(iii) The daily volume-weighted average VOC content of all coatings, as applied, calculated in accordance with the equation specified in paragraph (B)(9) of rule 3745-21-10 of the Administrative Code for $C_{voc,2}$.

(i) Any owner or operator of a coating line or printing line referenced in paragraph (B)(3)(h) of this rule shall notify the director of any daily record showing that the daily volume-weighted average VOC content exceeds the applicable emission limitation. A copy of such record shall be sent to the director within forty-five days after the exceedance occurs.

(j) Any owner or operator of a coating line who elects to demonstrate the ongoing status of compliance with the applicable pounds of VOC per gallon of solids limitation by means of control equipment shall collect and record the following information each day for the coating line and maintain the information at the facility for a period of three years:

(i) The name and identification number of each coating used.

(ii) The mass of VOC per unit volume of coating solids, as applied, the volume solids content, as applied, and the volume, as applied, of each coating.

(iii) The maximum VOC content (mass of VOC per unit volume of coating solids, as applied) or the daily volume-weighted average VOC content (mass of VOC per unit volume of coating solids, as applied) of all the coatings.

(iv) The calculated, controlled VOC emission rate, in mass of VOC per unit volume of coating solids, as applied. The controlled VOC emission rate shall be calculated using (a) either the maximum VOC content or the daily volume-weighted VOC content recorded in accordance with paragraph (B)(3)(j)(iii) of this rule and (b) the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance.

(v) A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated coating line.

(vi) For thermal incinerators, all three-hour periods of operation during which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most

recent performance test that demonstrated that the source was in compliance.

(vii) For catalytic incinerators, all three-hour periods of operation during which the average temperature of the process vent stream immediately before the catalyst bed is more than fifty degrees Fahrenheit below the average temperature of the process vent stream during the most recent performance test that demonstrated that the source was in compliance, and all three-hour periods of operation during which the average temperature difference across the catalyst bed is less than eighty per cent of the average temperature differences during the most recent performance test that demonstrated that the source was in compliance.

(viii) For carbon adsorbers, all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than twenty per cent greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance.

(k) Any owner or operator of a coating line referenced in paragraph (B)(3)(j) of this rule shall notify the director of any daily record showing that the calculated, controlled VOC emission rate exceeds the applicable pounds of VOC per gallon of solids limitation. A copy of such record shall be sent to the director within forty-five days after the exceedance occurs.

(l) Any owner or operator of a coating line or printing line who elects to demonstrate the ongoing status of compliance with the applicable capture and control efficiency requirements or overall control efficiency requirements contained in paragraph (B)(6), (H), (Y), (NN), (PP), or (XX) of this rule shall collect and record the following information each day for the control equipment and maintain the information at the facility for a period of three years:

(i) A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated coating line or printing line.

(ii) For thermal incinerators, all three-hour periods of operation during which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated that the source was in compliance.

(iii) For catalytic incinerators, all three-hour periods of operation during which the average temperature of the process vent stream immediately

before the catalyst bed is more than fifty degrees Fahrenheit below the average temperature of the process vent stream during the most recent performance test that demonstrated that the source was in compliance, and all three-hour periods of operation during which the average temperature difference across the catalyst bed is less than eighty per cent of the average temperature difference during the most recent performance test that demonstrated that the source was in compliance.

(iv) For carbon adsorbers, all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than twenty per cent greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance.

(m) Any owner or operator of a coating line or printing line referenced in paragraphs (B)(3)(j) and (B)(3)(l) of this rule shall submit to the director quarterly summaries of the records required by paragraphs (B)(3)(j)(v) to (B)(3)(j)(viii) and (B)(3)(l)(i) to (B)(3)(l)(iv) of this rule. These quarterly reports shall be submitted by April thirtieth, July thirty-first, October thirty-first, and January thirty-first, and shall cover the records for the previous calendar quarters.

(n) Any owner or operator of a coating line or printing line referenced in paragraphs (B)(3)(j) and (B)(3)(l) of this rule shall install and operate continuous monitoring and recording devices (i.e., for temperature or VOC concentration) and, if necessary, perform emission tests for the coating line or printing line to enable the recordkeeping required by paragraphs (B)(3)(j)(vi) to (B)(3)(j)(viii) and (B)(3)(l)(ii) to (b)(3)(l)(iv) of this rule. The continuous monitoring and recording devices shall be installed and placed in operation either within one hundred eighty days of the March 31, 1993 or by the date of operation of any new control equipment installed for the coating line or printing line after March 31, 1993 to achieve compliance with the VOC control requirements of this rule. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameter, and the owner or operator shall properly operate and maintain the devices in accordance with the manufacturer's recommendations.

(4) Recordkeeping and reporting requirements for sources other than coating lines and printing lines.

(a) Except as otherwise provided by this rule, the owner or operator of a source other than a coating line or printing line that is subject to paragraphs (O), (W), (CC), (X), (EE), (KK) to (MM), (SS) to (VV), or (YY) to (BBB) of this rule shall demonstrate the ongoing status of compliance with the applicable emissions limitations and/or control requirements by means of

one of the recordkeeping and reporting requirement alternatives specified in this paragraph.

(b) Any owner or operator of a source referenced in paragraph (B)(4)(a) of this rule who elects to demonstrate the ongoing status of compliance with the applicable emission limitation or control requirement by means of control equipment shall collect and record the following information each day for the source and maintain the information at the facility for a period of three years:

(i) A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated source.

(ii) For thermal incinerators, all three-hour periods of operation during which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated that the source was in compliance.

(iii) For catalytic incinerators, all three-hour periods of operation during which the average temperature of the process vent stream immediately before the catalyst bed is more than fifty degrees Fahrenheit below the average temperature of the process vent stream during the most recent performance test that demonstrated that the source was in compliance, and all three-hour periods of operation during which the average temperature difference across the catalyst bed is less than eighty per cent of the average temperature difference during the most recent performance test that demonstrated that the source was in compliance.

(iv) Where an absorber is the final control device and an organic monitoring device is used, all three-hour periods of operation during which the average concentration level or reading of organic compounds in the exhaust gases is more than twenty per cent greater than the exhaust gas organic compound concentration level or reading measured by the most recent performance test that demonstrated that the source was in compliance.

(v) Where an absorber is the final control device and an organic monitoring device is not used:

(a) All three-hour periods of operation during which the average absorbing liquid temperature was more than twenty degrees Fahrenheit above the average absorbing liquid temperature during the most recent performance test that demonstrated that the source was in compliance; or

(b) All three-hour periods of operation during which the average absorbing liquid specific gravity was more than 0.1 unit above, or more than 0.1 unit below the average absorbing liquid specific gravity during the most recent performance test that demonstrated that the source was in compliance (unless monitoring of an alternative parameter, which is a measure of the degree of absorbing liquid saturation, is approved by the director, in which case the director will define appropriate parameter boundaries and periods of operation during which they are exceeded).

(vi) Where a carbon absorber is the final control device and an organic monitoring device is used, all three-hour periods of operation during which the average concentration level or reading of organic compounds in the exhaust gases is more than twenty per cent greater than the exhaust gas organic compound concentration level or reading measured by the most recent performance test that demonstrated that the source was in compliance.

(vii) Where a carbon adsorber is the final control device and an organic monitoring device is not used:

(a) All carbon bed regeneration cycles during which the total mass steam flow rate was more than ten per cent below the total mass steam flow during the most recent performance test that demonstrated that the source was in compliance; or

(b) All carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration (and after completion of any cooling cycle(s)) was more than ten per cent greater than the carbon bed temperature (in degrees Celsius) during the most recent performance test that demonstrated that the source was in compliance.

(viii) Where a condenser is the final control device and an organic monitoring device is used, all three-hour periods of operation during which the average concentration level or reading of organic compounds in the exhaust gases is more than twenty per cent greater than the exhaust gas organic compound concentration level or reading measured by the most recent performance test that demonstrated that the source was in compliance.

(ix) When a condenser is the final control device and an organic monitoring device is not used, all three-hour periods of operation during which the average exit (product side) condenser operating temperature was more than eleven degrees Fahrenheit above the average exit (product side)

operating temperature during the most recent performance test that demonstrated that the source was in compliance.

(x) For flares, all periods during which the electric arc ignition system or pilot flame is not functioning properly.

(c) Any owner or operator of a source referenced in paragraph (B)(4)(a) of this rule shall submit to the director quarterly summaries of the records required by paragraph (B)(4)(b) of this rule. These quarterly reports shall be submitted by April thirtieth, July thirty-first, October thirty-first, and January thirty-first, and shall cover the records for the previous calendar quarters.

(d) Any owner or operator of a source referenced in paragraph (B)(4)(a) of this rule shall install and operate continuous monitoring and recording devices (i.e., for temperature, VOC concentration, arcing of an electric arc ignition system, or presence of a pilot flame) and, if necessary, perform emission tests for the source to enable the recordkeeping required by paragraph (B)(4)(b) of this rule. The continuous monitoring and recording devices shall be installed and placed in operation either within one hundred eighty days of March 31, 1993 or by the date of operation of any new control equipment installed for the source after March 31, 1993 to achieve compliance with the VOC control requirements of this rule. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameter, and the owner or operator shall properly operate and maintain the devices in accordance with the manufacturer's recommendations.

(5) Any owner or operator of a coating line, printing line, or other source that is subject to the recordkeeping and reporting requirements contained in paragraph (B)(3) or (B)(4) of this rule may propose to the director an alternative recordkeeping and reporting program. If the alternative recordkeeping and reporting program is approved by the director, it shall supersede the requirements of paragraph (B)(3) or (B)(4) of this rule and shall be specified in the terms and conditions of the permit, variance, or order issued by the director for the coating line, printing line, or other source. Any alternative recordkeeping and reporting program approved by the director also must be approved by the USEPA as a revision to the state implementation plan.

(6) In lieu of complying with the pounds of VOC per gallon of solids limitations contained in paragraphs (D), (E), (F)(1), (G), (I)(1), (J), (K)(1), (U), and (HH) of this rule, any owner or operator of a coating line that employs a control system may choose to demonstrate that the capture and control equipment provide not less than an eighty one per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions

vented to the control equipment. In such cases, the owner or operator shall comply with the certification and permit application requirements specified in paragraph (B)(3) of rule 3745-21-04 of the Administrative Code and shall achieve compliance with the overall VOC emission reduction and control efficiency requirements in accordance with the applicable compliance schedules contained in paragraph (C) of rule 3745-21-04 of the Administrative Code. Also, in such cases, the owner or operator of the coating line shall be subject to the recordkeeping and reporting requirements contained in paragraph (B)(3)(l) of this rule.

(7) In lieu of complying with the pounds of VOC per gallon of solids limitations contained in paragraphs (I)(4) and (K)(6) of this rule, any owner or operator of a coating line that employs a control system may choose to demonstrate that the capture and control equipment provide not less than a ninety per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions vented to the control equipment. In such cases, the owner or operator shall comply with the certification and permit application requirements specified in paragraph (B)(3)(b) of rule 3745-21-04 of the Administrative Code and shall achieve compliance with the overall VOC emission reduction and control efficiency requirements in accordance with the applicable compliance schedules contained in paragraph (C) of rule 3745-21-04 of the Administrative Code. Also, in such cases, the owner or operator of the coating line shall be subject to the recordkeeping and reporting requirements contained in paragraph (B)(3)(l) of this rule.

(C) Surface coating of automobiles and light-duty trucks.

For any source located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county subject to paragraph (C) of this rule, the requirement to comply with paragraph (C) of this rule shall terminate at such time the source becomes subject to and complies with rule 3745-21-29 of the Administrative Code.

(1) Except as otherwise provided in paragraphs (C)(2) and (C)(3) of this rule, no owner or operator of an automobile or light-duty truck assembly plant may cause, allow or permit the discharge into the ambient air of any VOC after the dates specified in rule 3745-21-04 of the Administrative Code in excess of the following:

(a) For a prime coat coating line employing electrodeposition,

(i) 1.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 1.4 pounds of VOC per gallon of solids from the electrodeposition coating line; or

(ii) 1.4 pounds of VOC per gallon of solids from any electrodeposition (EDP) coating line when the solids turnover ratio (R_T) is 0.16 or greater. R_T shall be calculated as follows:

$$R_T = \frac{T_E}{L_E}$$

where:

T_V = total volume of coating solids that is added to the EDP coating line in a calendar month (gallons).

L_E = volume design capacity of the EDP system, which is the total liquid volume contained in the EDP system's tanks, pumps, recirculating lines, filters, etc. at the system's designed liquid operating level (gallons); or

(iii) $1.4 \times 350^{(0.160-R_T)}$ pounds of VOC per gallon of solids from any EDP coating line when R_T, calculated according to the equation in paragraph (C)(1)(a)(ii) of this rule, is greater than or equal to 0.040 and less than 0.160; or

(iv) When R_T, calculated according to the equation in paragraph (C)(1)(a)(ii) of this rule, is less than 0.040 for any EDP coating line, there is no emission limit; and

(v) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or 15.1 pounds VOC per gallon of deposited solids from the guidecoat or surfacer coating line. (Antichip coatings applied to automobile and light-duty truck components such as rocker panels, the bottom edges of doors and fenders, and the leading edge of the roof, are considered to be guidecoat or surfacer coatings.)

(b) For a prime coat coating line not employing electrodeposition, 1.9 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 2.6 pounds of VOC per gallon of solids.

(c) For a topcoat coating line, 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or 15.1 pounds VOC per gallon of deposited solids.

(d) For a final repair coating line, 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 13.8 pounds of VOC per gallon of solids.

(2) The emission limitations specified in paragraph (C)(1) of this rule shall apply to the application of surface coatings, except sound-proofing materials, to the frame, main body, interior panels and exterior sheet metal such as the hood, trunk lid, fenders, cargo boxes, doors and grill openings of an automobile or light-duty truck and to other parts that are coated along with these bodies or body parts. The emission limitation specified in paragraph (C)(1)(c) of this rule is a daily volume-weighted average of the entire topcoat operation (i.e., all spray booths, flash-off areas and bake ovens where topcoat coatings are applied, dried, and cured, except those spray booths, flash-off areas and bake ovens in the final repair coating line). The emission limitation specified in paragraph (C)(1)(a)(v) of this rule is a daily volume-weighted average of the entire guidecoat and surfacer operation (i.e., all spray booths, flash-off areas and bake ovens where guidecoat and surfacer coatings are applied, dried, and cured, except those spray booths, flash-off areas and bake ovens in the final repair topcoat coating line).

(3) When an owner or operator of an automobile or light-duty truck assembly plant chooses to comply with the pounds VOC per gallon of deposited solids limitation specified in paragraphs (C)(1)(a)(v) and (C)(1)(c) of this rule, the test method for determining the transfer efficiency of the coating line and for determining compliance of the coating line with applicable emission limitations shall be in accordance with the publication specified in paragraph (C)(4) of this rule.

(4) As expeditiously as practicable but not later than December 1, 1990 for any topcoat coating line and not later than July 1, 1995 for any guidecoat or surfacer coating line, any owner or operator of an automobile or light-duty truck assembly plant shall maintain daily records for the guidecoat or surfacer coating line and for the topcoat coating line and shall demonstrate compliance with paragraphs (C)(1)(a)(v) and (C)(1)(c) of this rule in accordance with the USEPA publication entitled "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations". A copy of records indicating an exceedance of paragraphs (C)(1)(a)(v) and (C)(1)(c) of this rule limitations shall be sent to the director within thirty days following the end of the calendar month. These recordkeeping and reporting requirements are in lieu of those contained in paragraph (B)(3) of this rule.

(D) Surface coating of cans.

(1) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a two-piece can coating operation may cause, allow, or permit the discharge into the ambient air of any volatile organic compounds after the date specified in paragraph (C)(3) of rule 3745-21-04 of the Administrative Code in excess of the following:

(a) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.5 pounds of VOC per gallon of solids from a basecoat coating line;

(b) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.5 pounds of VOC per gallon of solids from an overvarnish coating line;

(c) 4.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 9.8 pounds of VOC per gallon of solids from an interior body coating line;

(d) 4.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 9.8 pounds of VOC per gallon of solids from an exterior bottom end coating line; and

(e) 3.7 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 7.4 pounds of VOC per gallon of solids from an end sealing compound coating line.

(2) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a three-piece can coating operation may cause, allow, or permit the discharge into the ambient air of any volatile organic compounds after the date specified in paragraph (C)(3) of rule 3745-21-04 of the Administrative Code in excess of the following:

(a) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.5 pounds of VOC per gallon of solids from a basecoat coating line;

(b) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.5 pounds of VOC per gallon of solids from an overvarnish coating line;

(c) 4.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 9.8 pounds of VOC per gallon of solids from an interior body coating line;

(d) 5.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 21.7 pounds of VOC per gallon of solids from a side-seam coating line; and

(e) 3.7 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 7.4 pounds of VOC per gallon of solids from an end sealing compound coating line.

(3) Alternative daily emission limitation:

(a) Any owner or operator of a two-piece or three-piece can coating operation may obtain from the director an alternative daily emission limitation for the emission limitations specified in paragraph (D)(1) or (D)(2) of this rule. The alternative daily emission limitation shall be determined according to paragraph (D)(3)(b) of this rule and the actual daily emission shall be determined according to paragraph (D)(3)(c) of this rule. Prior to obtaining the alternative daily emission limitation, the owner or operator shall demonstrate to the satisfaction of the director that the actual daily emission will not exceed the alternative daily emission limitation after the date specified in paragraph (C)(3) of rule 3745-21-04 of the Administrative Code and that the record-keeping requirements of paragraph (D)(3)(d) of this rule shall be met.

(b) The alternative daily emission limitation (A_d) shall be determined on a daily basis as follows:

$$A_d = \sum_{i=1}^{n} V_i L_i \frac{(D_i - C_i)}{(D_i - L_i)}$$

Where A_d = pounds of VOC emissions allowed for the day,

C = VOC content of surface coating employed, in pounds of VOC per gallon of coating, excluding water and exempt solvents,

D = density of VOC content of surface coating employed, in pounds of VOC per gallon of VOC (a standard density of 7.36 may be used if it is used for all surface coatings employed),

V = volume of surface coating employed for the day, in gallons (excluding water and exempt solvents),

L = emission limitation for the surface coating employed as specified in paragraph (D)(1) or (D)(2) of this rule, in pounds of VOC per gallon of coating (excluding water and exempt solvents),

i = subscript denoting a specific surface coating employed, and

n = total number of surface coatings employed in can coating operation.

(c) The actual daily emission (E_d) shall be determined on a daily basis as follows:

$$E_d = \sum_{i=1}^{n} V_i C_i (1 - F_i)$$

Where E_d = actual pounds of VOC emissions for the day,

F = fraction by weight of VOC emissions from the surface coating reduced or prevented from being emitted by control equipment, and V, C, i and n are defined as in paragraph (D)(3)(b) of this rule.

(d) Record-keeping requirements:

(i) Daily records shall be maintained for a period of not less than two years which list the usage of surface coatings or which list other data, as authorized by the director, that approximate the usage of surface coatings. The following data shall be listed for each surface coating being recorded: VOC content (in pounds of VOC per gallon of coating, excluding water and exempt solvents), density of VOC content of coating (in pounds of VOC per gallon of VOC) unless the standard density of 7.36 is recorded, and the type of surface coating according to the classification contained within paragraphs (D)(1) and (D)(2) of this rule.

(ii) Daily records shall be maintained for a period of not less than two years which include the following for any control equipment designed to reduce or prevent the emission of VOC: downtime, any operational problems and/or malfunctions which reduce the effective control efficiency, and the average control efficiency, if less than the normally expected control efficiency.

(iii) Other records shall be maintained, as deemed necessary by the director, in order to provide information on VOC emissions and/or compliance with the alternative daily emission limitation.

(E) Except as otherwise provided in paragraphs (B)(6) and (D) of this rule, no owner or operator of a coil coating line may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(4) of rule 3745-21-04 of the Administrative Code in excess of 2.6 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.0 pounds of VOC per gallon of solids from a prime coat, topcoat, or single coat coating line.

(F) Paper coating lines.

(1) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a paper coating line which has a maximum application of coating materials greater than three gallons in any one day may cause, allow or permit the discharge into the ambient air of any volatile organic compounds after the date specified in paragraph (C)(5) of rule 3745-21-04 of the Administrative Code in excess of 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.8 pounds of VOC per gallon of solids from such paper coating line.

(2) In addition to the requirements specified in paragraph (F)(1) of this rule, the following requirements are applicable to all paper coating lines located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties.

(a) Any owner or operator of a paper coating line with potential emissions that are equal to or greater than 25.0 tons per year of VOC before the application of capture and control devices shall comply with either of the following requirements for the coating line:

(i) Employ a control system in order to reduce VOC emissions from the paper coating line by at least ninety per cent or maintain a maximum VOC outlet concentration of twenty ppmv on a dry basis, whichever is less stringent.

(ii) Employ coatings in the paper coating line that comply with the following VOC content limitations:

-VOC content limitations-

Coating Type	Pound of VOC/Pound of Coating
pressure surface coatings (not including pressure sensitive tape and labels)	0.08
pressure sensitive tape and label surface coatings	0.067

(b) Work practice standards for cleaning materials.

Unless emissions to the atmosphere are controlled by an approved emission control system with an overall control efficiency of at least ninety per cent, any person using an organic solvent for cleanup shall:

(i) Store all VOC containing cleaning materials and used shop towels in closed containers;

(ii) Ensure that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(iii) Minimize spills of VOC-containing cleaning materials;

(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

(v) Minimize VOC emission from cleaning of storage, mixing, and conveying equipment.

(G) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a fabric coating line may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(6) of rule 3745-21-04 of the Administrative Code in excess of 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.8 pounds of VOC per gallon of solids from a fabric coating line.

(H) Except as otherwise provided in paragraph (XX) of this rule, no owner or operator of a vinyl coating line may cause, allow or permit the discharge into the ambient air of any VOCs from such coating line after the date specified in paragraph (C)(7) of rule 3745-21-04 of the Administrative Code, unless the requirements of either paragraph (H)(1) or (H)(2) of this rule are satisfied.

(1) The VOC content of the coatings employed in the vinyl coating line, as determined under paragraph (B) of rule 3745-21-10 of the Administrative Code, does not exceed the following limitation:

(a) 4.8 pounds of VOC per gallon of vinyl coating, excluding water and exempt solvents; or

(b) Twenty-five per cent VOC by volume of the volatile matter of the vinyl coating.

(2) The vinyl coating line is equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOCs, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code:

(a) A capture efficiency which is at least seventy-five per cent by weight; and

(b) A control efficiency which is at least ninety per cent by weight.

(3) The requirements specified in paragraphs (H)(1) and (H)(2) of this rule shall not apply to the application of organisol or plastisol coatings.

(I) Surface coating of metal furniture.

(1) Except as otherwise provided in paragraphs (B)(6), (I)(2) and (I)(3) of this rule, no owner or operator of a prime coat, topcoat, or single coat coating line for metal furniture may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(8) of rule 3745-21-04 of the Administrative Code in excess of 3.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 5.1 pounds of VOC per gallon of solids from such prime coat, topcoat, or single coat coating line.

(2) Any owner or operator of a prime coat, topcoat, or single coat coating line for metal furniture may obtain from the director an alternative emission limitation for the limitation specified in paragraph (I)(1) of this rule. The owner or operator shall demonstrate to the satisfaction of the director, prior to obtaining an alternative emission limitation, that the alternative emission limitation is, at a minimum, equivalent in terms of total daily emissions of VOCs to the applicable requirement of paragraph (I)(1) of this rule. For purposes of this demonstration, the director shall recognize that the emission limitation in paragraph (I)(1) of this rule is equivalent to 8.4 pounds VOC per gallon of deposited solids and is based upon a coating applicator transfer efficiency of sixty per cent. If the director approves an alternative emission limitation for a prime coat, topcoat, or single coat coating line for metal furniture, said limitation and the associated transfer efficiency shall be specified in the special terms and conditions of a operating permit or variance issued by the director for the coating line. If the test method for determining the transfer efficiency for a coating line has not been approved by the USEPA as part of the state implementation plan, the permit to operate or variance issued by the director for the coating line must be approved by the USEPA as a revision to the state implementation plan.

(3) Exemptions.

(a) Exempted from the requirements of paragraph (I)(1) of this rule are the prime coat, topcoat, or single coat coating lines for metal furniture at a facility, only if all such lines, in combination, emit less than fifteen pounds of VOC per day (before add-on controls).

(b) Exempted from the requirements of paragraph (I)(1) of this rule is any application of a coating to a part not defined as metal furniture.

(4) In addition to the requirements specified in paragraph (I)(1) of this rule the following requirements are applicable to all metal furniture coating lines located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties.

(a) Except as otherwise provided in paragraph (I)(4)(b) of this rule, no owner or operator of a coating line for metal furniture may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in

paragraph (C)(8) of rule 3745-21-04 of the Administrative Code in excess of the VOC limitations specified in the following table:

-VOC content (pound per gallon of coating, less water and exempt solvents)-

Coating	Air-Dried Coating (controls not employed)	Baked Coating (controls not employed)
general one-component	2.3	2.3
general multi-component	2.8	2.3
solar-absorbent	3.5	3.0
heat-resistant	3.5	3.0
extreme high-gloss	2.8	3.0
metallic	3.5	3.5
extreme performance	3.5	3.0
pretreatment coatings	3.5	3.5

The recommended emission limits can also be expressed in terms of mass of VOC per volume of coating solids, as applied. A facility could use low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the recommended mass of VOC per volume of coating solids limits. Using an assumed VOC density of 7.36 pounds per gallon, the equivalent limits in terms of mass of VOC per volume of solids, as applied, are as follows:

-VOC content (pound per gallon of coating solids, as applied)-

Coating	Air-Dried Coating (controls employed)	Baked Coating (controls employed)
general one-component	3.3	3.3
general multi-component	4.5	3.3
extreme high gloss	4.5	5.1
extreme performance	6.7	5.1
heat resistant	6.7	5.1
metallic	6.7	6.7
pretreatment coatings	6.7	6.7
solar absorbent	6.7	5.1

(b) Exemptions.

(i) Exempted from the requirements of paragraph (I)(4) of this rule are the coating lines for metal furniture at a facility, only if all such lines, in combination, emit less than fifteen pounds of VOC per day (before add-on controls).

(ii) Exempted from the requirements of paragraph (I)(4) of this rule is any application of coating to a part not defined as metal furniture.

(iii) The provisions of paragraphs (I)(4)(a) and (I)(4)(d) of this rule shall not apply to:

(a) Stencil coatings;

(b) Safety-indicating coatings;

(c) Solid-film lubricants;

(d) Touch-up and repair coatings; and

(e) Coating application utilizing hand-held aerosol cans.

(c) Operating equipment.

A person shall not apply VOC-containing coatings to metal furniture unless the coating is applied with equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(i) Electrostatic application;

(ii) Flow coat;

(iii) Dip coat;

(iv) Roll coat;

(v) HVLP spray;

(vi) Hand application methods; or

(vii) Such other coating application methods as are demonstrated to the director to be capable of achieving a transfer efficiency equivalent or better to the method listed in paragraph (I)(4)(c)(v) of this rule and for which written approval of the director has been obtained.

(d) Work practices for coating-related activities.

Unless emissions to the atmosphere are controlled by an approved emission control system with an overall control efficiency of at least ninety per cent, any person performing coating related activities shall:

(i) Store all VOC-containing coatings, thinners, and coating-related waste materials in closed containers;

(ii) Ensure that mixing and storage containers used for VOC-containing coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing these materials;

(iii) Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; and

(iv) Convey VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes.

(e) Work practice standards for cleaning materials.

Unless emissions to the atmosphere are controlled by an approved emission control system with an overall control efficiency of at least ninety per cent, any person using an organic solvent for cleanup shall:

(i) Store all VOC containing cleaning materials and used shop towels in closed containers;

(ii) Ensure that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(iii) Minimize spills of VOC-containing cleaning materials;

(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

(v) Minimize VOC emission from cleaning of storage, mixing, and conveying equipment.

(J) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a magnet wire coating line may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(9) of rule 3745-21-04 of the Administrative Code in excess of 1.7 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 2.2 pounds of VOC per gallon of solids from a magnet wire coating line.

(K) Surface coating of large appliances.

(1) Except as otherwise provided in paragraphs (B)(6), and (K)(2) to (K)(4) of this rule, no owner or operator of a prime coat, single coat or topcoat coating line for large appliances may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(10) of rule 3745-21-04 of the Administrative Code in excess of 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 4.5

pounds of VOC per gallon of solids from such prime coat, single coat, or topcoat coating line.

(2) The emission limit under paragraph (K)(1) of this rule shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the maximum usage of such lacquers does not exceed one quart in any eight-hour period.

(3) Any owner or operator of a prime coat, single coat or topcoat coating line for large appliances may obtain from the director an alternative emission limitation for the limitation specified in paragraph (K)(1) of this rule. The owner or operator shall demonstrate to the satisfaction of the director, prior to obtaining an alternative emission limitation, that the alternative emission limitation is, at a minimum, equivalent in terms of total daily emissions of VOCs to the applicable requirement of paragraph (K)(1) of this rule. For purposes of this demonstration, the director shall recognize that the emission limitation in paragraph (K)(1) of this rule is equivalent to 7.5 pounds VOC per gallon of deposited solids and is based upon a coating applicator transfer efficiency of sixty per cent. If the director approves an alternative emission limitation for a prime coat, single coat or topcoat coating line for large appliances, said limitation and the associated transfer efficiency shall be specified in the special terms and conditions of an operating permit or variance issued by the director for the coating line. If the test method for determining the transfer efficiency for a coating line has not been approved by the USEPA as part of the state implementation plan, the permit to operate or variance issued by the director for the coating line must be approved by the USEPA as a revision to the state implementation plan.

(4) The emission limit under paragraph (K)(1) of this rule shall not apply to any large appliance coating line for which construction commenced prior to October 19, 1979 and which is located at the following facilities, unless a modification for any such coating line has commenced on or after October 19, 1979:

(a) The "Whirlpool Corporation (Findlay Division)" facility located at 4901 North Main street, Findlay, Ohio; and

(b) The "Whirlpool Corporation (Marion Division)" facility located at 1300 Marion-Agosta road, Marion, Ohio.

(5) The emission limit under paragraph (K)(1) of this rule shall not apply to large appliance coatings that are subject to in-use temperatures in excess of two hundred fifty degrees Fahrenheit.

(6) In addition to the requirements specified in paragraph (K)(1) of this rule the following requirements are applicable to all surface coatings operations for large appliances located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit counties.

(a) Except as otherwise provided in paragraph (K)(6)(b) of this rule, no owner or operator of a coating line for large appliances may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(10) of rule 3745-21-04 of the Administrative Code in excess of the VOC limitations specified in the following table.

-VOC content emission limitations (pounds per gallon of coating, less water and exempt solvents)-

Coating Type	Air-Dried (controls not employed)	Baked Coating (controls not employed)
general one-component	2.3	2.3
general multi-component	2.8	2.3
solar-absorbent	3.5	3.0
heat-resistant	3.5	3.0
extreme high-gloss	2.8	3.0
metallic	3.5	3.5
extreme performance	3.5	3.0
pretreatment coatings	3.5	3.5

The recommended emission limits can also be expressed in terms of mass of VOC per volume of coating solids, as applied. A facility could use low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the recommended mass of VOC per volume of coating solids limits. Using an assumed VOC density of 7.36 pounds per gallon, the equivalent limits in terms of mass of VOC per volume of solids, as applied, are as follows:

-VOC content (pounds per gallon of coating solids, as applied)-

Coating	Air-Dried Coating (controls employed)	Baked Coating (controls employed)
general one-component	3.3	3.3
general multi-component	4.5	3.3
extreme high gloss	4.5	5.1
extreme performance	6.7	5.1
heat resistant	6.7	5.1
metallic	6.7	6.7
pretreatment coatings	6.7	6.7
solar absorbent	6.7	5.1

(b) Exemptions.

(i) Exempted from the requirements of paragraph (K)(6) of this rule are coating lines for large appliances at a facility, only if all such lines, in

combination, emit less than fifteen pounds of VOC per day (before add-on controls).

(ii) The provisions of paragraphs (K)(6)(a) and (K)(6)(e) of this rule shall not apply to:

(a) Stencil coatings;

(b) Safety-indicating coatings;

(c) Solid-film lubricants;

(d) Electric-insulating and thermal-conducting coatings;

(e) Touch-up and repair coatings; and

(f) Coating application utilizing hand-held aerosol cans.

(c) Operating equipment.

A person shall not apply VOC-containing coatings to a large appliance unless the coating is applied with equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(i) Electrostatic application;

(ii) Flow coat;

(iii) Dip coat;

(iv) Roll coat;

(v) HVLP spray;

(vi) Hand application methods; or

(vii) Such other coating application methods as are demonstrated to the director to be capable of achieving a transfer efficiency equivalent or better to the method listed in paragraph (K)(6)(c)(v) of this rule and for which written approval of the director has been obtained.

(d) Work practices for coating-related activities.

Unless emissions to the atmosphere are controlled by an approved emission control system with an overall control efficiency of at least ninety per cent, any person performing coating related activities shall:

(i) Store all VOC-containing coatings, thinners, and coating-related waste materials in closed containers;

(ii) Ensure that mixing and storage containers used for VOC-containing coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing these materials;

(iii) Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; and

(iv) Convey VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes.

(e) Work practice standards for cleaning materials.

Unless emissions to the atmosphere are controlled by an approved emission control system with an overall control efficiency of at least ninety per cent, any person using an organic solvent for cleanup shall:

(i) Store all VOC containing cleaning materials and used shop towels in closed containers;

(ii) Ensure that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(iii) Minimize spills of VOC-containing cleaning materials;

(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

(v) Minimize VOC emission from cleaning of storage, mixing, and conveying equipment.

(L) Storage of petroleum liquids in fixed roof tanks.

(1) No person shall place, store, or hold in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute after the date specified in paragraph (C)(11) of rule 3745-21-04 of the Administrative Code unless such tank, is designed or equipped as follows, except where exempted under paragraph (L)(2) of this rule:

(a) Vapor control equipment which is one of the following:

(i) Internal floating roof; or

(ii) Alternative equivalent control for VOC emissions as may be approved by the director.

(b) If equipped with an internal floating roof, the automatic bleeder vents are to be closed at all times except when the roof is floated off or landed on the roof leg supports, and the rim vents, if provided, are to be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.

(c) All openings, except stub drains, are to be equipped with a cover, seal or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.

(d) Other means for reducing the emission of VOC into the ambient air as may be required by the director.

(2) The following tanks are exempted from paragraph (L)(1) of this rule:

(a) Fixed roof tank with a capacity less than forty thousand gallons; and

(b) Fixed roof tank with a capacity less than four hundred twenty-two thousand gallons and used to store produced crude oil and condensate prior to lease custody transfer.

(3) Any owner or operator of a fixed roof tank that is not exempted pursuant to paragraph (L)(2) of this rule shall maintain records of the following information in a readily accessible location for at least five years and shall make copies of the records available to the director upon verbal or written request.

(a) The types of petroleum liquids stored in the tank.

(b) The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater 1.0 pound per square inch absolute.

(4) If an owner or operator places, stores, or holds in a fixed roof tank, that is not exempted pursuant to paragraph (L)(2) of this rule, any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of paragraph (L)(1) of this rule, the owner or operator shall so notify the director within thirty days of becoming aware of the occurrence.

(M) Refinery vacuum producing systems, wastewater separators, and process unit turnarounds.

(1) Each owner or operator of a petroleum refinery shall control the emissions of VOC from any vacuum producing systems no later than the date specified in paragraph (C)(12) of rule 3745-21-04 of the Administrative Code by piping the vapors to an appropriate firebox or incinerator, or by compressing the vapors and adding them to the refinery fuel gas system.

(2) Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, each owner or operator of a petroleum refinery shall control the emissions of VOC from any wastewater separator no later than the date specified in paragraph (C)(13) of rule 3745-21-04 of the Administrative Code by equipping all forebay sections and other separator sections with covers and seals which minimize the amount of oily water exposed to the ambient air. In addition, all covers and forebay and separator sections shall be equipped with lids and seals which are kept in a closed position at all times except when in actual use.

(3) Process unit turnarounds.

(a) Each owner or operator of a petroleum refinery shall control the emissions of VOC from process unit turnarounds no later than the date specified in paragraph (C)(14) of rule 3745-21-04 of the Administrative Code by combusting the vapors as fuel gas or by flaring the vapors until the pressure in the process vessel is 19.7 pounds per square inch absolute or less.

(b) Each owner or operator of a petroleum refinery shall maintain records for a minimum of two years for each process unit turnaround. Such records shall include:

(i) The date the unit was shut down;

(ii) The approximate pressure of the vapors in the process vessel when the VOC emissions were first discharged to the ambient air; and

(iii) The approximate total quantity of VOC emitted to the ambient air.

(N) Use of cutback asphalts and emulsified asphalts in road construction and maintenance.

(1) Except where exempted under paragraph (N)(3) of this rule, no person may allow or permit the use or application of cutback asphalts in road construction and maintenance after the date specified in paragraph (C)(15) of rule 3745-21-04 of the Administrative Code.

(2) Except where exempted under paragraph (N)(3) of this rule, no person may allow or permit the use or application of any emulsified asphalt in road construction and maintenance after the date specified in paragraph (C)(15) of rule 3745-21-04 of the Administrative Code unless the oil distillate content of such emulsified asphalt, as determined by ASTM D244-04, "Standard Method of Testing Emulsified Asphalt," is less than or equal to:

(a) 8.0 per cent by volume for an open-graded mix;

(b) 12.0 per cent by volume for a dense-graded mix; or

(c) 3.0 per cent by volume for any use or application not regulated under paragraphs (N)(2)(a) and (N)(2)(b) of this rule.

(3) The requirements of paragraphs (N)(1) and (N)(2) of this rule shall not apply:

(a) During the period from October fifteenth through April fifteenth;

(b) To the use or application of a prime coat;

(c) To the use or application of any maintenance mix which is to be stockpiled for at least thirty days; and

(d) To the use or application of any cutback asphalt or emulsified asphalt on an unpaved road for the purpose of dust control.

(4) Recordkeeping requirements

(a) Any person using or applying a cutback asphalt or emulsified asphalt in road construction or maintenance during the period from April fifteenth through October fifteenth shall maintain the following records for each cutback asphalt or emulsified asphalt used or applied during that period:

(i) The type and quantity employed;

(ii) If an emulsified asphalt, the oil distillate content;

(iii) The date(s) of application;

(iv) An identification of the road segments where applied;

(v) The type of application (e.g., prime coat, tack coat, seal coat, maintenance mix, crack sealing, dust control, etc.); and

(vi) If the application is by hand for crack sealing, the quantity employed each day per work crew.

(b) The records required by paragraph (N)(4)(a) of this rule shall be maintained for a minimum of two years and shall be available for review by the director or authorized representative during normal business hours.

(O) Solvent metal cleaning.

(1) Except where exempted under paragraph (O)(6) of this rule, the requirements in paragraphs (O)(2), (O)(3), and (O)(4) of this rule shall be satisfied no later than the dates specified in paragraph (C)(16) of rule 3745-21-04 of the Administrative Code.

(2) Each owner or operator of a cold cleaner shall:

(a) Equip the cold cleaner with either:

(i) A cover; and if the solvent has a vapor pressure greater than 0.3 pound per square inch absolute measured at one hundred degrees Fahrenheit, or the solvent is heated or agitated, the cover shall be designed and constructed so that it can be easily operated with one hand; or

(ii) A remote solvent reservoir from which solvent is pumped through a nozzle suspended over a sink-like work area which drains back to the reservoir, provided the sink-like work area has an open drain area of less than sixteen square inches and provided the solvent neither is heated above one hundred twenty degrees Fahrenheit nor has a vapor pressure greater than 0.6 pound per square inch absolute, measured at one hundred degrees Fahrenheit;

(b) Equip the cold cleaner with a device for draining the cleaned parts; and if the solvent has a vapor pressure greater than 0.6 pound per square inch absolute, measured at one hundred degrees Fahrenheit, the drainage facility shall be constructed internally so that parts are enclosed under the cover during draining unless an internal type drainage device cannot fit into the cleaning system;

(c) Install one of the following devices if the solvent vapor pressure is greater than 0.6 pound per square inch absolute measured at one hundred degrees Fahrenheit, or if the solvent is heated above one hundred twenty degrees Fahrenheit:

(i) Freeboard that gives a freeboard ratio greater than or equal to 0.7;

(ii) Water cover (solvent must be insoluble in and heavier than water); or

(iii) Other systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the director; and

(d) Operate and maintain the cold cleaner in accordance with the following practices to minimize solvent evaporation from the unit:

(i) Provide a permanent, legible, conspicuous label, summarizing the operating requirements.

(ii) Store waste solvent in covered containers.

(iii) Close the cover whenever parts are not being handled in the cleaner.

(iv) Drain the cleaned parts until dripping ceases.

(v) If used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower-type spray) at a pressure that does not exceed ten pounds per square inch gauge.

(vi) Clean only materials that are neither porous nor absorbent.

(e) Notwithstanding the exemption specified in paragraph (O)(6)(b) of this rule, for each cold cleaner located in Ashtabula, Butler, Clark, Clermont, Cuyahoga, Geauga, Greene, Hamilton, Lake, Lorain, Medina, Miami, Montgomery, Portage, Summit, and Warren counties, comply with the following requirements:

(i) The solvent material employed in the cold cleaner shall have a vapor pressure that does not exceed 1.0 mmHg (0.019 psi) measured at twenty degrees Celsius (sixty-eight degrees Fahrenheit).

(ii) The owner or operator of each cold cleaner shall maintain records for a minimum of five years that include the following information for each solvent purchased:

(a) The date of the purchase;

(b) The name, company identification, and chemical composition of the solvent; and

(c) The vapor pressure of the solvent measured in mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit), as determined by ASTM D2879-97, "Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

(iii) The cleaning of electronic components as defined in paragraph (G)(3) of rule 3745-21-01 of the Administrative Code are exempt from the requirements of paragraph (O)(2)(e) of this rule.

(iv) The cleaning of paint gun parts, through the use of cold cleaners as defined in paragraph (G)(1) of rule 3745-21-01 of the Administrative Code, for the removal of paint and coatings, is exempt from the requirements of paragraph (O)(2)(e) of this rule.

(3) Each owner or operator of an open top vapor degreaser shall:

(a) Equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;

(b) Install the following safety switches:

(i) A condenser thermostat or any other device which shuts off the sump heat if the condenser coolant is either not circulating or too warm;

(ii) A spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle;

(iii) A vapor level control thermostat or any other device which shuts off the sump heat when the vapor level rises too high; and

(iv) A water flow switch, water pressure switch or any other device which shuts off the sump heat if the water in a water-cooled condenser has no flow or no pressure, whichever is being monitored.

(c) Install one of the following devices:

(i) A freeboard with a freeboard ratio greater than or equal to 0.75, and if the open top vapor degreaser opening is greater than ten square feet, the cover must be powered or equipped with mechanical features whereby it can be readily closed when the degreaser is not in use;

(ii) Refrigerated chiller;

(iii) Enclosed design (cover or door opens only when the dry part is actually entering or exiting the open top vapor degreaser);

(iv) Carbon adsorption system, with ventilation greater than or equal to fifty cubic feet per minute per square foot of air/solvent interface (when cover is open), and exhausting less than twenty-five parts per million of solvent averaged over one complete adsorption cycle; or

(v) A control system, demonstrated to have control efficiency equivalent to or greater than any of the above, and approved by the director; and

(d) Operate and maintain the open top vapor degreaser in accordance with the following practices to minimize solvent evaporation from the unit:

(i) Keep the cover closed at all times except when processing work loads through the degreaser.

(ii) Minimize solvent carryout by:

(a) Racking parts so that solvent drains freely and is not trapped.

(b) Moving parts in and out of the degreaser at less than eleven feet per minute.

(c) Holding the parts in the vapor zone at least thirty seconds or until condensation ceases, whichever is longer.

(d) Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone.

(e) Allowing parts to dry within the degreaser for at least fifteen seconds or until visually dry, whichever is longer.

(iii) Clean only materials that are neither porous nor absorbent.

(iv) Occupy no more than one-half of the degreaser's open-top area with a workload.

(v) Always spray within the vapor level.

(vi) Repair solvent leaks immediately, or shut down the degreaser.

(vii) Store waste solvent only in covered containers.

(viii) Operate the cleaner such that water cannot be visually detected in solvent exiting the water separator.

(ix) Use no ventilation fans near the degreaser opening.

(x) When the cover is open, do not expose the open top vapor degreaser to drafts greater than one hundred thirty-one feet per minute, as measured between three and six feet upwind and at the same elevation as the tank lip.

(xi) If a lip exhaust is used on the open top vapor degreaser, do not use a ventilation rate that exceeds sixty five cubic feet per minute per square foot of degreaser open area, unless a higher rate is necessary to meet occupational safety and health administration requirements.

(xii) Provide permanent, conspicuous label, summarizing the operating procedures.

(4) Each owner or operator of a conveyorized degreaser shall:

(a) Install one of the following devices on all conveyorized degreasers having an air/solvent interface greater than twenty-two square feet:

(i) Refrigerated chiller;

(ii) Carbon adsorption system, with ventilation greater than or equal to fifty cubic feet per minute per square foot of air/solvent interface (when downtime covers are open), and exhausting less than twenty-five parts per million of solvent by volume averaged over a complete adsorption cycle; or

(iii) A system, demonstrated to have a control efficiency equivalent to or greater than paragraph (O)(4)(a)(i) or (O)(4)(a)(ii) of this rule, and approved by the director;

(b) Equip the conveyorized degreaser with equipment, such as a drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;

(c) Install the following safety switches, if the solvent is heated to its boiling point:

(i) A condenser flow switch and thermostat or any other device which shuts off the sump heat if the condenser coolant is either not circulating or too warm;

(ii) A spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle; and

(iii) A vapor level control thermostat or any other device which shuts off the sump heat when the vapor level rises too high;

(d) Equip the conveyorized degreaser with covers for closing off the entrance and exit when not in use, unless the conveyorized degreaser is equipped

with a refrigerated chiller or carbon adsorption system that is always in use except during maintenance; and

(e) Operate and maintain the conveyorized degreaser in accordance with the following practice to minimize solvent evaporation from the unit:

(i) Use no workplace fans near the degreaser opening, and ensure that exhaust ventilation does not exceed sixty-five cubic feet per minute per square foot of degreaser opening, unless a higher rate is necessary to meet occupational safety and health administration requirements.

(ii) Minimize openings during operation so that entrances and exits silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than ten per cent of the width of the opening.

(iii) Provide downtime covers for closing off the entrance and exit during shutdown hours.

(iv) Minimize carryout emission by:

(a) Racking parts so that solvent drains freely from parts and is not trapped.

(b) Maintaining the vertical conveyor speed at less than eleven feet per minute.

(v) Store waste solvent only in covered containers.

(vi) Repair solvent leaks immediately, or shut down the degreaser.

(vii) Operate the cleaner such that water cannot be visually detected in solvent exiting the water separator.

(viii) Place downtime covers over entrances and exits of the conveyorized degreaser at all times when the conveyors and exhausts are not being operated.

(ix) Clean only materials that are neither porous nor absorbent.

(5) Any owner or operator of a solvent metal cleaning operation shall maintain records of the following information in a readily accessible location for at least five years and shall make these records available to the director upon verbal or written request:

(a) All control equipment maintenance such as replacement of the carbon in a carbon adsorption unit.

(b) The results of all emission tests conducted to demonstrate compliance with the requirements of paragraph (O)(3)(c)(iv), (O)(3)(c)(v), (O)(4)(a)(ii), or (O)(4)(a)(iii) of this rule.

(c) For cold cleaners, the types of solvents employed and the vapor pressure of each solvent (pounds per square inch absolute) measured at one hundred degrees Fahrenheit.

(6) Exemptions:

(a) Paragraph (O)(2)(d)(v) of this rule shall not apply to cold cleaners that are research and development sources, as defined under section 3704.01 of the Revised Code, provided that the owner or operator maintains records which demonstrate that the combined VOC emissions from the exempted research and development sources are less than five tons per calendar year.

(b) After June 15, 1999, except as provided in paragraph (O)(2)(e), paragraphs (O)(2) to (O)(5) of this rule shall not apply to any solvent metal cleaning operation which is subject to 40 CFR Part 63, Subpart T, provided the requirements of Subpart T are specified in the terms and conditions of installation and/or operating permit issued by the director.

(c) Where VOC-containing cleaners that exceed the vapor pressure requirements of paragraph (O)(2)(e)(i) of this rule are used to clean cured resin from application equipment, the cleaning of resin application equipment at facilities subject to and complying with the requirements of 40 CFR Part 63, Subpart WWWW, is exempt from the requirements of paragraph (O)(2)(e)(i) of this rule.

(d) The cleaning of medical parts subject to regulation by the food and drug administration and metal parts subject to federal aviation administration and department of defense cleaning solvent specifications is exempt from the requirements of paragraph (O)(2)(e)(i) of this rule provided a documented conflict between said specification and the vapor pressure requirements of paragraph (O)(2)(e)(i) of this rule occurs. Such documentation shall be provided to the appropriate Ohio EPA district office or local air agency.

(P) Bulk gasoline plant.

(1) No owner or operator of a bulk gasoline plant may cause, allow or permit the transfer of gasoline at a bulk gasoline plant after the date specified in paragraph (C)(17) of rule 3745-21-04 of the Administrative Code unless the following

requirements are met, except where exempted under paragraph (P)(5) of this rule:

(a) Each stationary storage tank which stores gasoline at the bulk gasoline plant is loaded by means of a submerged fill pipe;

(b) For any transfer of gasoline from a delivery vessel to a stationary storage tank located at the bulk gasoline plant, the vapors displaced from the stationary storage tank are processed by one of the following systems:

(i) A vapor balance system which is equipped with a vapor tight vapor line from the stationary storage tank to the delivery vessel and a means to ensure that the vapor line is connected before gasoline can be transferred and which is designed and operated to route at least ninety per cent by weight of the VOC in the displaced vapors to the delivery vessel; or

(ii) A vapor control system which is designed and operated to recover at least ninety per cent by weight of the VOC in the displaced vapors;

(c) Any loading rack at the bulk gasoline plant which transfers gasoline to a delivery vessel is equipped for top submerged filling or bottom filling for the transfer of gasoline;

(d) For any transfer of gasoline from a loading rack located at the bulk gasoline plant to a delivery vessel, the vapors displaced from delivery vessel are processed by one of the following systems:

(i) A vapor balance system which is equipped with a vapor tight vapor line from the delivery vessel to the stationary storage tank being unloaded and a means to ensure that the vapor line is connected before gasoline can be transferred and which is designed and operated to route at least ninety per cent by weight of the VOC in the displaced vapors to the stationary storage tank; or

(ii) A vapor control system which is designed and operated to recover at least ninety per cent by weight of the VOC in the displaced vapors; and

(e) All gasoline loading lines, unloading lines and vapor lines are equipped with fittings which are vapor tight.

(2) When a vapor balance system is employed to meet the requirements of paragraph (P)(1)(b) or (P)(1)(d) of this rule, the following operating practices shall be followed:

(a) The vapor balance system shall be kept in good working order and shall be used at all times during the transfer of gasoline;

(b) The delivery vessel hatches shall be closed at all times during the loading of the delivery vessel;

(c) There shall be no leaks in the delivery vessel pressure/vacuum relief valves and hatch covers;

(d) There shall be no leaks in the vapor and liquid lines during the transfer of gasoline; and

(e) The pressure relief valves on the stationary storage tanks and delivery vessels shall be set to release at no less than 0.7 pound per square inch gauge or the highest possible pressure (in accordance with state or local fire codes, or the "National Fire Prevention Association" guidelines).

(3) No owner or operator of a bulk gasoline plant may permit gasoline to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

(4) Any owner or operator of a bulk gasoline plant shall repair within fifteen days any leak from the vapor balance system or vapor control system which is employed to meet the requirements of paragraph (P)(1) of this rule when such leak is equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of rule 3745-21-10 of the Administrative Code.

(5) Exemptions.

(a) Paragraphs (P)(1) to (P)(4) of this rule shall not apply to a bulk gasoline plant which has an average daily throughput, based upon the number of days during a calendar year when the bulk plant was actually in operation, of less than four thousand gallons of gasoline.

(b) Paragraph (P)(1)(b) of this rule shall not apply to any stationary storage tank which is equipped with either an internal floating roof or external floating roof.

(6) Any owner or operator of a bulk gasoline plant shall maintain records of the following information in a readily accessible location for at least five years and shall immediately make these records available to the director upon verbal or written request:

(a) The daily quantity of all gasoline loaded into gasoline tank trucks.

(b) The results of any leak checks, including, at a minimum, the following information:

(i) Date of inspection.

(ii) Findings (may indicate no leaks discovered or location, nature, and severity of each leak).

(iii) Leak determination method.

(iv) Corrective action (date each leak repaired and reasons for any repair interval in excess of fifteen calendar days).

(v) Inspector's name and signature.

(7) Reporting requirements.

(a) For any bulk gasoline plant that is exempted pursuant to paragraph (P)(5)(a) of this rule and has an average daily throughput equal to or greater than four thousand gallons per day, the owner or operator shall so notify the director within thirty days of becoming aware of the occurrence.

(b) Any leaks in vapor or liquid lines that are not repaired within fifteen days after identification shall be reported to the director within thirty days after the repair is completed.

(Q) Bulk gasoline terminal.

(1) Except where exempted under paragraph (Q)(4) of this rule, no owner or operator of a bulk gasoline terminal may cause, allow or permit the transfer of gasoline at a bulk gasoline terminal after the date specified in paragraph (C)(18) of rule 3745-21-04 of the Administrative Code unless the following requirements are met:

(a) The loading rack is equipped with a vapor collection system whereby during the transfer of gasoline to any delivery vessel:

(i) All vapors displaced from the delivery vessel during loading are vented only to the vapor collection system: and

(ii) The pressure in the vapor collection system is maintained between minus six and plus eighteen inches of water gauge pressure:

(b) The loading rack is equipped with a vapor control system whereby:

(i) All vapors collected by the vapor collection system are vented to the vapor control system;

(ii) The mass emissions of VOC from the vapor control system do not exceed 0.67 pound of VOC per thousand gallons (eighty milligrams of VOC per liter) of gasoline loaded into the delivery vessel; and

(iii) Any liquid gasoline returned to a stationary storage tank from the vapor control system is free of entrained air to the extent possible with good engineering design;

(c) A means is provided to prevent drainage of gasoline from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and

(d) All gasoline loading lines and vapor lines are equipped with fittings which are vapor tight.

(2) No owner or operator of a bulk gasoline terminal may permit gasoline to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

(3) Any owner or operator of a bulk gasoline terminal shall repair within fifteen days any leak from the vapor collection system and vapor control system which are employed to meet the requirements of paragraph (Q)(1) of this rule when such leak is equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of rule 3745-21-10 of the Administrative Code.

(4) Paragraph (Q)(1) of this rule shall not apply to a bulk gasoline terminal which has a maximum daily throughput equal to or less than twenty thousand gallons of gasoline, provided either:

(a) The gasoline is supplied to the loading rack only from stationary storage tanks, each of which is equipped with an internal floating roof or external floating roof; or

(b) The loading rack is equipped with a vapor balance system that meets the requirements of paragraphs (P)(1)(d)(i), (P)(2) and (P)(4) of this rule.

(R) Gasoline dispensing facilities (stage I vapor control systems).

(1) No owner or operator of a gasoline dispensing facility may cause, allow or permit the transfer of gasoline at a gasoline dispensing facility after the date specified in paragraph (C)(19) of rule 3745-21-04 of the Administrative Code unless the

following requirements are met, except where exempted under paragraph (R)(4) of this rule:

(a) Any stationary storage tank which stores gasoline at the gasoline dispensing facility is equipped with a submerged fill pipe; and

(b) For any transfer of gasoline from a delivery vessel to a stationary storage tank located at the gasoline dispensing facility, the vapors displaced from the stationary storage tank are processed by one of the following systems:

(i) A vapor balance system which is designed and operated to route at least ninety per cent by weight of the VOC in the displaced vapors to the delivery vessel and which is equipped with a means to prevent the discharge of displaced vapors from an unconnected vapor line; or

(ii) A vapor control system which is designed and operated to recover at least ninety per cent by weight of the VOC in the displaced vapors.

(2) When a vapor balance system is employed to meet the requirements of paragraph (R)(1)(b) of this rule, the following operating practices shall be followed:

(a) The vapor balance system shall be kept in good working order and shall be used at all times during the transfer of gasoline;

(b) There shall be no leaks in the delivery vessel pressure/vacuum relief valves and hatch covers; and

(c) There shall be no leaks in the vapor and liquid lines during the transfer of gasoline.

(3) Any owner or operator of a gasoline dispensing facility shall repair within fifteen days any leak from the vapor balance system or vapor control system which is employed to meet the requirements of paragraph (R)(1) of this rule when such leak is equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of rule 3745-21-10 of the Administrative Code.

(4) Paragraphs (R)(1) to (R)(3) of this rule shall not apply to the following:

(a) Any gasoline dispensing facility which has an annual throughput of less than one hundred twenty thousand gallons of gasoline; or

(b) Transfers made to a stationary storage tank which is equipped with an internal floating roof or external floating roof.

(5) Any owner or operator of a gasoline dispensing facility that is exempted from the requirements of paragraphs (R)(1) to (R)(3) of this rule pursuant to paragraph (R)(4)(a) of this rule shall maintain records of the quantity of gasoline delivered to the facility during each calendar month. The records shall be maintained at the facility for a period of three years. The owner or operator shall notify the director if the annual gasoline throughput for any rolling twelve-month period is equal to or greater than one hundred twenty thousand gallons. The director shall be notified within forty-five days after the exceedance occurs.

(S) "Alside, Inc." or any subsequent owner or operator of the "Alside, Inc." facility located at 3773 Akron-Cleveland road, North Hampton township, Summit county, Ohio shall not cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(20)(b) of rule 3745-21-04 of the Administrative Code in excess of the following:

(1) 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, from a siding (spray) coating line.

(2) 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, from a corner coating line.

(T) Leaks from petroleum refinery equipment.

(1) Except as otherwise provided in paragraphs (T)(1)(b) and (T)(1)(c) of this rule, each owner or operator of a petroleum refinery shall comply with the following monitoring, recordkeeping and reporting requirements no later than the date specified in paragraph (C)(27) of rule 3745-21-04 of the Administrative Code:

(a) Except as otherwise indicated in paragraph (T)(1)(b) of this rule, a monitoring program shall be developed and implemented which incorporates the following provisions:

(i) Yearly monitoring of all pump seals, pipeline valves in liquid service and process drains in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code;

(ii) Quarterly monitoring of all compressor seals, pipeline valves in gas service and pressure relief valves in gas service in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code;

(iii) Monthly monitoring of all pump seals by visual methods;

(iv) Monitoring of any pump seal in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code within five working days after any liquids are observed dripping from the seal;

(v) Monitoring of any relief valve in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code within five working days after the valve has vented to the atmosphere; and

(vi) Monitoring of any component in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code within five working days after the repair of a leak;

(b) Pressure relief devices which are connected to an operating flare header, vapor recovery devices, valves which are located in pipelines containing kerosene or heavier liquids, storage tank valves and valves which are not externally regulated are exempt from the monitoring requirements contained in paragraph (T)(1)(a) of this rule;

(c) For any pipeline or pressure relief valves in gas or liquid service, an alternative monitoring schedule may be employed in lieu of the monitoring schedule specified in paragraph (T)(1)(a) of this rule as follows:

(i) The valve is designated as difficult to monitor and is monitored each calendar year, provided the following conditions are met:

(a) Construction of the process unit commenced prior to March 27, 1981;

(b) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than six feet above a support surface; and

(c) The owner or operator of the valve has a written plan that requires monitoring of the valve at least once per year;

(ii) The valve is designated as unsafe to monitor and is monitored as frequently as practical during safe to monitor times, provided the following conditions are met:

(a) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of monitoring on a quarterly or yearly basis as specified in paragraph (T)(1)(a) of this rule; and

(b) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practical during process unit turnarounds and other safe to monitor times;

(d) All pipeline valves in gas service and pressure relief valves in gas service shall be clearly marked and identified in such a manner that they will be obvious to both refinery personnel performing monitoring and to the director;

(e) If a leak is identified as a result of the monitoring program required by paragraph (T)(1)(a) of this rule and the concentration of VOC exceeds ten thousand parts per million by volume, a tag shall immediately be placed on the leaking component. The tag shall be readily visible and weatherproof; it shall bear an identification number; and it shall clearly indicate the date the leak was detected. The tag shall remain in place until the leaking component is repaired;

(f) A monitoring log shall be maintained for all leaking components which are tagged in accordance with paragraph (T)(1)(e) of this rule. The monitoring log shall contain, at a minimum, the following data:

(i) The name of the process unit where the leaking component is located;

(ii) The type of leaking component (such as valve, seal, or other component);

(iii) The tag number of the leaking component;

(iv) The date on which the leaking component was detected;

(v) The date on which the leaking component was repaired;

(vi) The date and results of the monitoring performed within five working days after the leaking component was repaired;

(vii) A record of the calibration of the monitoring instrument;

(viii) A list of those leaking components which cannot be repaired until the next process unit turnaround; and

(ix) The total number of components monitored and the total number of components found leaking during the calendar year;

(g) A copy of any monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report was prepared;

(h) A copy of any monitoring log shall immediately be made available to the director or an authorized representative of the director, upon verbal or written request, at any reasonable time; and

(i) A report shall be submitted to the director by the fifteenth day of January, April, July and October that gives the total number of components monitored during the previous three calendar months, gives the total number of components found leaking during the previous three calendar months, identifies all components which were found leaking during the previous three calendar months but which were not repaired within fifteen days and identifies all leaking components which cannot be repaired until the next process unit turnaround.

(2) Any owner or operator of a petroleum refinery shall repair and retest any leaking component, which is tagged and identified in accordance with paragraph (T)(1)(e) of this rule, as soon as possible but no later than fifteen days after the leak is found unless the leaking component cannot be repaired until a process unit turnaround occurs.

(3) The director may require a process unit turnaround to occur earlier than the normally scheduled date if the number and severity of leaking components awaiting a turnaround warrant such action. Any such process unit turnaround shall be required by means of an order issued by the director to the owner or operator of the petroleum refinery pursuant to division (R) of section 3704.03 of the Revised Code.

(4) The director may accept an alternative monitoring, recordkeeping and reporting program for that required by paragraph (T)(1) of this rule if the owner or operator of a petroleum refinery can demonstrate to the satisfaction of the director that the alternative program is at least as effective in identifying, documenting and reporting leaks from petroleum refinery equipment as the program outlined in paragraph (T)(1) of this rule. For purposes of this paragraph, any proposed alternative monitoring, recordkeeping and reporting program that the director finds comparable to the requirements of paragraph (DD)(12) or (DD)(13) of this rule or for any individual equipment component, finds equivalent to the federal requirements specified in 40 CFR Part 60, Subparts VV and GG or 40 CFR Part 63, Subparts H and CC shall be acceptable to the director.

Pursuant to this paragraph, the alternative monitoring, recordkeeping and reporting program entitled "Premcor Lima Refinery, LDAR Plan" and dated November 19, 2002 is approved by the director as an acceptable alternative program for the "Premcor Lima Refinery" (premise number 0302020012).

(U) Surface coating of miscellaneous metal parts and products.

For any source located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county subject to paragraph (U) of this rule, the requirement to

comply with paragraph (U) of this rule shall terminate at such time the source becomes subject to and complies with rule 3745-21-26 of the Administrative Code.

(1) Except where exempted under paragraph (U)(2) of this rule, or otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a miscellaneous metal part or product coating line may cause, allow or permit the discharge into the ambient air of any VOCs from such coating line after the date specified in paragraph (C)(28) of rule 3745-21-04 of the Administrative Code in excess of the following:

(a) 4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 10.3 pounds of VOC per gallon of solids for a clear coating;

(b) 4.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 8.8 pounds of VOC per gallon of solids for a zinc rich primer coating;

(c) 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 6.7 pounds of VOC per gallon of solids for an extreme performance coating;

(d) 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 6.7 pounds of VOC per gallon of solids for any coating that is dried at temperatures not exceeding two hundred degrees Fahrenheit;

(e) 4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 10.3 pounds of VOC per gallon of solids for the interior coating of a steel pail or drum;

(f) 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 6.7 pounds of VOC per gallon of solids for the exterior coating of a steel pail or drum;

(g) 4.9 pounds of VOC per gallon of coating, excluding water and exempt solvents, for a glass adhesion body primer coating used for the installation of any glass windows during the assembly of automobiles and trucks;

(h) 6.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 39.2 pounds of VOC per gallon of solids for a high performance architectural aluminum coating; or

(i) 3.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, or, if a control system is employed, 5.1 pounds of VOC per gallon

of solids for any coating that is not regulated under paragraphs (U)(1)(a) to (U)(1)(h) of this rule.

If a miscellaneous metal parts of products coating is subject to two or more limits as listed in paragraphs (U)(1)(a) to (U)(1)(i) of this rule, the limit which is least restrictive shall apply.

(2) The requirements of paragraph (U)(1) of this rule shall not apply to the following:

(a) The application of an exterior coating to marine vessels;

(b) The application of an exterior coating to airplanes;

(c) The repainting (refinishing) of used motor vehicles and trailers;

(d) The application of a customized topcoat and any related customized single coat to motor vehicles, if the maximum number of motor vehicles is less than thirty-five per day;

(e) Any miscellaneous metal parts or products coating line which never uses more than:

(i) For Clark, Greene, Miami, and Montgomery counties, eight gallons per day.

(ii) For Ashtabula, Butler, Clermont, Cuyahoga, Geauga, Hamilton, Lake, Lorain, Medina, Portage, Summit, and Warren counties, three gallons per day.

(iii) For all other counties, ten gallons per day.

Daily usage limitations included in paragraphs (U)(2)(e)(i) to (U)(2)(e)(iii) of this rule shall not apply to coatings employed by the metal parts or products coating line on parts or products which are not metal.

(f) Any coating line that is a new source, as defined by rule 3745-31-01 of the Administrative Code and meets the following requirements:

(i) The construction or modification of the coating line commenced on or after March 27, 1981;

(ii) The director has determined that the otherwise applicable emission limitation(s) in paragraph (U)(1) of this rule is technically or economically infeasible and has established an alternative reasonably

available control technology emission limitation. The alternative limitation shall be the lowest emission limitation that the coating line is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. The alternative limitation shall be an emissions rate (e.g., pounds VOC per gallon) or overall per cent reduction but shall not be in terms of mass per time (e.g., pounds per hour).

(iii) A final installation permit has been issued for the coating line pursuant to Chapter 3745-31 of the Administrative Code. The installation permit shall contain terms and conditions that specify the control requirement or emission limitation that is the basis for the director's alternative limitation determination for the coating line, as described in paragraph (U)(2)(f)(ii) of this rule.

(iv) USEPA has approved the alternative limitation as a revision to the Ohio state implementation plan.

(g) The application of a coating which is subject to paragraph (C), (D), (E), (I), (J), (K), (S), (FF) or (OO) of this rule;

(h) Any facility which always emits less than fifteen pounds of VOC per day (before add-on controls) from all miscellaneous metal parts or products coating lines within the facility (pounds of VOC attributed to metal parts or products coating lines in which non-metal parts or products were being coated shall not count towards this daily limit);

(i) The application of a coating to motorcycles at the "Honda of America Mfg., Inc." motorcycle assembly plant located at 24000 U.S. route 33, Marysville, Ohio;

(j) The application of a coating to bicycles in any coating line for which construction commenced prior to March 27, 1981 at the "Huffy Corporation" bicycle assembly plant located at 410 Grand Lake road, Celina, Ohio, unless a modification for any such coating line has commenced on or after March 27, 1981;

(k) The application of a coating subject to rule 3745-21-19 of the Administrative Code (pertaining to aerospace manufacturing and rework facilities); and

(l) The application of a coating subject to rule 3745-21-20 of the Administrative Code (pertaining to shipbuilding and ship repair operations).

(3) At automobile and light-duty truck assembly plants, the requirements of paragraph (U)(1) of this rule also shall apply to the application of underbody

antichip materials (e.g., underbody plastisol) and to metal surface coating operations other than prime, prime surfacer, topcoat, and final repair operations.

(V) Gasoline tank trucks.

(1) Except where exempted under paragraph (V)(3) of this rule, each owner or operator of a gasoline tank truck shall comply with the following requirements by the date specified in paragraph (C)(29) of rule 3745-21-04 of the Administrative Code:

(a) No gasoline tank truck is to be used for the transfer of gasoline, unless within the previous twelve months it was tested for leaks in accordance with the applicable method specified in paragraph (G) of rule 3745-21-10 of the Administrative Code.

(b) Any gasoline tank truck which, when last tested for leaks, failed to meet all requirements of the applicable method specified in paragraph (G) of rule 3745-21-10 of the Administrative Code is not to be used for the transfer of gasoline.

(c) A record is to be maintained of all gasoline tank trucks which are tested in accordance with paragraph (G) of rule 3745-21-10 of the Administrative Code, and such record is to contain, at a minimum, the following data:

(i) The tank identification number (manufacturer's serial number and/or owner's identification number);

(ii) The calendar year during which the tank was manufactured;

(iii) The date and location of the test;

(iv) The name, title and telephone number of the person who conducted the test, and the name and address of the company where the person is employed;

(v) The following information from the test:

(a) The tank pressure for the start of the pressure test;

(b) The tank pressure for the end of the pressure test;

(c) The tank pressure for the start of the vacuum test;

(d) The tank pressure for the end of the vacuum test; and

(e) The resultant pressure changes for the pressure test and the vacuum test; and

(vi) A list of all repairs which were made to the gasoline tank truck to enable it to pass all applicable requirements of the test.

(d) A copy of the test record required in paragraph (V)(1)(c) of this rule is to be retained by the owner or operator of the tank truck for a minimum of two years after the date on which the test was conducted.

(e) A copy of the test record required in paragraph (V)(1)(c) of this rule is to immediately be made available to the director, or an authorized representative of the director, upon verbal or written request, at any reasonable time.

(f) No gasoline tank truck is to be used for the transfer of gasoline, unless the requirements of paragraphs (V)(1)(a) and (V)(1)(b) of this rule can be readily verified by means of the following:

(i) A copy of the test record required in paragraph (V)(1)(c) of this rule is kept in the gasoline tank truck; or

(ii) A sticker, which contains the tank identification number, the calendar year during which the tank was manufactured, the date the tank last passed the requirements of the applicable test method specified in paragraph (G) of rule 3745-21-10 of the Administrative Code and the name and location of the testing company or department, is prominently displayed on the right side of the front of the tank.

(g) Any gasoline tank truck which has a leak which is equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of rule 3745-21-10 of the Administrative Code, is not to be used for the transfer of gasoline after fifteen days from the detection of such leak unless the leak is repaired.

(h) Whenever any gasoline tank truck is removed from service for routine maintenance and repairs, the gasoline tank truck shall also be inspected/repaired in accordance with the following procedures:

(i) Inspect all dome cover gaskets to ensure they will properly seal against vapor releases. Any dome cover gasket must be replaced if its integrity is in doubt.

(ii) Open and close all dome covers to ensure that the latch tension is such that the cover will be held securely closed to prevent vapor releases.

Any dome covers with inadequate latch tension must be repaired or replaced.

(iii) Inspect the fusible plugs in each dome cover assembly to ensure proper tightness. Any fusible plugs which are found to be loose or defective must be tightened and/or replaced.

(iv) Inspect each vapor vent hood and sealing band for defects. If any defects are found, the defective vapor vent hood and/or sealing band shall be replaced with new components.

(v) Inspect all vapor return hoses and any associated fittings and adaptors for defects that could allow vapor releases. If defects are found, the defective equipment shall be repaired or replaced.

(vi) Inspect any pressure and vacuum relief vents located on the vapor recovery line to ensure that they are clean and in proper working order. If a relief vent is found to be defective, it shall be repaired or replaced.

(i) No gasoline tank truck is to be used for the transfer of gasoline at a bulk gasoline terminal, bulk gasoline plant or gasoline dispensing facility that employs a vapor balance system or vapor control system unless the transfer is done in a manner that ensures the proper operation of the vapor balance system or vapor control system.

(2) The director may require any gasoline tank truck to be tested in accordance with the applicable method specified in paragraph (G) of rule 3745-21-10 of the Administrative Code within a reasonable period of time. Any such test shall be required by means of an order issued by the director to the owner or operator of the gasoline tank truck pursuant to division (R) of section 3704.03 of the Revised Code.

(3) Exempted from the requirements of paragraphs (V)(1) and (V)(2) of this rule is any gasoline tank truck which has a capacity of less than five thousand gallons, unless it either:

(a) Receives gasoline from any loading rack which is equipped with a vapor balance system or vapor control system; or

(b) Delivers gasoline to any stationary storage tank which is equipped with a vapor balance system.

(W) Synthesized pharmaceutical manufacturing facility.

(1) Except where exempted under paragraph (W)(2) of this rule, each owner or operator of a synthesized pharmaceutical manufacturing facility shall comply

with the following requirements no later than the date specified in paragraph (C)(30) of rule 3745-21-04 of the Administrative Code:

(a) Except for any VOC emissions which are collected by a production equipment exhaust system, the discharge of VOC emissions into the ambient air from any reactor, distillation operation, crystallizer, centrifuge or vacuum dryer is to be controlled by one of the following devices:

(i) A surface condenser which has an outlet gas concentration of VOC not exceeding fifty thousand parts per million by volume; or

(ii) A device or system which is, in the judgment of the director, at least as effective in controlling VOC emissions as the above-mentioned surface condenser;

(b) The discharge of VOC emissions into the ambient air from any air dryer or production equipment exhaust system is not to exceed thirty-three pounds in any one day, unless said discharge has been reduced by at least ninety per cent on a weight basis by control equipment;

(c) Except as otherwise provided in paragraph (L) of this rule, any storage tank which holds a VOC that has a vapor pressure greater than 1.5 pounds per square inch absolute at sixty-eight degrees Fahrenheit is to be equipped with one of following devices:

(i) A conservation vent which opens at a pressure of 0.5 ounce per square inch or higher and at a vacuum of 0.5 ounce per square inch or higher; or

(ii) A device or system which is, in the judgment of the director, at least as effective in controlling VOC emissions as the above-mentioned conservation vent;

(d) During any transfer of a VOC, which has a vapor pressure greater than 4.1 pounds per square inch absolute at sixty-eight degrees Fahrenheit, from a truck or railcar to a fixed roof tank which has a capacity greater than two thousand gallons, the vapors displaced from said tank are to be processed by one of the following systems:

(i) A vapor balance system which is designed and operated to route at least ninety per cent by weight of the VOC in the displaced vapors to the truck or railcar; or

(ii) A vapor control system which is designed and operated to recover at least ninety per cent by weight of the VOC in the displaced vapors;

(e) Any centrifuge containing a VOC, any rotary vacuum filter processing a VOC and any other filter having an exposed liquid VOC surface, are to be enclosed if the VOC has a vapor pressure greater than 0.5 pound per square inch absolute at sixty-eight degrees Fahrenheit;

(f) Any in-process tank which contains a VOC is to be equipped with a cover which remains closed, except when production, sampling, maintenance or inspection procedures require access to said tank; and

(g) Any leak in which a VOC is observed to be running or dripping from a vessel or other equipment is to be repaired as soon as possible, but no later than the first time said equipment is off line for a period of time long enough to complete the repair.

(2) Exempted from the requirements of paragraph (W)(1) of this rule is any operation or equipment not associated with the production of drugs.

(X) Rubber tire manufacturing facility.

(1) Except where exempted under paragraph (X)(2) of this rule, each owner or operator of a rubber tire manufacturing facility shall comply with the following requirements no later than the date specified in paragraph (C)(31) of rule 3745-21-04 of the Administrative Code:

(a) Each undertread cementing, tread end cementing and bead dipping operation is to be equipped with a capture system and associated control system which are designed and operated with the following efficiencies for VOCs, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code:

(i) A capture efficiency which is at least eighty-five per cent by weight; and

(ii) A control efficiency which is at least ninety per cent by weight.

(b) Except as otherwise provided in paragraph (X)(1)(c) of this rule, each green tire spraying operation is to be equipped with a capture system and associated control system which are designed and operated with the following efficiencies for VOCs, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code:

(i) A capture efficiency which is at least ninety per cent by weight; and

(ii) A control efficiency which is at least ninety per cent by weight.

(c) The requirements of paragraph (X)(1)(b) of this rule do not apply to any green tire spraying operation in which the VOC content of the material

sprayed, as determined in accordance with paragraph (B) of rule 3745-21-10 of the Administrative Code, is a maximum daily weighted average of six per cent or less by weight for material sprayed on the inside of a tire and eleven per cent or less by weight for material sprayed on the outside of a tire.

(2) Exempted from the requirements of paragraph (X)(1) of this rule are the following operations:

(a) Any operation not associated with rubber tires of the following size:

(i) A bead diameter less than or equal to 20.0 inches; and

(ii) A cross-sectional dimension less than or equal to 12.8 inches.

(b) Any operation for which construction commenced prior to March 27, 1981 at the "Cooper Tire and Rubber Company" facility located at Lima and Western avenues, Findlay, Ohio, unless a modification for any such operation has commenced on or after March 27, 1981.

(c) Any operation that produces specialty tires for antique or other vehicles when produced on an irregular basis or with short production runs. (This exemption applies only to tires produced on equipment separate from normal production lines for passenger-type tires.)

(d) Any operation subject to the federal "Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart BBB."

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

(1) Except where exempted under paragraph (Y)(2) of this rule, no owner or operator of a flexographic printing line, packaging rotogravure printing line or publication rotogravure printing line may cause, allow or permit the discharge into the ambient air of any VOCs from such printing line after the date specified in paragraph (C)(32) of rule 3745-21-04 of the Administrative Code unless the requirements of either paragraph (Y)(1)(a) or (Y)(1)(b) of this rule are satisfied.

(a) The VOC content of the coatings and inks employed in said printing line, as determined under paragraph (B) of rule 3745-21-10 of the Administrative Code, does not exceed the following limitation:

(i) Forty per cent VOC by volume of the coating and ink, excluding water and exempt solvents; or

(ii) Twenty-five per cent VOC by volume of the volatile matter in the coating and ink.

(b) Said printing line is equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for volatile organic compounds, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code:

(i) A capture efficiency which is:

(a) At least sixty-five per cent by weight, for a flexographic printing line;

(b) At least seventy per cent by weight, for a packaging rotogravure printing line; or

(c) At least eighty per cent by weight, for a publication rotogravure printing line.

(ii) A control efficiency which is at least ninety per cent by weight.

(2) The requirements of paragraph (Y)(1) of this rule shall not apply to the following printing lines:

(a) Any printing line that is subject to and in compliance with the emission limitations in paragraph (H) of this rule, which pertains to vinyl coating;

(b) Any printing line which is located at a facility in which the total maximum usage of coatings and inks in all flexographic, packaging rotogravure and publication rotogravure printing lines is less than or equal to one hundred forty-eight tons per year; except as otherwise provided under paragraph (Y)(3) of this rule;

(c) Any printing line which is used solely to check the quality of the image formation of newly engraved or etched cylinders; and,

(d) Any printing line which is located at a facility in which the total maximum usage of VOC in all coatings and inks employed in all flexographic, packaging rotogravure and publication rotogravure printing lines within the facility is less than or equal to one hundred tons per year, except as otherwise provided under paragraph (Y)(3) of this rule.

(3) Once the requirements of paragraph (Y)(1) of this rule apply to a facility or a flexographic, packaging rotogravure and publication rotogravure printing line within the facility, the facility is not eligible for an exemption under paragraphs (Y)(2)(b) and (Y)(2)(d) of this rule.

(4) In addition to the requirements specified in paragraph (Y)(1) of this rule the following requirements are applicable to all packaging rotogravure printing lines and flexographic packaging printing lines located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit counties.

(a) Any owner or operator of a packaging rotogravure printing line or flexographic packaging printing line with potential emissions that are equal to or greater than 25.0 tons per year of VOC before the application of capture and control devices shall comply with either of the following requirements for the printing line:

(i) Employ a control system in order to reduce VOC emissions from the packaging rotogravure printing line that meets one of the following requirements:

(a) Sixty-five per cent overall control for a press that was first installed prior to March 14, 1995 and that is controlled by an add-on air pollution control device whose first installation date was prior to April 2, 2009.

(b) Seventy per cent overall control for a press that was first installed prior to March 14, 1995 and that is controlled by an add-on air pollution control device whose first installation date was on or after April 2, 2009.

(c) Seventy-five per cent overall control for a press that was first installed on or after March 14, 1995 and that is controlled by an add-on air pollution control device whose first installation date was prior to April 2, 2009.

(d) Eighty per cent overall control for a press that was first installed on or after March 14, 1995 and that is controlled by an add-on air pollution control device whose first installation date was on or after April 2, 2009.

(ii) Employ coatings in the packaging rotogravure printing line or flexographic packaging printing line that comply with the following VOC content limitations:

(a) 0.8 pound of VOC per pound of solids applied; or

(b) 0.16 pound of VOC per pound of coating or ink applied.

The VOC content limits specified above can be met by averaging the VOC content of materials used on a single press, within a single printing line.

(b) Work practice standards for cleaning materials.

Any person or facility subject to this rule that uses VOC-containing clean-up materials shall ensure that VOC emissions are minimized by incorporating the following procedures:

(i) Keep cleaning materials and used shop towels in closed containers; and

(ii) Convey cleaning materials from one location to another in closed containers or pipes.

(Z) Storage of petroleum liquids in external floating roof tanks.

(1) Except where exempted under paragraph (Z)(3) of this rule, no owner or operator of an external floating roof tank shall place, store, or hold any petroleum liquid in any such tank after the date specified in paragraph (C)(33) of rule 3745-21-04 of the Administrative Code, unless the tank is designed or equipped as follows:

(a) The tank is equipped with one of the following:

(i) A liquid-mounted primary seal and a rim-mounted secondary seal;

(ii) A mechanical shoe primary seal and a rim-mounted secondary seal;

(iii) A mechanical shoe primary seal and a shoe-mounted secondary seal, provided the shoe-mounted secondary seal was installed prior to January 1, 1981;

(iv) A vapor-mounted primary seal and a rim-mounted secondary seal;

(v) A flexible wiper primary seal and a rim-mounted secondary seal;

(vi) A liquid-mounted primary seal or a mechanical shoe primary seal, provided the petroleum liquid is crude oil with a pour point of fifty degrees Fahrenheit or higher as determined by ASTM D97-05a; or

(vii) A seal, closure or device which is, in the judgment of the director, equivalent to the following seals in controlling the emission of VOC into the ambient air:

(a) The dual seals specified in paragraph (Z)(1)(a)(i) or (Z)(1)(a)(ii) of this rule; or

(b) Either of the seals specified in paragraph (Z)(1)(a)(vi) of this rule, provided the petroleum liquid is crude oil with a pour point of fifty degrees Fahrenheit or higher as determined by ASTM D97-05a.

(b) Each seal meets the following requirements:

(i) There are no visible holes, tears, or other openings in the seal or seal fabric;

(ii) If the tank is of welded construction, the total seal gap area, as determined under paragraph (I) of rule 3745-21-10 of the Administrative Code, does not exceed:

(a) 10.0 square inches per foot of tank diameter for a liquid-mounted primary seal or mechanical shoe primary seal;

(b) 10.0 square inches per foot of tank diameter for a vapor-mounted primary seal or flexible wiper primary seal, if said seal was installed prior to January 1, 1981;

(c) 1.0 square inch per foot of tank diameter for a vapor-mounted primary seal or flexible wiper primary seal, if said seal was installed on or after January 1, 1981;

(d) 1.0 square inch per foot of tank diameter for a rim-mounted secondary seal or shoe-mounted secondary seal; or

(e) The amount which is assigned by the director for any seal which is equivalent under paragraph (Z)(1)(a)(vii) of this rule;

(iii) If the tank is of riveted construction, the maximum seal gap width, as determined under paragraph (I) of rule 3745-21-10 of the Administrative Code, does not exceed:

(a) 2.5 inches for a mechanical shoe primary seal;

(b) 1.5 inches for a liquid-mounted primary seal, vapor-mounted primary seal, flexible wiper primary seal, shoe-mounted secondary seal or rim-mounted secondary seal; or

(c) The amount which is assigned by the director for any seal which is equivalent under paragraph (Z)(1)(a)(vii) of this rule;

(c) Any opening in the external floating roof, except automatic bleeder vents, rim space vents, leg sleeves, stub drains and slotted gauging/sampling wells, is equipped with:

(i) A cover, seal or lid which remains in the closed position at all times without any visible gaps, except when the opening is in actual use; and

(ii) A projection into the tank below the liquid surface;

(d) Any automatic bleeder vent remains in the closed position, except when the external floating roof is floated off or landed on the roof leg supports;

(e) Any rim vent is set to open only at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports;

(f) Any emergency roof drain is equipped with a slotted membrane fabric cover or other device which covers at least ninety per cent of the area of the opening;

(g) Any stub drain is equipped with a projection into the tank below the liquid surface; and

(h) Any slotted gauging/sampling well is equipped with an object which floats on the liquid surface within the well and which covers at least ninety per cent of the area of the well opening.

(2) Except where exempted under paragraph (Z)(3) of this rule, each owner or operator of an external floating roof tank which contains a petroleum liquid shall meet the following inspection, recordkeeping and reporting requirements:

(a) Inspect annually and seal and seal fabric for compliance with paragraph (Z)(1)(b)(i) of this rule;

(b) Measure annually, in accordance with the method specified in paragraph (I) of rule 3745-21-10 of the Administrative Code, the secondary seal gap or the primary seal gap, if there is no secondary seal, for compliance with the seal gap requirements of paragraph (Z)(1)(b)(ii) or (Z)(1)(b)(iii) of this rule;

(c) Measure at least once every five years, in accordance with the method specified in paragraph (I) of rule 3745-21-10 of the Administrative Code, the primary seal gap, if there is a secondary seal, for compliance with the seal gap requirements of paragraph (Z)(1)(b)(ii) or (Z)(1)(b)(iii) of this rule;

(d) Maintain for at least two years a record of the following:

(i) The dates and results of any inspections or measurements performed in accordance with paragraphs (Z)(2)(a) to (Z)(2)(c) of this rule; and

(ii) The annual throughput of any petroleum liquid stored in the tank; and

(e) Provide immediately to the director or an authorized representative of the director, upon written or verbal request at any reasonable time, a copy of the record required under paragraph (Z)(2)(d) of this rule.

(3) The following external floating roof tanks shall be exempted from the requirements of paragraphs (Z)(1) and (Z)(2) of this rule:

(a) Any tank which has a capacity of less than forty thousand gallons;

(b) Any tank which has a capacity of less than four hundred twenty thousand gallons and which is used to store produced crude oil or condensate prior to custody transfer; and

(c) Any tank which contains a petroleum liquid which, as stored, has a maximum true vapor pressure less than 1.5 pounds per square inch absolute.

(4) Any owner or operator of an external floating roof tank that is not exempted pursuant to paragraph (Z)(3)(a) or (Z)(3)(b) of this rule shall maintain records of the following information in a readily accessible location for at least five years and shall make copies of the records available to the director upon verbal or written request:

(a) The types of petroleum liquids stored in the tank

(b) The maximum true vapor pressure (pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

(5) If an owner or operator places, stores, or holds in an external floating roof tank, that is not exempted pursuant to paragraph (Z)(3)(a) or (Z)(3)(b) of this rule, any petroleum liquid with a true vapor pressure which is greater than 1.5 pounds per square inch absolute and such tank does not comply with the requirements of paragraph (Z)(1) of this rule, the owner or operator shall so notify the director within thirty days of becoming aware of the occurrence.

(AA) Perchloroethylene dry cleaning facility.

(1) Except where exempted under paragraph (AA)(2) of this rule, no owner or operator of a perchloroethylene dry cleaning facility may cause, allow or permit the cleaning of articles in perchloroethylene on or after June 14, 1991 unless the following requirements are met:

(a) Any dryer which contains articles cleaned in perchloroethylene is to be equipped and operated in accordance with one of the following:

(i) Any exhaust from the dryer is vented through a carbon adsorber which emits no more than one hundred parts per million by volume of perchloroethylene at any time; or

(ii) The dryer is equipped with or vented to a refrigerated vapor condenser whereby there is no exhaust of perchloroethylene vapors to the ambient air throughout the drying cycle, except for when the dryer's door is momentarily opened during loading or unloading.

(b) The waste from any diatomaceous earth filter which has been used to filter perchloroethylene is to contain no more than twenty-five per cent by weight perchloroethylene, as determined under paragraph (J) of rule 3745-21-10 of the Administrative Code.

(c) The waste from any distillation operation (solvent still) which has been used to distill perchloroethylene is to contain no more than sixty per cent by weight perchloroethylene, as determined under paragraph (J) of rule 3745-21-10 of the Administrative Code.

(d) Any disposable filter cartridge which has been used to filter perchloroethylene is to be drained in the filter housing for at least twenty-four hours before being discarded.

(e) All equipment must be maintained so as to prevent the leaking of perchloroethylene liquid and prevent perceptible vapor leaks from gaskets, seals, ducts, and related equipment. Any equipment which is leaking perchloroethylene liquid or has a perceptible vapor leak is not to be operated until the leak is repaired.

(2) Exemptions.

(a) Paragraphs (AA)(1)(a) to (AA)(1)(e) of this rule shall not apply to any dry cleaning operation which is coin-operated.

(b) Paragraph (AA)(1)(a) of this rule shall not apply to any facility in which the owner or operator has satisfactorily demonstrated that a carbon adsorber or refrigerated condenser cannot be installed because of inadequate space.

(c) Paragraph (AA)(1)(a) of this rule shall not apply to any facility in which the annual amount of fabric dry cleaned with perchloroethylene is less than sixty thousand pounds.

(3) Compliance with paragraph (AA)(1)(e) of this rule shall be determined by means of visual inspection of the following components:

(a) Hose connections, unions, couplings, and valves;

(b) Machine door gaskets and seatings;

(c) Filter head gasket and seating;

(d) Pumps;

(e) Base tanks and storage containers;

(f) Water separators;

(g) Filter sludge recovery;

(h) Distillation unit;

(i) Diverter valves;

(j) Saturated lint from lint basket; and

(k) Cartridge filters.

(4) Each owner or operator of a perchloroethylene dry cleaning facility shall maintain the following records in a readily accessible location for at least three years and shall make these records available to the director or an authorized representative of the director at any reasonable time:

(a) A record of control equipment maintenance, such as replacement of the carbon in a carbon adsorption unit;

(b) A record of the results of visual leak inspections conducted in accordance with paragraph (AA)(3) of this rule;

(c) The results of all tests conducted to determine compliance with the limitations contained in paragraphs (AA)(1)(a)(i), (AA)(1)(b), and (AA)(1)(c) of this rule; and

(d) The annual usage of perchloroethylene, in gallons, and the annual amount of fabric dry cleaned with perchloroethylene, in pounds.

(BB) Petroleum dry cleaning facility.

(1) Except where exempted under paragraph (BB)(3) of this rule, no owner of operator of a petroleum dry cleaning facility may cause, allow or permit the cleaning of articles in petroleum solvent after the date specified in paragraph

(C)(36) of rule 3745-21-04 of the Administrative Code unless the following requirements are met:

(a) Any dryer for articles cleaned in petroleum solvent shall comply with one of the following requirements:

(i) The dryer is a solvent recovery dryer which is operated in a manner such that the dryer remains closed and the solvent recovery phase continues until a final recovered solvent flow rate of 1.7 ounces per minute (fifty milliliters per minute) or less is attained; or

(ii) The emission of VOC into the ambient air from the dryer does not exceed 3.5 pounds of VOC per one hundred pounds dry weight of articles cleaned, as determined under paragraph (L) of rule 3745-21-10 of the Administrative Code.

(b) Any solvent filter for petroleum solvent shall comply with one of the following requirements:

(i) The solvent filter is a cartridge filter which is drained for at least eight hours in its sealed housing before removal of any cartridge; or

(ii) The filtration waste contains, before disposal and exposure to the ambient air, no more than 1.0 pound of VOC per one hundred pounds dry weight of articles cleaned, as determined under paragraph (M) of rule 3745-21-10 of the Administrative Code.

(c) Any bucket or barrel which contains petroleum solvent or petroleum solvent-laden waste shall be covered to minimize solvent evaporation.

(d) Any equipment associated with the use of petroleum solvent shall be visually inspected weekly to identify any liquid leaks of petroleum solvent.

(e) Any liquid or vapor leak of petroleum solvent shall be repaired within fifteen days after identifying the source of the leak, unless a necessary repair part is not on hand. If a repair part is not on hand, it shall be ordered within three working days after identifying the source of the leak. The leak shall be repaired within fifteen days following the delivery of the necessary repair part.

(2) Any owner or operator of a solvent recovery dryer subject to the requirements of paragraph (BB)(1)(a) of this rule shall perform a test, in accordance with paragraph (N) of rule 3745-21-10 of the Administrative Code, to demonstrate the minimum length of time for operating the recovery cycle of the dryer.

(3) Exempted from the requirements of paragraphs (BB)(1)(a), (BB)(1)(b), and (BB)(2) of this rule is any petroleum dry cleaning facility in which:

(a) The total manufacturer's rated capacity of all petroleum solvent dryers is less than or equal to eighty-three pounds of articles, dry basis; or

(b) The total annual consumption of petroleum solvent is less than or equal to four thousand seven hundred gallons.

(4) Recordkeeping requirements.

(a) Any owner or operator of a petroleum solvent dry cleaning facility that is exempted pursuant to paragraph (BB)(3)(b) of this rule shall maintain records of annual solvent consumption in a readily accessible location for at least five years and shall make these records available to the director upon verbal or written request.

(b) Any owner or operator of a petroleum solvent dry cleaning facility shall maintain records of the following information in a readily accessible location for at least five years and shall make these records available to the director upon verbal or written request:

(i) Documentation of the results of any tests performed to determine compliance with the emission limitation specified in paragraph (BB)(1)(a)(ii) of this rule.

(ii) Documentation of the results of any tests performed to determine compliance with the limitation specified in paragraph (BB)(1)(b)(ii) of this rule.

(iii) The results of any measurements to determine compliance with the limitation specified in paragraph (BB)(1)(a)(i) of this rule.

(iv) The results of any leak checks, including, at a minimum, the following information.

(a) Date of inspection.

(b) Findings (may indicate no leaks discovered or location, nature, and severity of each leak).

(c) Leak determination method.

(d) Corrective action (date each leak repaired and reasons for any repair interval in excess of fifteen calendar days).

(e) Inspector's name and signature.

(5) Reporting requirements.

(a) Any test result that shows an exceedance of the limitation specified in paragraph (BB)(1)(a)(i), (BB)(1)(a)(ii), or (BB)(1)(b)(ii) of this rule shall be reported to the director within thirty days after the occurrence.

(b) Any leaks in vapor or liquid lines that are not repaired within fifteen days after identification shall be reported to the director within thirty days after the repair is completed.

(c) For any petroleum dry cleaning facility that is exempted pursuant to paragraph (BB)(3)(b) of this rule and has an annual consumption of petroleum solvent greater than four thousand seven hundred gallons, the owner or operator shall so notify the director within thirty days of becoming aware of the occurrence.

(CC) No owner or operator of a continuous, polystyrene resin manufacturing process may cause, allow, or permit the discharge into the ambient air of any VOC from the material recovery section of the process after the date specified in paragraph (C)(37) of rule 3745-21-04 of the Administrative Code in excess of 0.12 pound of VOC per one thousand pounds of polystyrene resin produced.

(DD) Leaks from process units that produce organic chemicals.

(1) Except where exempted under paragraph (DD)(17) of this rule, each owner or operator of a process unit that produces as an intermediate or final product one or more of the organic chemicals identified in appendix A to this rule shall comply with the requirements in paragraphs (DD)(2) to (DD)(6) of this rule no later than the date specified in paragraph (C)(38) of rule 3745-21-04 of the Administrative Code.

(2) Leak detection and repair program.

(a) A leak detection and repair program for equipment in the process unit shall be developed and implemented in accordance with the requirements specified in paragraphs (DD)(2)(b) to (DD)(2)(m) of this rule.

(b) Except as otherwise provided in paragraphs (DD)(2)(c) and (DD)(2)(d) of this rule, equipment shall be monitored for leaks in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code, as follows:

(i) Any pump in light liquid service shall be monitored monthly.

(ii) Any valve in gas/vapor service or in light liquid service shall be monitored monthly, except that quarterly monitoring may be employed anytime after no leaks are detected during two consecutive months. The quarterly monitoring shall begin with the next calendar quarter following the two consecutive months of no detected leaks and shall be conducted in the first month of each calendar quarter. The quarterly monitoring may continue until a leak is detected, at which time monthly monitoring shall be employed again.

(iii) Any of the following equipment shall be monitored within five calendar days after evidence of a leak or potential leak from the equipment by visual, audible, olfactory, or other detection method:

(a) Any pump in heavy liquid service;

(b) Any valve in heavy liquid service;

(c) Any pressure relief device in light liquid service or in heavy liquid service; and

(d) Any flange or other connector.

(iv) Any equipment in which a leak is detected as described in paragraph (DD)(2)(g) of this rule shall be monitored within five working days after each attempt to repair, unless the owner or operator believes that the equipment was not successfully repaired.

(c) For any valve in gas/vapor service or in light liquid service, an alternative monitoring schedule may be employed in lieu of the monitoring schedule specified in paragraph (DD)(2)(b)(ii) of this rule as follows:

(i) The valve is designated as difficult to monitor and is monitored each calendar year, provided the following conditions are met:

(a) Construction of the process unit commenced prior to May 9, 1986.

(b) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than six feet above a support surface.

(c) The owner or operator of the valve has a written plan that requires monitoring of the valve at least once per year.

(ii) The valve is designated as unsafe to monitor and is monitored as frequently as practical during safe to monitor times, provided the following conditions are met:

(a) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of monitoring on a monthly basis.

(b) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practical during safe to monitor times.

(iii) The valve is subject to an alternative monitoring schedule based on a skip period as specified in paragraph (DD)(12) of this rule.

(d) Excluded from the monitoring requirements of paragraph (DD)(2)(b) of this rule are the following equipment:

(i) Any pump that has no externally actuated shaft penetrating the pump housing and that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule;

(ii) Any pump that is equipped with a dual mechanical seal which has a barrier fluid system and sensor that comply with the requirements specified in paragraph (DD)(8) of this rule;

(iii) Any pump that is equipped with a closed vent system capable of capturing and transporting any leakage from the pump seal to control equipment, provided the closed vent system and the control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule;

(iv) Any valve that has no externally actuated stem penetrating the valve and that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule; and

(v) Any valve that is subject to the alternative monitoring standard for valves based on the percentage of valves leaking as provided in paragraph (DD)(13) of this rule.

(e) Any pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, unless the pump is equipped with a closed vent system capable of transporting any leakage from the pump seal to control equipment, and the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(f) Any sensor employed pursuant to paragraph (DD)(2)(d)(ii) or (DD)(3)(b) of this rule shall be checked daily, unless the sensor is equipped with an audible alarm.

(g) A leak is detected:

(i) When a concentration of ten thousand ppmv or greater is measured from a potential leak interface of any equipment that is monitored for leaks using the method in paragraph (F) of rule 3745-21-10 of the Administrative Code;

(ii) When there is an indication of liquids dripping from the seal of a pump in light liquid service; or

(iii) When a sensor employed pursuant to paragraph (DD)(2)(d)(ii) or (DD)(3)(b) of this rule indicates failure of the seal system, the barrier fluid system, or both.

(h) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the following procedures shall be followed:

(i) A weatherproof and readily visible identification tag, marked with the equipment identification number, is immediately attached to the leaking equipment.

(ii) A record of the leak and any attempt to repair the leak is entered into the leak repair log kept pursuant to paragraph (DD)(2)(k) of this rule.

(iii) The identification tag attached to the leaking equipment, other than a valve that is monitored pursuant to paragraph (DD)(2)(b)(ii) of this rule, may be removed after the leaking equipment is repaired.

(iv) The identification tag attached to a leaking valve that is monitored pursuant to paragraph (DD)(2)(b)(ii) of this rule may be removed after the leaking valve is repaired, monitored for leaks for two consecutive months as specified in paragraph (DD)(2)(b)(ii) of this rule, and found to have no detected leaks during those two consecutive months.

(i) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the leaking equipment shall be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except for a delay of repair as provided in paragraph (DD)(11) of this rule. Leaking equipment shall be deemed repaired if the maximum concentration measured pursuant to paragraph (DD)(2)(b)(iv) of this rule is less than ten thousand ppmv.

(j) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, a first attempt at repair shall be made no later than five calendar days after the leak is detected; and the first attempts at repair shall include, but are not limited to, the following best practices where practicable:

(i) Tightening of bonnet bolts;

(ii) Replacement of bonnet bolts;

(iii) Tightening of packing gland nuts; and

(iv) Injection of lubricant into lubricated packing.

(k) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the following information shall be recorded in a leak repair log:

(i) The identification number of the leaking equipment and, for leaks based on monitoring, the identification numbers of the leak detection instrument and its operator;

(ii) The basis for the detection of the leak; for example, monitoring, visual inspection, or sensor;

(iii) The date on which the leak was detected and the date of each attempt to repair the leaking equipment;

(iv) The methods of repair applied in each attempt to repair the leaking equipment;

(v) One of the following entries within five working days after each attempt to repair the leaking equipment:

(a) "Not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or

(b) If the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured as follows:

(i) The actual reading in ppmv; or

(ii) "Below 10,000," denoting less than ten thousand ppmv; or

(iii) "Above 10,000," denoting not less than ten thousand ppmv;

(vi) If the leak is not repaired within fifteen calendar days after the date on which it was detected:

(a) "Repair delayed" and the reason for the delay;

(b) If repair is being delayed until the next process unit shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process unit shutdown;

(c) The expected date of successful repair of the leak;

(d) The dates of process unit shutdowns that occur while the leaking equipment is unrepaired; and

(vii) The date on which the leak was successfully repaired.

(l) The leak repair log shall be retained by the owner or operator of the process unit in a readily accessible location for a minimum of two years after the date on which the record was made.

(m) Semiannual reports shall be submitted to the director by the first day of February and August and shall include the following information for the preceding semiannual periods:

(i) The process unit identification;

(ii) The number of pumps in light liquid service excluding those pumps designated for no detectable emissions under the provision of paragraph (DD)(2)(d)(i) of this rule and those pumps complying with paragraph (DD)(2)(d)(iii) of this rule;

(iii) The number of valves in gas/vapor service or in light liquid service excluding those valves designated for no detectable emission under the provision of paragraph (DD)(2)(d)(iv) of this rule and those valves subject to the alternative standard for monitoring under the provision of paragraph (DD)(2)(d)(v) of this rule;

(iv) The number of compressors excluding those compressors designated for no detectable emissions under the provision of paragraph (DD)(3)(c) of this rule and those compressors complying with paragraph (DD)(3)(d) or (DD)(3)(e) of this rule;

(v) For each month during the semiannual period:

(a) The number of pumps in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule;

(b) The number of pumps in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;

(c) The number of valves in gas/vapor service or in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule;

(d) The number of valves in gas/vapor service or in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;

(e) The number of compressors for which leaks were detected as described in paragraph (DD) of this rule;

(f) The number of compressors for which leaks were not repaired within fifteen calendar days after the date of leak detection; and

(g) The facts that explain each delay of repair allowed pursuant to paragraph (DD)(11) of this rule; and

(vi) The dates of process unit shutdowns that occurred within the semiannual period.

(3) Compressors.

(a) Except as otherwise provided in paragraphs (DD)(3)(c) to (DD)(3)(e) of this rule, any compressor in the process unit shall comply with the requirements specified in paragraph (DD)(3)(b) of this rule.

(b) The compressor shall be equipped with a seal that has a barrier fluid system and sensor which comply with the requirements specified in paragraph (DD)(8) of this rule.

(c) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any compressor that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule.

(d) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any compressor that is equipped with a closed vent system capable of capturing and transporting any leakage from the compressor seal to control equipment, provided the closed vent system and the control equipment

comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(e) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any reciprocating compressor that meets the following conditions:

(i) The compressor was installed prior to May 9, 1986; and

(ii) The owner or operator of the compressor demonstrates to the satisfaction of the director that recasting the compressor distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the requirements of paragraph (DD)(3)(b) of this rule.

(4) Pressure relief devices in gas/vapor service.

(a) Except as otherwise provided in paragraph (DD)(4)(e) of this rule, any pressure relief device in gas/vapor service in the process unit shall comply with the requirements specified in paragraphs (DD)(4)(b) to (DD)(4)(d) of this rule.

(b) Except during pressure releases, the pressure relief device shall be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) No later than five calendar days after a pressure release, the pressure relief device shall be tested to confirm the condition of no detectable emissions in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(d) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than five calendar days after the pressure release, except for a delay of repair as provided in paragraph (DD)(11) of this rule.

(e) Excluded from the requirements of paragraphs (DD)(4)(b) to (DD)(4)(d) of this rule is any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to control equipment, provided the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(5) Sampling connection system.

(a) Except as otherwise provided in paragraph (DD)(5)(c) of this rule, any sampling connection system in the process unit shall comply with the requirements specified in paragraph (DD)(5)(b) of this rule.

(b) The sampling connection system shall be equipped with a closed purge system or a closed vent system that meets one of the following requirements:

(i) The purged process fluid is returned directly to the process line with zero VOC emissions to the ambient air;

(ii) The purged process fluid is collected and recycled with zero VOC emissions to the ambient air; or

(iii) The closed purge system or closed vent system is designed and operated to capture and transport all the purged process fluid to control equipment that meet the requirements specified in paragraph (DD)(10) of this rule.

(c) Excluded from the requirements of paragraph (DD)(5)(b) of this rule is any sampling connection system that is an in-situ sampling system.

(6) Open-ended valves or lines.

(a) Any open-ended valve or line in the process unit shall be equipped with a cap, blind flange, plug, or second valve and shall comply with the requirements specified in paragraphs (DD)(6)(b) to (DD)(6)(d) of this rule.

(b) Except during operations requiring the flow of process fluid through the open-ended valve or line, the cap, blind flange, plug, or second valve shall seal the open end of the open-ended valve or line.

(c) If equipped with a second valve, the open-ended valve or line shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(d) If a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with paragraph (DD)(6)(b) of this rule at all other times.

(7) Equipment designated for no detectable emissions.

(a) Any equipment (pump, valve, or compressor) designated for no detectable emissions pursuant to paragraph (DD)(2)(d)(i), (DD)(2)(d)(iv) or

(DD)(3)(c) of this rule shall comply with the requirements specified in paragraphs (DD)(7)(b) to (DD)(7)(d) of this rule.

(b) The equipment shall be operated with no detectable emissions as indicated by an instrument reading of less than five hundred ppmv above background as measured by paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) The equipment shall be tested for compliance with paragraph (DD)(7)(b) of this rule initially upon designation and annually.

(d) The designation of the equipment shall be signed by the owner or operator of the equipment in the log kept pursuant to paragraph (DD)(14)(b) of this rule.

(8) Barrier fluid systems and sensors for pumps and compressors.

(a) When a pump or compressor is equipped with a seal that has a barrier fluid system and sensor which are employed to meet the requirements of paragraph (DD)(2)(d)(ii) or (DD)(3)(a) of this rule, the requirements of paragraphs (DD)(8)(b) to (DD)(8)(d) of this rule shall be met.

(b) The barrier fluid system shall meet one of the following conditions:

(i) The barrier fluid system is operated with a barrier fluid at a pressure that is at all times greater than the stuffing box pressure of the pump or compressor.

(ii) The barrier fluid system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to control equipment and the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(iii) The barrier fluid system is equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the ambient air.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) The barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both based on criteria determined by the owner or operator from design considerations and operating experience.

(9) Closed vent systems.

(a) Any closed vent system that is used to comply with the requirements of paragraph (DD)(2)(d)(iii), (DD)(3)(d), (DD)(4)(e), or (DD)(8)(b)(ii) of this rule shall comply with the requirements specified in paragraphs (DD)(9)(b) to (DD)(9)(d) of this rule.

(b) The closed vent system shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) The closed vent system shall be tested for compliance with paragraph (DD)(9)(b) of this rule initially and annually.

(d) The closed vent system shall be operated at all times when emissions may be vented to it.

(10) Control equipment.

(a) Any control equipment that is used to comply with the requirements of paragraph (DD)(2)(d)(iii), (DD)(3)(d), (DD)(4)(e), (DD)(5)(b)(iii), (DD)(8)(b)(ii), or (DD)(11)(d)(ii) of this rule shall comply with the requirements specified in paragraphs (DD)(10)(b) to (DD)(10)(f) of this rule.

(b) If the control equipment is a vapor recovery system, it shall be designed and operated to recover VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight.

(c) If the control equipment is an enclosed combustion device, it shall be designed and operated to reduce the VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight, or to provide a minimum residence time of 0.75 second at a minimum temperature of fifteen hundred degrees Fahrenheit.

(d) If the control equipment is a flare, it shall meet the following requirements:

(i) The flare shall be designed for and operated with no visible emissions as determined by USEPA method 22, except for periods not to exceed a total of five minutes during any one hundred twenty consecutive minutes.

(ii) The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other

equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

(iii) The flare shall be steam-assisted, air-assisted or nonassisted.

(iv) The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is nonassisted.

(v) Except as provided in paragraph (DD)(10)(d)(vi) of this rule, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than sixty feet per second if the flare is steam-assisted or nonassisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

(vi) Excluded from the requirements of paragraph (DD)(10)(d)(v) of this rule is any steam-assisted or nonassisted flare that meets both of the following requirements:

(a) The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

(b) The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

(e) The owner or operator of the control equipment shall monitor the control equipment to ensure that it is operated and maintained in conformance with its design.

(f) The control equipment shall be operated at all times when emissions may be vented to it.

(11) Delay of repair.

(a) A delay of repair that is employed pursuant to paragraph (DD)(2)(i) or (DD)(4)(d) of this rule shall be allowed only as provided in paragraphs (DD)(11)(b) to (DD)(11)(f) of this rule.

(b) A delay of repair shall be allowed if the repair is technically infeasible without a process unit shutdown. However, the repair shall occur before the end of the next process unit shutdown.

(c) A delay of repair shall be allowed for a piece of equipment that is isolated from the process and that does not remain in VOC service (for example, isolated from the process and properly purged).

(d) A delay of repair for a valve shall be allowed if:

(i) The owner or operator of the valve demonstrates that the emission of purged material resulting from immediate repair is greater than the emission likely to result from delay of repair; and

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in control equipment that meets the requirements specified in paragraph (DD)(10) of this rule.

(e) A delay of repair for a pump shall be allowed if:

(i) The repair requires the use of a dual mechanical seal system and associated barrier fluid system; and

(ii) The repair is completed as soon as practicable, but no later than six months after the leak was detected.

(f) A delay of repair beyond a process unit shutdown shall be allowed for a valve if a valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. A delay of repair beyond the next process unit shutdown shall not be allowed for that valve unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown.

(12) Alternative monitoring schedule for valves based on a skip period.

(a) Any owner or operator of a process unit may elect to implement an alternative monitoring schedule in lieu of the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule, as provided in paragraph (DD)(2)(c)(iii) of this rule. The alternative monitoring schedule shall be based on skipping quarterly monitoring periods provided the percentage of valves leaking is no more than 2.0. Any owner or operator who elects to implement an alternative monitoring schedule shall comply with the requirements specified in paragraphs (DD)(12)(b) to (DD)(12)(h) of this rule.

(b) The owner or operator must notify the director prior to implementing this alternative monitoring schedule. Such notification must identify which valves will be subject to this alternative monitoring schedule and which work practice within paragraph (DD)(12)(e) of this rule will be implemented. Any valve in vacuum service, in heavy liquid service, or not in VOC service, shall be excluded from this alternative monitoring schedule.

(c) Any valve subject to this alternative monitoring schedule shall comply initially with the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule.

(d) Any valve subject to this alternative monitoring schedule shall continue to be subject to the requirements specified in paragraphs (DD)(2)(g) to (DD)(2)(m) of this rule.

(e) One of the following two alternative work practices for skipping monitoring periods may be implemented:

(i) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first quarter of every two consecutive quarterly leak detection periods is skipped.

(ii) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first three quarters of every four consecutive quarterly periods is skipped.

(f) If the percentage of valves leaking is greater than 2.0, the owner or operator shall comply with the monitoring requirements as specified in paragraph (DD)(2)(b)(ii) of this rule, but may again elect to use this alternative monitoring schedule.

(g) The percentage of valves leaking shall be determined for the valves subject to this alternative monitoring schedule as the sum of the number of those valves found leaking during any portion of the current monitoring period and the number of those valves found leaking during a previous monitoring period for which repair has been delayed during the current monitoring period, divided by the total number of valves, and multiplied by one hundred.

(h) The following information pertaining to valves subject to this alternative monitoring schedule shall be recorded in a log that is kept in a readily accessible location:

(i) A schedule of monitoring; and

(ii) The percentage of valves leaking during each monitoring period.

(13) Alternative monitoring standard for valves based on the allowable percentage of valves leaking.

(a) Any owner or operator of a process unit may elect to implement an alternative monitoring standard in lieu of the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule, as provided in paragraph (DD)(2)(d)(v) of this rule. The alternative monitoring standard shall be based on maintaining the percentage of valves leaking at 2.0 or less. Any owner or operator who elects to implement an alternative monitoring standard shall comply with the requirements specified in paragraphs (DD)(13)(b) to (DD)(13)(g) of this rule.

(b) The owner or operator must notify the director prior to implementing this alternative monitoring standard.

(c) All valves in gas/vapor service or in light liquid service in the process unit shall be subject to this alternative monitoring standard, except for those valves which are designated as unsafe to monitor as provided in paragraph (DD)(2)(c)(ii) of this rule, those valves not in VOC service, and those valves in vacuum service.

(d) The percentage of valves leaking, as determined in accordance with paragraph (DD)(13)(f) of this rule, shall not exceed 2.0. If the percentage of valves leaking is greater than 2.0, the owner or operator shall comply with the monitoring requirements as specified in paragraph (DD)(2)(b)(ii) of this rule, but may again elect to use this alternative monitoring standard.

(e) All valves subject to this alternative monitoring standard shall be tested for compliance with paragraph (DD)(13)(d) of this rule initially upon implementation and annually.

(f) A compliance test shall be conducted in the following manner:

(i) All valves subject to this alternative monitoring standard shall be monitored for leaks within a one-week period by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(ii) If an instrument reading of ten thousand ppmv or greater is measured, a leak is detected.

(iii) The percentage of valves leaking shall be determined as the number of valves for which a leak is detected, divided by the number of valves monitored, and multiplied by one hundred.

(g) When a leak is detected as described in paragraph (DD)(13)(f)(ii) of this rule, the leaking valve shall be repaired in accordance with paragraphs (DD)(2)(h) and (DD)(2)(i) of this rule.

(14) Recordkeeping.

(a) Each owner or operator of a process unit as described in paragraph (DD)(1) of this rule shall comply with the recordkeeping requirements of paragraphs (DD)(14)(b) to (DD)(14)(g) of this rule. An owner or operator of more than one process unit may use one recordkeeping system to comply with the recordkeeping requirements, provided the system identifies each record by each process unit.

(b) The following information shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers for equipment subject to the requirements of paragraphs (DD)(2) to (DD)(10) of this rule;

(ii) A list of identification numbers for equipment designated for no detectable emissions as provided in paragraph (DD)(7) of this rule, and a signature of the owner or operator authorizing such designation;

(iii) A list of identification numbers for pressure relief devices subject to paragraph (DD)(4) of this rule;

(iv) A list of identification numbers for closed vent systems subject to paragraph (DD)(9) of this rule; and

(v) For compliance tests required under paragraphs (DD)(4)(c), (DD)(7)(c), and (DD)(9)(c) of this rule:

(a) The date of each compliance test;

(b) The background level measured during each compliance test; and

(c) The maximum instrument reading measured at the equipment during each compliance test.

(c) The following information pertaining to valves subject to an alternative monitoring schedule, as provided in paragraph (DD)(2)(c) of this rule, shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers for valves designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve;

(ii) A list of identification numbers for valves designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the schedule for monitoring each valve; and

(iii) A list of identification numbers for valves subject to the alternative monitoring schedule based on a skip period, a schedule for monitoring, and the percentage of valves leaking during each monitoring period.

(d) The following information pertaining to closed vent systems and control equipment described in paragraphs (DD)(9) and (DD)(10) of this rule shall be recorded and kept in a readily accessible location:

(i) Detailed schematics, design specifications, and piping and instrumentation diagrams;

(ii) The dates and descriptions of any changes in the design specifications;

(iii) A description of the parameter or parameters monitored, as required in paragraph (DD)(10)(d) of this rule, to ensure that the control equipment is operated and maintained in conformance with its design, and an explanation of the reason for selecting such parameter or parameters;

(iv) Periods when the closed vent systems and control equipment are not operated as designed, including periods when a flare pilot light does not have a flame; and

(v) Dates of startups and shutdowns of the closed vent systems and control equipment.

(e) The following information pertaining to barrier fluid systems and sensors described in paragraph (DD)(8) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers of pumps and compressors equipped with such barrier fluid systems and sensors;

(ii) The criteria that indicate failure of the seal system, the barrier fluid system, or both, as required in paragraph (DD)(8)(d) of this rule and an explanation of the criteria; and

(iii) Any changes to such criteria and the reasons for the changes.

(f) The following information for use in determining an exemption for the process unit as provided in paragraph (DD)(17)(a) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) An analysis demonstrating the design capacity of the process unit;

(ii) A statement listing the feed and raw materials and products from the process unit and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohols; or

(iii) An analysis demonstrating that no equipment is in VOC service.

(g) The following information pertaining to specific equipment that are exempt as provided in paragraph (DD)(17)(b) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers of equipment in vacuum service;

(ii) A list of identification numbers of equipment not in VOC service and the information or data used to demonstrate that the equipment is not in VOC service; and

(iii) A list of equipment subject to an equivalent emission requirement that is approved by the director pursuant to paragraph (DD)(16) of this rule.

(15) Reporting.

(a) Each owner or operator of a process unit as described in paragraph (DD)(1) of this rule shall comply with the reporting requirements specified in paragraphs (DD)(15)(b) to (DD)(15)(d) of this rule.

(b) For compliance tests required under paragraphs (DD)(7)(c) and (DD)(9)(c) of this rule, the requirements of paragraphs (A)(3) and (A)(4) of rule 3745-21-10 of the Administrative Code (pertaining to notification of intent to test) shall be met. The results of such compliance tests shall be reported to the appropriate Ohio EPA district office or local air agency within thirty days after the test date.

(c) The results of compliance tests required under paragraph (DD)(4)(c) of this rule shall be reported semiannually to the appropriate Ohio EPA district office or local air agency. The semiannual reports shall be submitted by the first day of February and August and shall include information for the preceding semiannual period.

(d) Any semiannual reports required under paragraph (DD)(2)(m) of this rule may be sent to the appropriate Ohio EPA district office or local air agency.

(16) Equivalent requirement.

(a) Any owner or operator of a process unit may apply to the director for determination of an equivalent requirement in lieu of the requirements specified in paragraphs (DD)(2) to (DD)(10) of this rule. The determination of equivalence will be evaluated by the guidelines specified in paragraphs (DD)(16)(b) to (DD)(16)(d) of this rule. If the director approves an equivalent requirement for a process unit, said requirement shall be specified in the special terms and conditions of an operating permit or variance issued by the director for the process unit.

(b) The owner or operator applying for a determination of equivalency shall be responsible for collecting and verifying test data to demonstrate the proposed equivalence.

(c) The equivalent requirement shall achieve a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC that would be achieved by compliance with the applicable requirements of paragraph (DD) of this rule.

(d) The director may condition the approval of equivalence as necessary to ensure the same emission reduction as the applicable requirements of paragraph (DD) of this rule.

(17) Exemptions.

(a) Exempted from the requirements of paragraphs (DD)(2) to (DD)(6) of this rule are the following process units:

(i) Any process unit that has a design capacity to produce less than one thousand one hundred tons per year;

(ii) Any process unit that produces only heavy liquid chemicals from heavy liquid feed or raw materials;

(iii) Any process unit that produces beverage alcohol;

(iv) Any process unit that has no equipment in VOC service as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code; and

(v) Any process unit at a petroleum refinery, as defined in paragraph (E)(15) of rule 3745-21-01 of the Administrative Code.

(b) Exempted from the requirements of paragraphs (DD)(2) to (DD)(6) of this rule are the following equipment:

(i) Any equipment not in VOC service, as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code;

(ii) Any equipment in vacuum service; and

(iii) Any equipment subject to an equivalent emission limitation as provided in paragraph (DD)(16) of this rule.

(EE) Air oxidation processes that produce organic chemicals.

(1) Except where exempted under paragraph (EE)(2) of this rule, no owner or operator of an air oxidation process that produces an organic chemical identified in appendix A to this rule may cause, allow or permit the discharge into the ambient air of VOC from any process vent stream after the date specified in paragraph (C)(39) of rule 3745-21-04 of the Administrative Code unless the process vent stream is vented to a combustion device that is designed and operated either:

(a) To reduce the VOC emissions vented to it with an efficiency of at least ninety-eight per cent by weight; or

(b) To emit VOC at a concentration less than twenty parts per million by volume, dry basis.

(2) Exemptions.

(a) Any process vent stream which is vented to a combustion device for which construction commenced prior to May 9, 1986, shall be exempt from the requirements of paragraph (EE)(1) of this rule, provided the combustion device is operated and maintained in accordance with design specifications and good engineering practices. This exemption shall terminate for such process vent stream if the combustion device is replaced with new control equipment for which construction commenced on or after May 9, 1986.

(b) Any process vent stream or combination of process vent streams which has a total resource effectiveness value greater than 1.0 shall be exempt from the requirements of paragraph (EE)(1) of this rule. If an air oxidation process has more than one process vent stream, the total resource effectiveness shall be based upon a combination of the process vent streams.

(3) Total resource effectiveness value.

(a) The total resource effectiveness value for an air oxidation process shall be calculated in accordance with the following equations:

(i) For nonchlorinated process vent streams with a net heating value less than or equal to 3.6 and for all chlorinated process vent streams:

$$TRE = \frac{[a + bW^{.88} + cW + dWH + eW^{.88}H^{.88} + fW^{.5}]}{E}$$

where,

TRE = total resource effectiveness value;

E = maximum hourly VOC emission rate at the vent stream design flowrate (W), in kilograms of VOC per hour (kg/hr);

W = vent stream design flowrate at a standard temperature of twenty degrees Celsius, in standard cubic meters per minute (scm/min);

H = vent stream net heating value, as determined in accordance with paragraph (P)(2) of rule 3745-21-10 of the Administrative Code; in mega joules per standard cubic meter (10^6J/scm); and a, b, c, d, e, and f = applicable coefficients from appendix B to this rule.

(ii) For nonchlorinated process vent streams with a net heating value greater than 3.6:

$$TRE = \frac{[a + bW^{.88} + cW + dWH + eW^{.88}H^{.88} + f(WH/3.6)^{.5}]}{E}$$

where TRE, E, W, H, a, b, c, d, e and f are defined as in paragraph (EE)(3)(a)(i) of this rule.

(b) The parameters used in the total resource effectiveness equations shall be measured at the outlet(s) of the final product recovery device(s) where VOC is reclaimed for beneficial reuse (recycle, sale or use in another part of the process).

(4) The exhaust gases from any combustion device installed to meet the requirements of paragraph (EE)(1) of this rule for a process vent stream containing chlorinated VOC shall be controlled by a scrubber which is designed and operated to remove at least ninety-nine per cent, by weight, of the hydrogen chloride formed during combustion, unless the owner or operator of the air oxidation process demonstrates to the satisfaction of the director that a lesser

control efficiency limitation is warranted based upon good engineering practices.

(FF) "The Steelcraft Manufacturing Company" or any subsequent owner or operator of "The Steelcraft Manufacturing Company" facility located at 9017 Blue Ash road, Cincinnati, Ohio shall comply with the following requirements by no later than the dates specified in paragraph (C)(40) of rule 3745-21-04 of the Administrative Code:

(1) The VOC content of the adhesive coatings employed in the adhesive coating line for steel door panels and in the adhesive coating line for honeycomb paper shall not exceed 0.7 pound of VOC per gallon of adhesive coating, excluding water and exempt solvents.

(2) The uncontrolled VOC emissions from the steel door wipe cleaning operation shall be reduced and maintained below fourteen tons per year. The owner or operator shall keep monthly records which document the quantity and composition of the solvents used in the door wiping operation. These records shall be maintained at the facility for a period of three years. The owner or operator shall notify the director of any annual VOC emission rate that exceeds fourteen tons per year. A copy of the record showing the exceedance shall be submitted to the director within thirty days after the exceedance occurs.

(GG) "Chevron U.S.A., Inc." or any subsequent owner or operator of the "Chevron U.S.A., Inc." barge loading facility located at state route 128 and U.S. route 50 in Hamilton county, Ohio shall not cause, allow or permit the transfer of gasoline at the barge loading facility after the date specified in paragraph (C)(41) of rule 3745-21-04 of the Administrative Code unless all of the following requirements are met:

(1) The loading rack is equipped with a vapor collection system whereby during the transfer of gasoline to any barge, all vapors displaced from the barge during loading are vented only to a vapor collection system.

(2) The loading rack is equipped with a vapor control system whereby:

(a) All vapors collected by the vapor collection system are vented to the vapor control system;

(b) The mass emissions of VOC from the vapor control system do not exceed 0.29 pound of VOC per thousand gallons (thirty-five milligrams of VOC per liter) of gasoline loaded into the barge, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code; and

(c) Any liquid gasoline returned to a stationary storage tank from the vapor control system is free of entrained air to the extent possible with good engineering design.

(3) A means is provided to prevent drainage of gasoline from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

(4) All gasoline loading lines and vapor lines are equipped with fittings which are vapor tight.

(5) Any leak from the vapor collection system and vapor control system which is equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of rule 3745-21-10 of the Administrative Code, is repaired within fifteen days of detection.

(6) A leak inspection of the vapor collection system and vapor control system shall be performed on a quarterly basis in accordance with paragraph (K) of rule 3745-21-10 of the Administrative Code. The following information for each leak inspection shall be maintained at the facility for a period of three years:

(a) The date of each leak inspection;

(b) A description of the findings, including, but not limited to a description of the location, nature, and severity of each leak;

(c) The leak determination method;

(d) A description of the corrective action taken, including the date each leak was repaired; and

(e) The inspector's name and signature.

(HH) Surface coating of automotive/transportation and business machine plastic parts.

For any source subject to paragraph (HH) of this rule, the requirement to comply with paragraph (HH) of this rule shall terminate at such time the source becomes subject to and complies with rule 3745-21-26 of the Administrative Code.

(1) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a coating line for automotive/transportation plastic parts may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(42) of rule 3745-21-04 of the Administrative Code in excess of the VOC-content limitations specified in table 1. If a control system is employed for the coating line, the applicable limitation expressed in terms of pounds of VOC per gallon of solids shall be met by the owner or operator.

-Table 1: VOC limitations for coatings used for automotive/transportation plastic parts.-

Type of coating	VOC content limitation (in pounds of VOC per gallon	VOC content limitation (in pounds of VOC per gallon

	of coating, excluding water and exempt solvents, as applied)	of solids, as applied, for a coating system that employs a control system)
(1) Auto interiors		
(a) High bake colorcoat	4.1	9.3
(b) High bake primer	3.8	7.9
(c) Low bake colorcoat	3.2	5.7
(d) Low bake primer	3.5	6.7
(2) Auto exteriors (flexible and non-flexible)		
(a) High bake		
(i) Colorcoat	4.6	12.3
(ii) Clearcoat	4.3	10.3
(iii) Primer-flexible	5.0	15.6
(iv) Primer-non-flexible	4.5	11.6
(b) Low bake		
(i) Primer	5.5	21.7
(ii) Colorcoat red and black	5.6	23.4
(iii) Colorcoat others	5.1	16.6
(iv) Clearcoat	4.5	11.6
(3) Auto specialty		
(a) Vacuum metallizing basecoats and texture basecoats	5.5	21.7
(b) Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	5.9	29.8
(c) Gloss reducers, vacuum metallizing topcoats, and texture topcoats	6.4	49.2
(d) Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	6.8	89.5
(e) Headlamp lens coatings	7.4	(not applicable)

(2) Except as otherwise provided in paragraph (B)(6) of this rule, no owner or operator of a coating line for business machine plastic parts may cause, allow or permit the discharge into the ambient air of any VOCs after the date specified in paragraph (C)(42) of rule 3745-21-04 of the Administrative Code in excess of the VOC content limitations specified in table 2. If a control system is employed for the coating line, the applicable limitation expressed in terms of pounds of VOC per gallon of solids shall be met by the owner or operator.

-Table 2: VOC limitations for coatings used for business machine plastic parts.-

Type of coating	VOC content limitation (in pounds of VOC per gallon of coating, excluding water and exempt solvents)	VOC content limitation (in pounds of VOC per gallon of solids, for a coating line that employs a control system)
(1) Primer	1.2	1.4
(2) Colorcoat (non-texture coat)	2.3	3.3
(3) Colorcoat (texture coat)	2.3	3.3
(4) Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	4.0	8.8
(5) Specialty coatings		
(a) Soft coatings	4.3	10.3
(b) Plating resist	5.9	29.8
(c) Plating sensitizer	7.1	202.9

(II) "International Paper Company" or any subsequent owner or operator of the "International Paper Company" facility located at 100 Progress place, Springdale, Ohio shall comply, by March 31, 1993, with the following requirements:

(1) The VOC contents of the coatings employed in any sheet-fed offset lithographic printing press shall not exceed the following limitations:

(a) 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any varnish coating;

(b) 3.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any aqueous coating;

(c) 1.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any ink, excluding any metallic ink; and

(d) 2.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any metallic ink.

(2) The fountain solution employed in any sheet-fed offset lithographic printing press shall be refrigerated at each cooling unit to a temperature not to exceed sixty degrees Fahrenheit and shall have a VOC content not greater than 8.5 per cent VOC (alcohol) by volume at each cooling unit. The owner or operator shall measure the temperature and VOC content, in per cent by volume, of the fountain solution in each cooling unit on a daily basis, and shall maintain records of the results of the measurements at the facility for a period of three

years. The VOC content of the fountain solution shall be measured using a hydrometer.

(3) The total VOC emissions from the metallic inks employed in all sheet-fed offset lithographic printing presses shall not exceed 0.258 ton during any calendar month and 2.32 tons during any period of twelve consecutive months. The owner or operator shall calculate the calendar month and rolling twelve-month VOC emissions from the metallic inks employed in all of the sheet-fed offset lithographic printing presses and shall maintain records of the results of the calculations at the facility for a period of three years.

(4) The owner or operator shall notify the director of any temperature measurement of the fountain solution that exceeds sixty degrees Fahrenheit, any VOC content measurement of the fountain solution that exceeds 8.5 per cent, by volume, and any monthly and rolling twelve-month VOC emission from the use of metallic inks that exceeds 0.258 ton and 2.32 tons, respectively. A copy of the record showing the exceedance shall be submitted to the director within forty-five days after the exceedance occurs.

(JJ) "The Goodyear Tire and Rubber Company" or any subsequent owner or operator of "The Goodyear Tire and Rubber Company" facility located at 1376 Tech Way drive, Akron, Ohio shall comply, on and after May 25, 1988, with the following requirements:

(1) The VOC emissions from the nitrile-butadiene rubber production operation shall be controlled by employing a continuous steam stripper following the degassing vessels to maximize the removal of residual monomers (acrylonitrile and butadiene). The continuous steam stripper shall be designed and operated to achieve a residual monomer content, as determined by "Goodyear Method E-826," of not greater than nine hundred parts per million by weight (total acrylonitrile and butadiene) in the polymer (rubber) blend tanks immediately following the stripper, and all exhaust gases from the stripper shall be vented to the butadiene recovery operation or to a flare system which complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule. The owner or operator shall perform daily analyses of the residual monomer content in the polymer blend tanks and shall maintain records of the results of the analyses at the facility for a period of three years. An alternative method and/or procedure to that in "Goodyear Method E-826" may be used to demonstrate compliance with the above limitation provided that such method or procedure is in accordance with good engineering practice, authorized in writing by the director, and approved by the U.S. environmental protection agency as a revision to the state implementation plan. The owner or operator shall notify the director of any residual monomer content that exceeds nine hundred parts per million by weight. A copy of the record showing the exceedance shall be submitted to the director within forty-five days after the exceedance occurs.

(2) The VOC emissions from the butadiene recovery operation shall be vented to a flare system which complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(KK) "Morton Thiokol, Inc." or any subsequent owner or operator of the "Morton Thiokol, Inc." facility located at 2000 West street, Cincinnati, Ohio shall comply, on and after May 25, 1988, with the following requirements for VOC emissions from the production of methyltin intermediates:

(1) Each process used for the production of methyltin intermediates shall be equipped with a VOC recovery system which is designed and operated to achieve a control efficiency of at least seventy per cent, by weight, as a weekly average for the seven-day period from Monday through Sunday, for the VOC emissions in the process vent gas, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code. The owner or operator shall on a daily basis determine the amount of VOC vented to the VOC vapor recovery system from the processes and the amount of VOC recovered. The overall recovery efficiency shall be calculated each week as the ratio of the total recovered VOC for the seven-day period from Monday through Sunday to the total VOC vented to the VOC recovery system for the same seven-day period. The ratio shall be expressed as a percentage. The ratio shall be calculated not later than the Monday following each seven-day period, and the owner or operator shall maintain records of the calculations at the facility for a period of three years. The owner or operator shall notify the director of any weekly average control efficiency that is less than seventy per cent, by weight. A copy of the record showing the noncomplying weekly average control efficiency shall be submitted to the director within thirty days of the occurrence.

(2) The railcar unloading operation shall be a closed-loop system that uses compressed VOC from storage, rather than nitrogen, to unload the VOC in the railcar.

(LL) "The Lubrizol Corporation" or any subsequent owner or operator of "The Lubrizol Corporation" facility located at 155 Freedom road, Painesville, Ohio shall comply with the following requirements for VOC emissions from reactor processes no later than the date specified in paragraph (C)(46) of rule 3745-21-04 of the Administrative Code:

(1) Except where exempted under paragraph (LL)(3) of this rule, any reactor process vent stream shall be vented to one of the following control equipment:

(a) The control equipment is an enclosed combustion device that is designed and operated:

(i) To reduce the VOC emissions vented to it with an efficiency of at least ninety-eight per cent by weight or to emit VOC at a concentration not

exceeding twenty parts per million by volume (dry basis), either of which is determined under paragraph (C) of rule 3745-21-10 of the Administrative Code; or

(ii) To provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

(b) The control equipment is a flare that meets the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(2) Any process wastewater stream from a reactor process shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals which minimize the amount of VOC exposed to the ambient air.

(3) Exempted from the requirements of paragraph (LL)(1) of this rule are the following reactor process vent streams:

(a) The reactor process vent stream is not vented to an enclosed combustion device or flare and has a VOC emission rate less than five tons per year. If the reactor process has more than one of these reactor process vent streams, the VOC emission rate shall be based upon a combination of such reactor process vent streams. In such cases, the owner or operator shall calculate the calendar month and rolling twelve-month VOC emissions from the reactor process vent streams and maintain records of the results of the calculations at the facility for a period of three years. The owner or operator shall notify the director of any rolling twelve-month VOC emission calculation that exceeds five tons. A copy of the record showing the exceedance shall be submitted to the director within thirty days after the exceedance occurs.

(b) The reactor process vent stream is vented to an enclosed combustion device or a flare for which construction commenced prior to May 25, 1988, provided the enclosed combustion device or flare is operated and maintained in accordance with design specifications. This exemption shall terminate for such reactor process vent stream if the enclosed combustion device or flare is replaced with new control equipment for which construction commenced on or after May 25, 1988.

(c) The reactor process vent stream is an air bearing vent stream which has a VOC concentration between the lower explosive limit and the upper explosive limit and which has a total resource effectiveness value greater than 1.0, as determined under paragraph (EE)(3) of this rule. If the reactor process has more than one of these air bearing process vent streams, the total resource effectiveness value shall be based upon a combination of such reactor process vent streams.

(MM) "PPG Industries, Inc." or any subsequent owner or operator of the "PPG Industries, Inc." facility located at 3800 West 143rd street, Cleveland, Ohio shall comply, on and after May 25, 1988, with the following requirements for the VOC emissions from the paint manufacturing operations and associated paint laboratory operations:

(1) The paint manufacturing operations shall include the following equipment for the processing or use of solvent based or waterbased paint materials: mixing tanks for paint liquids and pigments, grinding mills, paint thinning and tinting tanks, paint filling equipment for shipping containers, cleaning equipment for paint processing equipment, and recovery equipment for the cleaning solvents. The paint laboratory operations shall include the following equipment for the processing or use of solvent based or waterbased paint materials: paint spray booths and associated ovens within the paint manufacturing quality control laboratory and the paint research laboratory.

(2) Except as otherwise provided in paragraph (MM)(4) of this rule, the VOC emissions from the equipment included within the paint manufacturing operations shall be vented either directly or by means of a building or local area exhaust to a control system which shall maintain compliance with any of the following requirements:

(a) A minimum control efficiency of 98.0 per cent by weight for the VOC emissions;

(b) A maximum outlet VOC concentration of twenty parts per million by volume (dry basis); or

(c) A minimum incineration temperature of one thousand five hundred degrees Fahrenheit.

(3) Except as otherwise provided in paragraph (MM)(4) of this rule, the VOC emissions from the equipment included within the paint laboratory operations shall be vented to a control system which shall maintain compliance with a minimum control efficiency of ninety per cent by weight for the VOC emissions or a maximum outlet VOC concentration of twenty parts per million by volume (dry basis).

(4) The requirements of paragraphs (MM)(2) and (MM)(3) of this rule shall not apply to any specific piece of equipment included within the paint manufacturing operations or the paint laboratory operations during each of the following situations:

(a) During any period in which there is no production activity or laboratory activity at said equipment; and

(b) During the processing or use of a waterbased paint material in said equipment, provided the following three conditions are met:

(i) The equipment is dedicated solely to the production of waterbased paint materials;

(ii) The VOC content of the waterbased paint material is less than or equal to 12.0 per cent VOC by weight, as determined under paragraph (B) of rule 3745-21-10 of the Administrative Code; and

(iii) Any VOC emissions from the processing or use of the waterbased paint material that are not vented to the control systems specified in paragraphs (MM)(2) and (MM)(3) of this rule are included (accounted for) in a permit-to-install issued by the director after August 22, 1990 pursuant to Chapter 3745-31 of the Administrative Code.

(5) The VOC control efficiency or outlet VOC concentrations shall be determined in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code.

(6) For a control system identified in paragraph (MM)(2) or (MM)(3) of this rule that employs incineration, the incineration temperature shall be determined by means of a continuous measurement and recording of such temperature.

(7) Any mixing or blending tank containing a paint material shall be equipped with a cover or lid that completely covers the opening of the tank, except for an opening no larger than necessary to allow for safe clearance for the mixer's shaft. Such tank shall be covered at all times in which the tank contains a paint material except when operator access is necessary to add ingredients or take samples.

(8) For any specific piece of equipment included within the paint manufacturing operations or the paint laboratory operations, for which the owner or operator claims an exemption from the requirements of paragraphs (MM)(2) and (MM)(3) of this rule, pursuant to paragraph (MM)(4) of this rule, the owner or operator shall keep daily records of the following information:

(a) The periods of time during which there is no production activity or laboratory activity; and

(b) The VOC content of the waterbased paint material (in per cent VOC, by weight), and, if applicable, the application number for the permit to install which authorizes the use of the waterbased paint materials.

(9) The owner or operator shall maintain the records required by paragraphs (MM)(6) and (MM)(8) of this rule at the facility for a period of three years.

(NN) "Von Roll USA, Inc." or any subsequent owner or operator of the "Von Roll USA, Inc." facility located at 4853 West 130th street, Cleveland, Ohio shall not cause, allow or permit the discharge into the ambient air of any VOC from any mica coating or laminating line after the date specified in paragraph (C)(48) of rule 3745-21-04 of the Administrative Code unless the following requirements are met:

(1) Except as provided in paragraph (NN)(2) of this rule, each mica coating or laminating line shall be equipped with a VOC emission control system that is designed and operated to achieve a capture efficiency of one hundred per cent and a control destruction efficiency of at least ninety-five per cent, by weight, for all the VOC emissions from the mica coating or laminating line. To meet the one hundred per cent capture efficiency requirement, each mica coating or laminating line shall employ a permanent total enclosure that complies with the requirements of USEPA method 204 and the requirements of paragraph (NN)(3) of this rule. For the VOC control device, the VOC control (destruction) efficiency shall be determined in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code.

(2) The requirements of paragraph (NN)(1) of this rule shall not apply to any mica coating or laminating line which employs less than five tons of VOC per year. In such case, the owner or operator shall keep monthly records that document the VOC emissions from the mica coating or laminating line. These records shall be maintained at the facility for a period of three years. The owner or operator shall notify the director of any annual VOC emission rate that equals or exceeds five tons per year. A copy of the record showing the exceedance shall be submitted to the director within thirty days after the exceedance occurs.

(3) Each permanent total enclosure shall be maintained under negative pressure at a minimum differential pressure of 0.007 inch of water, as a three-hour average, at all times when the mica coating or laminating line is in operation.

(4) Monitoring devices and a recorder shall be employed to simultaneously and continuously measure and record the pressure inside and outside each permanent total enclosure. The monitoring and recording devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

(5) The owner or operator shall submit quarterly, deviation (excursion) reports that identify all three-hour blocks of time during which each permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inch of water, as a three-hour average.

(OO) "Armco Steel Company, L.P." or any subsequent owner or operator of the "Armco Steel Company, L.P. facility at 1801 Crawford street, Middletown, Ohio shall comply, on and after May 25, 1988, with the following VOC content limitations for

the metal coil treatment operations, as determined under paragraph (B) of rule 3745-21-10 of the Administrative Code:

(1) The VOC content of any rolling oil employed in the temper mills shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents.

(2) The VOC content of any rust preventive oil employed in the temper mills, shears, corrective rewinds, slitters, coating lines, and the pickle lines shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents.

(3) The VOC content of any anti-galling material employed in the aluminum coating operation shall not exceed 1.2 pounds of VOC per gallon of material, excluding water and exempt solvents.

(4) The VOC content of any prelube oil employed at the facility shall not exceed 0.8 pound of VOC per gallon of oil, excluding water and exempt solvents.

(PP) "Formica Corporation" or any subsequent owner or operator of the "Formica Corporation" facility located at 10155 Reading road, Cincinnati, Ohio shall comply, on and after May 25, 1988, with the following requirements for the VOC emissions from each paper treater:

(1) The VOC content of any coating employed in the paper treater shall not exceed 0.9 pound of VOC per gallon of coating, excluding water and exempt solvents, as determined under paragraph (B) of rule 3745-21-10 of the Administrative Code; or

(2) The paper treater shall be equipped with a capture system and control system which are designed and operated to achieve an overall control efficiency of at least eighty-five per cent by weight for the VOC emissions, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(QQ) "The Day-Glo Color Corp." or any subsequent owner or operator of "The Day-Glo Color Corp." facility located at 4515 St. Clair avenue, Cleveland, Ohio, shall comply with the following requirements by no later than the date specified in paragraph (C)(51) of rule 3745-21-04 of the Administrative Code:

(1) The filtration process which separates the methanol from the solid dye shall be a vacuum system which consists of a vacuum pump and condenser.

(2) Each mixing vessel having a capacity of four hundred gallons or less shall be equipped with a lid that remains in place at all times unless the vessel is empty or being emptied. The lid shall maintain contact along the entire perimeter of the vessel's rim and shall have no openings except as follows:

(a) The opening for the mixer shaft shall be no larger than three inches in diameter.

(b) Any opening used for the addition of materials to the vessel shall be no more than one-fourth of the lid area in size and shall remain open only during the addition of materials.

(RR) On and after March 12, 2006, "Sherwin-Williams Diversified Brands, Incorporated" or any subsequent owner or operator of the "Sherwin-Williams Diversified Brands, Incorporated" facility located at 26300 Fargo avenue, Bedford Heights, Ohio shall comply with the requirements of paragraphs (RR)(1) to (RR)(8) of this rule.

(1) For the liquid mixing tanks, can liquid filling operations, gasser (gashouse) operations (can propellant filling operations and propellant line purging operations), can brushing operations (manual can cleaning operations), and can piercing operations at this facility, the total VOC emissions in any rolling twelve-month period shall not exceed 0.75 pound of VOC per one thousand aerosol cans produced.

(2) When a gashouse production line is in VOC operation, all VOC emissions from the gashouse production line, except during a safety diversion or emergency described under paragraph (RR)(8) of this rule, shall be vented to a thermal incinerator that is designed and operated with a destruction efficiency greater than or equal to ninety per cent by weight for VOC. A gashouse production line is in VOC operation when either the propellant being used to fill the aerosol cans contains VOC or the propellant being purged from the propellant line contains VOC. The VOC propellant being purged shall be recovered and stored in a fuel tank of the thermal incinerator."

(3) The average combustion temperature within the thermal incinerator, for any three-hour block of time when the gashouse is vented to the thermal incinerator, shall not be more than fifty degrees Fahrenheit below the average combustion temperature during the most recent emissions test of the thermal incinerator that demonstrated compliance with the VOC destruction efficiency specified in paragraph (RR)(2) of this rule.

(4) Monitoring and recordkeeping.

(a) Continuous monitoring devices.

(i) The owner or operator shall install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal incinerator. The temperature monitor shall have a minimum accuracy of plus or minus one per cent of the temperature being monitored expressed in degrees

Fahrenheit or plus or minus one degree Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the owner or operator.

(ii) The owner or operator shall install, operate, and maintain a lower explosive limit (LEL) monitoring system that continuously measures and records the concentration of VOC and percent LEL within each gashouse line and the inlet vent to the thermal incinerator. The LEL detectors shall have a minimum accuracy or plus or minus two per cent. The LEL detectors shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations. The owner or operator shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall record the date and results of each calibration.

(iii) The owner or operator shall install, operate, and maintain mass flow meter that continuously measures and records the flow rate within each gashouse line. The mass flow meters shall have a minimum accuracy of plus or minus 1.5 per cent. The mass flow meters shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations. The owner or operator shall check the mass flow meters once every six months for accuracy using a pilot tube and shall record the date and results of each accuracy check.

(b) The owner or operator shall collect and record the following information for each day of gashouse operation:

(i) A log of operating time for each of the following: gashouse production line ventilation to the thermal incinerator, gashouse production line ventilation directly to ambient air, thermal incinerator operation, temperature monitoring equipment operation, gashouse production line in VOC operation, and gashouse production line not in VOC operation.

(ii) A log of all three-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the gashouse was vented to the thermal incinerator, was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent emissions test of the thermal incinerator that demonstrated compliance with the VOC destruction efficiency requirement specified in paragraph (RR)(2) of this rule.

(iii) A log of the dates and times of the bypass venting of gashouse emissions to ambient air and any downtime for the thermal incinerator and temperature monitoring equipment, when any gashouse production

line is in VOC operation. Additional records on bypass venting due to safety diversions are specified under paragraph (RR)(4)(h) of this rule.

(c) The owner or operator shall collect and record for each aerosol can production line at this facility the following production information each month:

(i) Number of aerosol cans produced.

(ii) Name and amount (pounds) of each VOC liquid charged to the mixing tanks and filled into aerosol cans.

(iii) Number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (under-the-cup fill, needle fill, or Sepro fill), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator).

(iv) Number of VOC propellant line purges by name of propellant, type of recovery (recovered for fuel tank of thermal incinerator or not recovered), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator).

(v) Name and amount (pounds) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation).

(vi) Number of safety diversion events and number of emergency events, as described in paragraph (RR)(8)(a) of this rule.

(d) The owner or operator shall collect and record the following chemical and physical properties for the VOC liquids and VOC propellants used in the aerosol can production lines of this facility:

(i) For any VOC liquid used in liquid mixing and liquid filling of aerosol cans, the liquid name, the liquid density (pounds per gallon), and the vapor pressure (mmHg) at seventy degrees Fahrenheit and eighty degrees Fahrenheit.

(ii) For any VOC liquid used in manual aerosol can cleaning, the liquid name and the liquid density (pounds per gallon).

(iii) For any VOC propellant, the liquid density (pounds per gallon) under usual propellant storage temperature and pressure, the vapor density (pounds per cubic centimeter) at propellant filler temperature, the fraction VOC by weight, the molecular weight, and the lower explosive limit (LEL) concentration (ppmv).

(e) The owner or operator shall calculate and record for each aerosol can production line at this facility the following information each month:

(i) Monthly amount of VOC emissions (pounds) from the liquid mixing operations, as determined in accordance with paragraph (RR)(6)(a) of this rule.

(ii) Monthly amount of VOC emissions (pounds) from the can liquid filling operations, as determined in accordance with paragraph (RR)(6)(b) of this rule.

(iii) Monthly amount of VOC emissions (pounds) from the gashouse operations (propellant filling, propellant line purging, and safety diversions), as determined in accordance with paragraph (RR)(6)(c) of this rule.

(iv) Monthly amount of VOC emissions (pounds) from the manual aerosol can cleaning operations (can brushing operations), as determined in accordance with paragraph (RR)(6)(d) of this rule.

(v) Monthly amount of VOC emissions (pounds) from the aerosol can production line, which is the sum of data recorded under paragraphs (RR)(4)(e)(i) to (RR)(4)(e)(iv) of this rule.

(f) The owner or operator shall collect and record for each can piercing operation at this facility the following information each month:

(i) The monthly operation of aerosol cans pierced, categorized by type of product/propellant and size.

(ii) For each category of aerosol can identified under paragraph (RR)(4)(f)(i) of this rule, the name and amount (pounds per can) of VOC liquid (solvent) and VOC propellant contained within the aerosol can.

(iii) For each VOC liquid, the vapor pressure (mmHg) at eighty degrees Fahrenheit and the molecular weight (pounds per pound mole).

(iv) The monthly amount of VOC emissions (pounds) from can piercing operations, as determined in accordance with paragraph (RR)(6)(e) of this rule.

(g) The owner or operator shall record for all aerosol can production lines and can piercing operations combined at this facility the following information each month:

(i) The monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under paragraphs (RR)(4)(e)(v) and (RR)(4)(f)(iv) of this rule for each aerosol can production line and each can piercing operation, respectively.

(ii) The monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under paragraph (RR)(4)(c)(i) of this rule for each aerosol can production line.

(iii) The amount of VOC emissions (pounds) during the rolling twelve-month period, which is the sum of the values recorded under paragraph (RR)(4)(g)(i) of this rule for this month and the previous eleven consecutive months.

(iv) The number of aerosol cans produced during the rolling twelve-month period, which is the sum of the values recorded under paragraph (RR)(4)(g)(ii) of this rule for this month and the previous eleven consecutive months.

(v) The VOC emissions rate during the rolling twelve-month period in pounds per one thousand cans, which is one thousand times the value from paragraph (RR)(4)(g)(iii) of this rule divided by the value from paragraph (RR)(4)(g)(iv) of this rule, and rounded to two decimal places.

(h) The owner or operator shall collect and record for each aerosol can production line at this facility, the following information for each safety diversion event, as described in paragraph (RR)(8) of this rule:

(i) Twenty per cent LEL stamp, which indicates that a concentration between twenty per cent and forty per cent of the LEL occurred;

(ii) Date and time of the twenty per cent LEL stamp;

(iii) Event length (seconds);

(iv) Type of VOC propellant being employed in the gashouse;

(v) Average concentration of LEL detectors in gashouse line (ppmv);

(vi) Average flow rate (cfm); and

(vii) Amount of VOC emissions (pounds).

(i) The records required by paragraphs (RR)(4)(a) to (RR)(4)(h) of this rule shall be maintained for a minimum of five years and shall be available for review

by the director or any authorized representative of the director during normal business hours.

(5) Reporting.

(a) The owner or operator shall submit quarterly compliance status reports:

(i) That identify any emission rate violation in which the emission rate recorded under paragraph (RR)(4)(g)(v) of this rule exceeds the VOC emission limitation specified in paragraph (RR)(1) of this rule;

(ii) That identify any deviations of the requirements specified in paragraphs (RR)(2) and (RR)(3) of this rule, as recorded under paragraphs (RR)(4)(b)(iii) and (RR)(4)(b)(ii) of this rule, respectively; and

(iii) That provide summaries of the records specified under paragraphs (RR)(4)(a) to (RR)(4)(h) of this rule.

(b) The owner or operator shall submit to the appropriate Ohio EPA district office or local air agency the quarterly compliance status reports specified in paragraph (RR)(5)(a) of this rule. These quarterly compliance status reports shall be submitted by April thirtieth, July thirty-first, October thirty-first, and January thirty-first and shall cover the records for the previous calendar quarters.

(6) Determination of VOC emissions.

(a) VOC emissions from liquid mixing operations.

(i) For liquid mixing operations, the monthly VOC emissions (pounds), E(mixing), shall be calculated as follows:

E(mixing) = E(loading) + (E)venting

where:

E(loading) = monthly VOC emissions from loading VOC liquids into mixing tanks

E(venting) = monthly VOC emissions from venting VOC liquids during mixing

(ii) For loading VOC liquid into a mixing tank, the monthly VOC emissions shall be calculated, based on the ideal gas law and displacement of saturated vapors at seventy degrees Fahrenheit (twenty-one degrees Celsius), as follows:

E(loading) = monthly sum of Ei(loading) for all VOC liquid "i" loaded into mixing tanks

Ei(loading) = (Pi * Xi * Vi * MWi)/ (R * T)

where:

Ei(loading) = pounds of VOC emissions during the month from loading VOC liquid "i" into mixing tanks

Pi = vapor pressure of VOC liquid "i" at seventy degrees Fahrenheit, in mmHg

Xi = mole fraction of VOC liquid "i" in liquid mix (value of one is used for this emissions estimate)

Vi = volume of VOC liquid "i" charged to mixing tanks during the month in cubic feet (equals monthly gallons of liquid "i" divided by 7.48 gallons per cubic foot)

R = nine hundred ninety-nine mmHg-cubic feet per pound mole-degrees Kelvin

T = temperature in degrees Kelvin (equals two hundred seventy-three plus twenty-one degrees Celsius)

MWi = molecular weight of VOC liquid "i", in pounds per pound mole

(iii) For venting of VOC liquids during mixing, the monthly VOC emissions shall be calculated, based on the ideal gas law and venting of saturated vapors at eighty degrees Fahrenheit (twenty-seven degrees Celsius), as follows:

E(venting) = monthly sum of Ei(venting) for all VOC liquid "i" loaded into mixing tanks

Ei(venting) = (Pi * Xi * Vi,v * MWi) / (R * T)

where:

Ei(venting) = pounds of VOC emissions during the month for venting a VOC liquid "i" during mixing

Pi = vapor pressure of VOC liquid "i" at eighty degrees Fahrenheit, in mmHg

Xi = mole fraction of VOC liquid "i" in liquid mix (a value of one is used for this emissions estimate)

Vi,v = volume (cubic feet) of saturated vapors removed by the ventilation system during mixing of VOC liquid "i" (equals monthly gallons of VOC liquid "i" times five times thirty divided by three hundred fifty based on five per cent of the total ventilation flow rate or five cubic feet per minute, an average mixing time of thirty minutes per batch, and a typical batch size of three hundred and fifty gallons)

R = nine hundred ninety-nine mmHg-cubic feet per pound mole-degrees Kelvin

T = temperature in degrees Kelvin (equals two hundred seventy-three plus twenty-seven degrees Celsius)

MWi = molecular weight of VOC liquid "i", in pounds per pound mole

(iv) Alternative method.

An alternative method for calculating the monthly emissions rate for liquid mixing operations shall be as follows:

E(mixing) = EFM * V(mixing)

where:

EFM = emission factor of 0.00131 pound VOC per pound VOC liquid throughput (this emission factor is based on the highest annual average emission factor for mixing operations during 1997 to 2000)

V(mixing) = monthly throughput of VOC liquid employed for mixing, in pounds

(v) If for any month in which the use of the alternative method described in paragraph (RR)(6)(a)(iv) of this rule shows noncompliance with the VOC emission limit, the method described in paragraphs (RR)(6)(a)(i) to (RR)(6)(a)(iii) of this rule shall be used to calculate monthly emissions for liquid mixing operations. The compliance determination will then be based on these more detailed calculations.

(b) VOC emissions from liquid filling of aerosol cans.

(i) For the liquid filling of aerosol cans, the monthly VOC emissions (pounds) shall be calculated, based on the ideal gas law and

displacement of saturated vapors at seventy degrees Fahrenheit (twenty-one degrees Celsius) as follows:

E(filling) = monthly sum of Ei(filling) for all VOC liquid "i" filling of aerosol cans

Ei(filling) = (Pi * Xi * Vi * MWi) / (R * T)

where:

Ei(filling) = pounds of VOC emissions during the month for VOC liquid "i" filling of aerosol cans

Pi = vapor pressure of VOC liquid "i" at seventy degrees Fahrenheit, in mmHg

Xi = mole fraction of VOC liquid "i" in liquid fill (a value of one is used for this emissions estimate)

Vi = volume of VOC liquid "i" filled into aerosol cans during the month in cubic feet (equals monthly gallons of VOC liquid "i" divided by 7.48 gallons per cubic foot)

R = nine hundred ninety-nine mmHg-cubic feet per pound mole-degrees Kelvin

T = temperature in degrees Kelvin (equals two hundred seventy-three plus twenty-one degrees Celsius)

MWi = molecular weight of VOC liquid "i", in pounds per pound mole

(ii) Alternative method.

An alternative method for calculating the monthly emissions for liquid can filling operations shall be as follows:

E(filling) = EFF * V(filling)

where:

EFF = emission factor of 0.00026 pound VOC per pound VOC liquid throughput (this emission factor is based on the highest annual average emission factor for liquid can filling operations during 1997 to 2000)

V(filling) = monthly throughput of VOC liquid employed for can filling, in pounds

(iii) If for any month in which the use of the alternative method described in paragraph (RR)(6)(b)(ii) of this rule shows noncompliance with the VOC emission limit, the method described in paragraph (RR)(6)(b)(ii) of this rule shall be used to calculate monthly emissions for liquid filling of aerosol cans. The compliance determination will then be based on these more detailed calculations.

(c) VOC emissions from gasser (gashouse) operations.

(i) For the gasser operations, the monthly VOC emissions in pounds), EG(total), shall be calculated as follows:

EG(total) = EG(filling) + EG(purging) + EG(safety diversions)

where:

EG(filling) = monthly VOC emissions from filling aerosol cans with VOC propellant

EP(purging) = monthly VOC emissions from purging of lines containing VOC propellant

EG(safety diversions) = monthly VOC emissions from safety diversions of VOC control equipment

(ii) For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions for filling and line purging shall be calculated as follows:

EG(filling) = monthly sum of (NCp,f,v) x (EFp,f) X (Kp) x (1 - Cep,v/100) x (VOCp)

EP(purging) = monthly sum of (NPp,v) x (Vp) x (LDp) x (1 - Rp) x (1 - CEp,v/100) x (VOCp)

where:

CEp,v = control efficiency for propellant "p" VOC emissions and type of venting "v" for those emissions, based on venting of VOC propellant emissions to thermal incinerator or not and the overall control efficiency of the thermal incinerator for VOC

CEp,v = zero per cent if propellant "p" VOC emissions are not vented to the thermal incinerator

CEp,v = overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator

EFp,f = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (under-the-cup fill, needle fill, or Sepro fill)

EFp,f = 0.2 cubic centimeters per can for needle filling of VOC propellant "p"

EFp,f = 1.00 cubic centimeters per can for Sepro filling of VOC propellant "p"

EFp,f = 1.75 cubic centimeters per can for under-the-cup filling of VOC propellant "p"

Kp = conversion factor for gaseous VOC propellant "p" expressed in pounds per cubic centimeter at standard conditions

LDp = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds per gallon

NCp,f,v = number of cans produced with VOC propellant "p" and filling type "f" during the month by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

NPp,v = number of propellant line purges during the month for VOC propellant "p" by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

Rp = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

Vp = volume of propellant line purged for VOC propellant "p", in gallons

VOCp = fraction VOC by weight for VOC propellant "p" (usually one for a VOC containing propellant)

(iii) Alternative method for filling and line purging.

For gasser operations equipped with a thermal incinerator in which the VOC emissions from the filling of aerosol cans with VOC propellant are vented to the thermal incinerator and the line purging of VOC propellant is recovered for use as a fuel in the thermal incinerator, the

monthly VOC emissions for filling and line purging shall be calculated as follows:

EG(filling) + EG(purging) = EF * (NC/1000)

where:

EF = VOC emissions factor from most recent compliance test of the thermal incinerator, expressed in pounds VOC per thousand aerosol cans produced (based on the September 24, 2002 compliance test, EF equals 0.16 pound VOC per thousand aerosol cans)

NC = number of aerosol cans produced with VOC propellant during the month

(iv) EG(safety diversions) is the sum of the VOC emissions for each safety diversion event during the month, as determined in accordance with paragraph (RR)(8) of this rule. The amount of VOC emissions in pounds for a safety diversion event EG(event) shall be calculated as follows:

$EG(event) = C_{avg} * MW * Flow * Time * (4.256 \times 10^{-11})$

where:

C_{avg} = average concentration of VOC propellant in gas stream being vented to ambient air during safety diversion event, in parts per million by volume

MW = molecular weight of VOC propellant being employed in gashouse at time of safety diversion event, in pounds per pound-mole

Flow = average flow rate of gas stream being vented to ambient air during safety diversion event, in cubic feet per minute

Time = length of safety diversion event, in seconds

4.256×10^{-11} = constant value based on various unit conversions and division by the Universal Gas Constant at standard conditions

(d) VOC emissions from manual aerosol can cleaning operations.

For the manual aerosol can cleaning operations (can brushing operations), VOC emissions shall be equal to the mass of VOC solvent consumed in the operation. The monthly VOC emissions from can brushing shall be calculated as the sum of VOC emissions for all solvents consumed during

that month. The VOC emissions from each VOC solvent consumed is calculated as the number of VOC solvent gallons consumed during the month times the VOC solvent density (pounds per gallon).

(e) VOC emissions from can piercing operations.

(i) For the can piecing operations, monthly VOC emissions shall be the total VOC emissions from propellants plus the total VOC emissions from liquid recovery.

(ii) The total VOC emissions (pounds) from propellants is the sum of the amount of VOC propellant within all cans pierced during that month. For a grouping of pierced cans by type and size, the monthly amount of VOC propellant is calculated as the amount of propellant VOC per can (pounds VOC per can), which is based on the type and size category, times the number of cans pierced during the month for that type and size category.

(iii) The total VOC emissions (pounds) from liquid recovery for all cans pierced during a month is the sum of VOC emissions from the liquids (solvents) within all cans pierced during that month. The VOC emissions from the liquids shall be calculated, based on the ideal gas law and displacement of saturated vapors at eighty degrees Fahrenheit (twenty-seven degrees Celsius) for liquid flowing into a recovery drum or vessel, using the following formulas:

E(piercing) = sum of Ei(piercing) for all VOC liquid "i" within the cans pierced in the month

Ei(piercing) = (Pi * Xi * Vi * MWi) / (R * T)

Vi = Wi / (7.48 * Di)

Wi = sum of (Wi,c * Nc) for VOC liquid "i" for all cans pierced (by can type and size category "c") during the month

where:

Di = density of VOC liquid "i", in pounds per gallon

E(piercing) = total VOC emissions from liquid recovery for all cans pierced in the month, in pounds

Ei(piercing) = pounds of VOC emissions from VOC liquid "i" recovered from cans pierced in the month

MWi = molecular weight of VOC liquid "i", in pounds per pound mole

Nc = number of cans pierced during the month for can type and size category "c"

Pi = vapor pressure of VOC liquid "i" at eighty degrees Fahrenheit, in mmHg

R = nine hundred ninety-nine mmHg-cubic feet per pound mole-degrees Kelvin

T = temperature in degrees Kelvin (equals two hundred seventy-three plus twenty-seven degrees Celsius)

Xi = mole fraction of VOC liquid "i" in liquid of pierced cans (value of one is used for this emissions estimate)

Vi = volume of VOC liquid "i" within pierced cans for the month, in cubic feet

Wi = amount of VOC liquid "i" within the pierced cans for the month, in pounds

Wi,c = amount of VOC liquid "i" for can type and size category "c", in pounds per can

7.48 = conversion factor in gallons per cubic foot

(7) VOC emissions testing.

The owner or operator shall conduct, or have conducted, emissions testing for the thermal incinerator to demonstrate the thermal incinerator's mass emission rate, destruction efficiency, and overall control efficiency for VOC emissions from this facility's gashouse operations in accordance with the following requirements:

(a) The emissions testing shall be conducted within six months of March 12, 2006, unless emissions testing had been conducted within three years prior to March 12, 2006 and the emissions testing demonstrated compliance with paragraph (RR)(2) of this rule.

(b) For the emissions testing, the owner or operator shall meet the general provisions of paragraph (A) of rule 3745-21-10 of the Administrative Code.

(c) The emissions testing shall be conducted in accordance with the test methods in paragraph (C) of rule 3745-21-10 of the Administrative Code with the

concentration of VOC in the thermal incinerator's inlet and outlet gas streams determined by means of USEPA method 25 or USEPA method 25A.

(d) The emission testing to determine the VOC capture efficiency of the vapor collection system used to transport VOC emissions from the facility's gashouse operations (propellant filling of aerosol cans and propellant line purging) to the thermal incinerator shall be conducted by means of the test methods specified in paragraph (C)(3)(c) of rule 3745-21-10 of the Administrative Code.

(e) The emission testing shall be conducted while the facility's gashouse is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA district office or local air agency.

(f) The overall control efficiency of the thermal incinerator for VOC shall be the destruction efficiency times the capture efficiency divided by one hundred.

(g) The mass emission rate of the thermal incinerator, expressed in pounds VOC per thousand aerosol cans produced, shall be the hourly mass emission rate (pounds VOC per hour) divided by the hourly production rate (one thousand cans per hour).

(h) Additional testing of the gashouse and the thermal incinerator may be required by the director to ensure continued compliance with the applicable requirements.

(8) Safety diversion events and emergency events for gasser operations being vented to a thermal incinerator.

(a) A safety diversion is the venting of gasser operations directly to ambient air, instead of being vented to the thermal incinerator, in order to meet requirements of NFPA 30B: "Code for the Manufacturing and Storage of Aerosol Products." A safety diversion occurs when any of the lower explosive limit (LEL) detectors in the gashouse detects a concentration between twenty per cent and forty per cent of the LEL. Under a safety diversion, as described in NFPA 30B, Section 5.4.2(E), the ventilation rate of the affected gashouse line is quickly increased, the gashouse line is vented immediately to ambient air (i.e. thermal incinerator is bypassed), and production activities usually continue. Safety diversion events are less than five minutes and shall be included in the determination of compliance with the monthly VOC emission limitation of 0.75 pound VOC per thousand aerosol cans produced. A safety diversion event is not be a malfunction under paragraph (B) of rule 3745-15-06 of the Administrative Code.

(b) An emergency event is a condition that shuts down the line, releases propellant in the gasser to atmosphere and vents the gashouse directly to ambient air, instead of being vented to the thermal incinerator as required by NFPA 30B, Section 5.12. Emergency events include safety diversions greater than five minutes, detected LEL concentrations greater than forty per cent, low flow alarms, power loss, fire alarms, explosion suppression systems discharge, gashouse and thermal oxidizer safety system monitoring device fault and emergency stops (E-Stops). An E-Stop occurs when a gashouse operator shuts down the line due to an observed safety issue caused by the gashouse operation such as employee injury, damage to equipment, or operation problems such as shredding of cans. The owner or operator shall maintain a record of the emergency events.

(c) The VOC emissions for a safety diversion event shall be calculated based on the average concentration of the LEL detectors associated with the gashouse line, the flow rate of the gashouse line (measured with a mass flow meter), the propellant being filled, and the length of the event (seconds).

(d) The owner or operator shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall check the flow meters once every six months for accuracy using a pilot tube.

(SS) On and after March 31, 1993, "Ritrama Duramark" or any subsequent owner or operator of the "Ritrama Duramark" facility located at 341 Eddy road, Cleveland, Ohio shall not cause, allow or permit the discharge into the ambient air of any VOC from the vinyl film casting line unless all of the VOC emissions are vented to an incinerator that is designed and operated to achieve a control efficiency of at least ninety-eight per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(TT) "ICI Americas Incorporated" or any subsequent owner or operator of the "ICI Americas Incorporated" facility located at 3647 Shepard road, Perry, Ohio, shall comply with the following requirements by no later than the date specified in paragraph (C)(54) of rule 3745-21-04 of the Administrative Code:

(1) For the tetra-hydro-phthalimide production process, the stage 1 and stage 2 reactor vent streams shall be vented to a flare that meets the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(2) VOC emissions from the diked area of the carbon disulfide tanks shall be reduced by employing styrofoam sheets which completely cover the diked area.

(UU) "British Petroleum Company, Toledo Refinery" or any subsequent owner or operator of the "British Petroleum Company, Toledo Refinery" facility located at 4001 Cedar Point road, Oregon, Ohio shall comply with the following requirements for VOC emissions:

(1) On and after the date specified in paragraph (C)(55)(a) of rule 3745-21-04 of the Administrative Code, all VOC emissions from the SPOP waterwash tower spentwash flash drum and the POLY waterwash tower spentwash flash drum shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(2) On and after the date specified in paragraph (C)(55)(b) of rule 3745-21-04 of the Administrative Code, all VOC emissions from the alkyl 1 blowdown drum and the alkyl 2 blowdown drum shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(3) On and after the date specified in paragraph (C)(55)(b) of rule 3745-21-04 of the Administrative Code, all VOC emissions from the cokers 1 and 2 blowdown drum shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(4) On and after the date specified in paragraph (C)(55)(c) of rule 3745-21-04 of the Administrative Code, all process wastewater from the crude desalter shall be discharged to a steam stripper for the recovery of condensable hydrocarbons, and all VOC emissions from the steam stripper shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(5) On and after the date specified in paragraph (C)(55)(d) of rule 3745-21-04 of the Administrative Code, the barometric condensers and hot wells serving crude vacuum unit 1 and associated with cooling tower cell 6 shall be replaced with surface condensers (shell and tube heat exchangers).

(6) On and after the date specified in paragraph (C)(55)(e) of rule 3745-21-04 of the Administrative Code, the barometric condensers and hot wells serving crude vacuum unit 2 and associated with cooling tower cell 7 shall be replaced with surface condensers (shell and tube heat exchangers).

(VV) "Marathon Petroleum Company LLC" or any subsequent owner or operator of the "Marathon Petroleum Company LLC" facility located at 2408 Gambrinus road, S.W., Canton, Ohio shall comply with the following requirements for VOC emissions:

(1) Reserved.

(2) On and after March 31, 1993, all VOC emissions from the asphalt oxidizer shall be vented to an enclosed combustion device that is operated to reduce the VOC emissions by at least ninety-five per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(WW) (Reserved)

(XX) "Columbus Coated Fabrics" or any subsequent owner or operator of "Columbus Coated Fabrics" facility located at 1280 North Grant avenue, Columbus, Ohio shall comply with the requirements of either paragraph (XX)(1) or (XX)(2) of this rule for each of the seven U-frame vinyl coating lines and the HL-40 in-line vinyl coating line, by no later than the dates specified in paragraph (C)(58) of rule 3745-21-04 of the Administrative Code.

(1) A capture system and control system shall be employed which are designed and operated to achieve an overall control efficiency for the VOC emissions of at least eighty-one per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of Administrative Code.

(2) The VOC content of the coatings employed in the coating line, as determined under paragraph (B) of rule 3745-21-10 of Administrative Code, does not exceed 3.2 pounds per gallon of coating, excluding water and exempt solvents.

(YY) "PMC Specialties Group" or any subsequent owner or operator of the "PMC Specialties Group" facility located at 501 Murray road, Cincinnati, Ohio shall comply with the following requirements by no later than the dates specified in paragraph (C)(59) of rule 3745-21-04 of the Administrative Code:

(1) Any VOC emissions from the reactor process vent streams from the methyl anthranilate and anthranilic acid manufacturing operations shall be vented to an enclosed combustion device that is designed and operated to reduce the VOC emissions by at least ninety-five per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(2) For the OCBS fine chemicals system II process, the VOC emissions from the centrifuge vent shall not exceed twelve pounds of VOC per six thousand pounds of product, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(ZZ) "Firestone Synthetic Rubber & Latex Company" or any subsequent owner or operator of the "Firestone Synthetic Rubber & Latex Company" facility located at 381 West Wilbeth road, Akron, Ohio shall comply with the following requirements for the VOC emissions from the reactor processes no later than the date specified in paragraph (C)(60) of rule 3745-21-04 of the Administrative Code:

(1) Except where exempted under paragraph (ZZ)(2) of this rule, each reactor process vent stream shall be vented to one of the following control equipment:

(a) An enclosed combustion device that is designed and operated to reduce the VOC emissions by at least ninety-eight per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code; or

(b) A flare that meets the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(2) Exempted from the requirements of paragraph (ZZ)(1) of this rule are the following reactor process vent streams:

(a) Any reactor process vent stream which is vented to an enclosed combustion device or a flare for which construction commenced prior to March 31, 1993, provided the enclosed combustion device or flare is operated and maintained in accordance with design specifications. This exemption shall terminate if the enclosed combustion device or flare is replaced with new control equipment for which construction commenced on or after March 31, 1993.

(b) Any reactor process vent stream which is an air-bearing vent stream, which has a VOC concentration between the lower explosive limit and the upper explosive limit, and which has a total resource effectiveness value greater than 1.0, as determined under paragraph (EE)(3) of this rule. If the reactor process has more than one of these air-bearing process vent streams, the total resource effectiveness value shall be based upon a combination of those air-bearing reactor process vent streams.

(AAA) Reserved.

(BBB) "BFGoodrich Company Akron Chemical Plant" or any subsequent owner or operator of the "BFGoodrich Company Akron Chemical Plant" facility located at 240 West Emerling avenue, Akron, Ohio shall comply with the following requirements by no later than the date specified in paragraph (C)(62) of rule 3745-21-04 of the Administrative Code:

(1) For the agerite resin D process, the VOC emissions from the recovery system vents and product neutralization and distillation system vents, except wash kettles (or still feed) condenser vents, stills vacuum jet tailpipe vents, and process emergency safety relief devices, shall be vented to a flare that meets the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

(2) For the superlite (trademark) process, the VOC emissions from the reactor process vent streams, except the process emergency safety relief devices, shall be vented to a control device that is designed and operated to achieve a control efficiency of at least ninety-five per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(3) For the diphenylamine-based antioxidants process, the VOC emissions from the reactor process vent streams, except the emulsion recovery system tank vent, recovered MND tank vent, and process emergency safety relief devices, shall be vented to a control device that is designed and operated to achieve a control efficiency of at least ninety-five per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(4) For the DPPD/PHDA process, the VOC emissions from the reactor process vent streams, except the north and south still jet vents and process emergency safety relief devices, shall be vented to a control device that is designed and operated to achieve a control efficiency of at least ninety-four per cent, by weight, as determined under paragraph (C) of rule 3745-21-10 of the Administrative Code.

(CCC) (Reserved)

(DDD) Gasoline dispensing facilities (stage II vapor control systems).

(1) Except where exempted under paragraph (DDD)(4) of this rule, no owner or operator of a gasoline dispensing facility may cause, allow, or permit the transfer of gasoline from a stationary storage tank at a gasoline dispensing facility into a motor vehicle after the dates specified in paragraph (C)(64) of rule 3745-21-04 of the Administrative Code unless the following requirements are met:

(a) All vapors displaced from the motor vehicle are vented to a vapor control system which is designed and operated to maintain an overall control efficiency of not less than ninety-five per cent, by weight, for the VOC in the displaced vapors and which is CARB certified. The vapor control system shall employ only coaxial hoses, and the use of remote check valves shall be prohibited.

(b) The vapor control system is installed, operated and maintained in accordance with the manufacturer's specifications and the applicable CARB certification, and is free of the following defects:

(i) Any component, that is required to be employed at all times pursuant to the system CARB certification, is absent or disconnected.

(ii) A vapor hose is crimped or flattened such that the vapor passage is blocked, or the pressure drop through the vapor hose exceeds by a factor of two or more the requirements in the CARB certification.

(iii) A nozzle boot is torn in one or more of the following manners:

(a) A triangular-shaped or similar tear one half inch or more to a side, or a hole one half inch or more in length; and

(b) A slit one inch or more in length.

(iv) A faceplate or flexible cone is damaged in the following manner:

(a) For balance nozzles and for nozzles for aspirator and educator assist type systems, the capability to achieve a seal with a fill pipe interface is affected for one fourth of the circumference of the faceplate (accumulated); and

(b) For nozzles for vacuum assist-type systems, more than one fourth of the flexible cone is missing.

(v) Nozzle shutoff mechanisms are malfunctioning in any manner.

(vi) Vapor return lines, including such components as swivels, antirecirculation valves and underground piping are malfunctioning or are blocked, or restricted such that the pressure drop through the lines exceeds by a factor of two or more the requirements specified in the system CARB certification.

(vii) A vapor processing unit is inoperative or malfunctioning.

(viii) A vacuum producing device is inoperative or malfunctioning.

(ix) Pressure/vacuum relief valves, vapor check valves, or dry breaks are inoperative.

(x) Any vapor recovery equipment is leaking liquid gasoline or gasoline vapors.

(xi) Any other equipment defect identified in the CARB certification as one which substantially impairs the effectiveness of the vapor control system.

(c) The vapor control system has successfully passed the testing requirements contained in paragraph (DDD)(2) of this rule.

(d) Operating instructions for the vapor control system are conspicuously posted in each gasoline dispensing area. The operating instructions shall clearly describe how to properly fuel motor vehicles and shall specifically prohibit the topping off of the motor vehicle fuel tank.

(2) Testing requirements:

(a) Except as otherwise provided in paragraph (DDD)(2)(h) of this rule, within sixty days after the installation or modification of a vapor control system required pursuant to paragraph (DDD)(1) of this rule, the owner or operator of the gasoline dispensing facility shall perform and comply with the requirements of the following tests:

(i) A leak test shall be performed in accordance with the test procedures contained in paragraph (Q) of rule 3745-21-10 of the Administrative Code to quantify the vapor tightness of the vapor control system. The vapor control system must comply with the leak rate criteria specified in the test procedures.

(ii) A dynamic pressure performance test shall be performed in accordance with the test procedures contained in paragraph (R) of rule 3745-21-10 of the Administrative Code to determine the pressure drop through the vapor control system at prescribed flow rates. The vapor recovery system must comply with the dynamic back pressures shown in the following table:

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Nitrogen flowrate (standard cubic feet per hour)	Maximum dynamic back pressure (inches of water)
40	0.16
60	0.35
80	0.62

(b) For purposes of paragraph (DDD)(2)(a) of this rule, the modification of a vapor control system shall include the following:

(i) Any change, such as the removal of certified components and the addition or removal of piping or fittings, which may cause the vapor control system to be incapable of maintaining an overall control efficiency of not less than ninety-five per cent, by weight, for the VOC emissions.

(ii) Any change which requires an installation permit pursuant to rule 3745-31-02 of the Administrative Code.

(c) Not later than thirty days prior to any tests required pursuant to paragraphs (DDD)(2)(a) and (DDD)(2)(d) of this rule, the owner or operator of the gasoline dispensing facility shall submit a test notification to the appropriate Ohio EPA district office or local air agency. The test notification shall describe the proposed test methods and procedures, the time and date of the

tests, and the person who will be conducting the tests. Failure to submit such notification prior to the tests may result in the Ohio EPA's refusal to accept the results of the tests. Personnel from the appropriate Ohio EPA district office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information during the tests. After completion of any tests, the owner or operator shall complete the post test inspection form contained in appendix C to rule 3745-21-10 of the Administrative Code, and a comprehensive written report on the results of the tests shall be submitted to the appropriate Ohio EPA district office or local air agency within thirty days following the completion of the tests.

(d) At intervals not to exceed five years, the owner or operator of the gasoline dispensing facility shall repeat and demonstrate compliance with the requirements of the tests specified in paragraph (DDD)(2) of this rule.

(e) The director may require the owner or operator of a gasoline dispensing facility to perform other tests that have been authorized by the USEPA if such tests are necessary to demonstrate the adequacy of a vapor control system.

(f) The owner or operator of the gasoline dispensing facility shall perform and comply with any vapor control system tests specified in the applicable CARB certification. The tests shall be performed at the frequency specified in such certification.

(g) Any vapor control system test conducted in accordance with the previous test procedures and specifications that were effective on March 31, 1993 and subsequently amended or deleted may be used, where appropriate, in lieu of the test procedures and specifications currently contained in this rule, provided such vapor control system test was not conducted after January 17, 1995.

(h) Any vapor control system required by paragraph (DDD)(1) of this rule at an automobile or light-duty truck assembly plant that has not been tested in accordance with paragraph (DDD)(2)(a) of this rule as of January 17, 1995, shall be tested in accordance with paragraph (DDD)(2)(a) of this rule by July 17, 1995.

(3) Recordkeeping requirements:

(a) Any owner or operator of a gasoline dispensing facility which is subject to the requirements of paragraph (DDD)(1) of this rule shall maintain the following records:

(i) The quantity of gasoline delivered to the facility during each calendar month.

(ii) The results of any tests performed pursuant to paragraph (DDD)(2) of this rule.

(iii) A log of the date and description of all repair and maintenance work performed (including, but not limited to, work performed to meet manufacturer's specifications or CARB certification requirements), or any other modifications made to the vapor control system.

(iv) A copy of the most recent operating permit application (including emissions activity category form or appendix form) submitted to the Ohio EPA.

(v) A copy of the most recent operating permit issued by the Ohio EPA.

(vi) Proof of attendance and completion of the training required by the Ohio EPA for the operator or local manager of the gasoline dispensing facility.

(vii) Copies of all completed post test inspection forms.

(b) All records shall be retained by the owner or operator for a period of not less than three years and shall be made available to the director or any authorized representative of the director for review during normal business hours.

(4) Exemptions:

(a) Paragraph (DDD)(1) of this rule shall not apply to any gasoline dispensing facility which has a monthly gasoline throughput of less than ten thousand gallons per month or to any gasoline dispensing facility which is owned by an independent small business marketer and which has a monthly gasoline throughput of less than fifty thousand gallons per month. The monthly gasoline throughput shall be based upon the average monthly sales of gasoline during the period from November 16, 1990 through November 15, 1992; however, if a gasoline dispensing facility was inactive for any portion of this two year calculation period, the calculation period may be extended to include a total of twenty-four months of activity. This exemption shall cease to apply to a facility if during any calendar month after November 15, 1992, the gasoline throughput equals or exceeds ten thousand gallons or fifty thousand gallons, whichever is applicable. Furthermore, this exemption shall not apply to any facility which installed a vapor control system pursuant to the requirements of paragraph (DDD)(1) of this rule and the monthly gasoline throughput subsequently falls below ten thousand gallons per month or, if owned by an independent small business marketer, fifty thousand gallons per month.

(b) Paragraph (DDD)(1) of this rule shall not apply to marinas and aircraft refueling stands.

(c) The requirement in paragraphs (DDD)(1)(a) and (DDD)(1)(b) of this rule that refer to a CARB certification shall not apply to any vapor control system at an automobile or light-duty truck assembly plant. In cases where it has been determined that the test procedures specified in paragraph (DDD)(2)(a)(i) and/or (DDD)(2)(a)(ii) of this rule are not appropriate for a vapor control system at an automobile or light-duty truck assembly plant, alternative test procedures may be employed and alternative testing deadlines may be established provided that written, prior approval has been obtained from the Ohio EPA.

(d) Paragraph (DDD)(1) of this rule shall not apply to any motor vehicle fueling or refueling operation which is located at an automobile or light-duty truck assembly plant and which, considered alone, has a monthly gasoline throughput of less than ten thousand gallons per month. Any gasoline dispensers located within two hundred feet from each other shall be considered as one operation for the purpose of this exemption.

(e) Paragraph (DDD)(1) of this rule shall not apply to any gasoline dispensing pump that is used solely for the dispensing of E85, a gasoline with an ethanol content of eighty-five per cent.

(f) Paragraph (DDD)(1) of this rule shall not apply to any gasoline dispensing facility where gasoline is dispensed to a fleet of motor vehicles in which ninety-five per cent or more of the fleet of motor vehicles being fueled with gasoline is equipped with onboard refueling vapor recovery. If the gasoline dispensing facility is located at a motor vehicle assembly plant, the fleet of produced motor vehicles being initially fueled with gasoline shall be considered separate from any fleet of motor vehicles being refueled with gasoline. The owner or operator of a gasoline dispensing facility claiming this exemption shall maintain records documenting that at least ninety-five per cent of the fleet of motor vehicle being fueled with gasoline are equipped with onboard refueling vapor recovery. These records shall be retained by the owner or operator for a period of not less than five years and shall be made available to the director or any authorized representative of the director for review.

[Comment: This exemption is appropriate for gasoline dispensing facilities located at a facility or site serving a known fleet of motor vehicle rental agency, governmental agency, or motor vehicle assembly plant.]

(5) Suspension of control requirements:

(a) If, as a result of the development of a redesignation request prepared in accordance with requirements of the USEPA and Section 107(d)(3)(D) of the Clean Air Act contained in 42 USC 7407 (d)(3)(D), the director determines that the stage II vapor control program is not necessary in an area to ensure the maintenance of the ambient air quality standard for ozone and subsequently submits an official redesignation request to the USEPA for approval, the director may suspend the requirements of this paragraph in that area. This suspension shall remain in effect until a violation of the ambient air quality standard for ozone is measured in the area or the USEPA disapproves the redesignation request.

(b) The director also may suspend the requirements of this paragraph in the event that the USEPA promulgates or a federal court of last resort requires the USEPA to promulgate onboard (on-the-vehicle) refueling control standards pursuant to Section 202(a)(6) of the Clean Air Act contained in 42 USC 7521(a)(6), unless the director determines that the stage II vapor control program is necessary for the attainment and/or maintenance of the ambient air quality standard for ozone and this determination is issued by the director as final findings and orders subject to public hearing requirements. If the director determines that the stage II vapor control program is not required for the maintenance of the ambient air quality standard for ozone after the promulgation of onboard control requirements, the director may suspend the requirements of this paragraph.

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