

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Interim Director

1/9/2014

Certified Mail

Joe Shaw  
Day-Glo Color Corp.  
4515 Saint Clair Ave.  
Cleveland, OH 44103

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1318006552  
Permit Number: P0112662  
Permit Type: Renewal  
County: Cuyahoga

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Plain Dealer. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall and Cleveland Division of Air Quality  
Permit Review/Development Section 2nd Floor  
Ohio EPA, DAPC 75 Erieview Plaza  
50 West Town Street Suite 700 Cleveland, OH 44114  
PO Box 1049  
Columbus, Ohio 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297.

Sincerely,

  
Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification  
CDAQ; Pennsylvania; Canada





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Day-Glo manufactures fluorescent pigments, ink bases, and dyes for various industries and applications.

3. Facility Emissions and Attainment Status:

DayGlo's reported emissions during CY 2011 for organic compounds (OC)/volatile organic compounds (VOC) were 6.95 tons and 3.194 tons for particulate matter (PM).

Cuyahoga County is currently designated as nonattainment for PM<sub>2.5</sub>, ozone, and partial nonattainment for lead.

4. Source Emissions:

Day-Glo has requested federally enforceable limits of 97 TPY for facility-wide VOC emissions, and is currently operating under federally enforceable synthetic minor limits on facility-wide individual hazardous air pollutant (HAP) and combined HAPs of 9.7 TPY and 24.7 TPY respectively as established through their Title V permit. The same HAP restrictions are included in the proposed FEPTIO permit.

DayGlo operates numerous VOC generating emissions units that are subject to the federally enforceable OAC rule 3745-21-07(M) requiring that each subject unit be equipped with a control system that reduces VOC emissions by at least eighty-five percent, by weight. These units include P001, P008, P009, P021, P024, P026, P027, and P030.

Through review of emissions calculations, stack test data, and development of the revised permit, DayGlo will maintain facility-wide VOC emissions below 97 through employment of voluntary hourly VOC emissions limitations. Compliance with the hourly emissions rates will be confirmed through required stack testing for all units operating under voluntary restrictions. Further, all emissions units operating under voluntary VOC emissions limitations have been permitted at potential to emit in order to ensure that VOC emissions do not exceed 97 TPY. Some emissions units, however, require federally enforceable permit restrictions.

Emissions unit P021 will operate under two federally enforceable emissions limitations, one for VOC at 9.16 TPY and 7.59 TPY methanol (individual HAP) limitation and associated rolling, 12-month period batch and raw material throughput limitations.

Emissions units P007 and P031 – P035 have enforceable limitations that were established through PTI 13-04335 issued on February 5, 2008 to determine the rolling, 12-month summation of emissions. These limitations have been carried forward in the proposed FEPTIO.



DayGlo has requested voluntary limits on PM for several emissions units at the facility. The allowable PM emissions based on the voluntary limitations and potential to emit associated with this renewal permit equals 34.83 TPY. Therefore, federally enforceable emissions limitations are not required for facility-wide PM emissions at this time

5. Conclusion:

Through the federally enforceable requirements of OAC rule 3745-21-07(M), voluntary restrictions on hourly and annual emissions rates, and federally enforceable limitations on material throughput and production, DayGlo will maintain compliance with the facility-wide VOC emission limitation of 97 TPY. Compliance with the hourly VOC limitations (where applicable) shall also be determined through the requirement of periodic performance testing.

6. Please provide additional notes or comments as necessary:

None.

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
OC/VOC	97
PM	34.83
Individual HAP (methanol)	9.7
Combined HAPs	24.7

PUBLIC NOTICE

1/9/2014 Issuance of Draft Air Pollution Permit-To-Install and Operate

Day-Glo Color Corp.

Day-Glo Color Corp., 4515 Saint Clair Ave.

Cleveland, OH 44103

Cuyahoga County

FACILITY DESC.: Plastics Material and Resin Manufacturing

PERMIT #: P0112662

PERMIT TYPE: Renewal

PERMIT DESC: The Day-Glo Color Corporation Cleveland Plant is submitting this federally enforceable permit-to-install and operate (FEPTIO) application to opt out of the Title V permitting program.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: David Hearne, Cleveland Division of Air Quality, 2nd Floor 75 Erieview Plaza, Cleveland, OH 44114. Ph: (216)664-2297





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Day-Glo Color Corp.**

Facility ID:	1318006552
Permit Number:	P0112662
Permit Type:	Renewal
Issued:	1/9/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





**Division of Air Pollution Control  
Permit-to-Install and Operate**

for  
Day-Glo Color Corp.

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**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 1318006552  
Application Number(s): A0045948  
Permit Number: P0112662  
Permit Description: The Day-Glo Color Corporation Cleveland Plant is submitting this federally enforceable permit-to-install and operate (FEPTIO) application to opt out of the Title V permitting program.  
Permit Type: Renewal  
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 1/9/2014  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Day-Glo Color Corp.  
Day-Glo Color Corp.  
4515 Saint Clair Ave.  
Cleveland, OH 44103

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality  
2nd Floor  
75 Erieview Plaza  
Cleveland, OH 44114  
(216)664-2297

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler  
Interim Director



## Authorization (continued)

Permit Number: P0112662

Permit Description: The Day-Glo Color Corporation Cleveland Plant is submitting this federally enforceable permit-to-install and operate (FEPTIO) application to opt out of the Title V permitting program.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

<b>Emissions Unit ID:</b>	<b>P001</b>
Company Equipment ID:	Plant #1 - 1st Floor - 2 Kettles and 3-Roll Mills (x2)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P002</b>
Company Equipment ID:	Plant #1 - 2nd Floor
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P003</b>
Company Equipment ID:	Plant #1 Hi-Solv Dispensers (x2) with Dust Collector
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P005</b>
Company Equipment ID:	Plant #1 - Mixers, Weigh Station, and Fabric Filter
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P008</b>
Company Equipment ID:	Plant #2 - Pigment Kettle #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P009</b>
Company Equipment ID:	Plant #2 - Pigment Kettle #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P021</b>
Company Equipment ID:	Plant #7 - Funda Filter & Rotary Dryer System
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P024</b>
Company Equipment ID:	Plant #2 - Pigment Kettle #3
Superseded Permit Number:	13-04335
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P030</b>
Company Equipment ID:	Plant #6 - MP Pigment Drying System
Superseded Permit Number:	13-04384
General Permit Category and Type:	Not Applicable



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

**Emissions Unit ID:**

**P036**

Company Equipment ID:

5,000-gallon reactor with wet scrubber.

Superseded Permit Number:

P0111064

General Permit Category and Type:

Not Applicable

**Group Name: Plant #6 Pigment Kettles #1 & #2**

<b>Emissions Unit ID:</b>	<b>P026</b>
Company Equipment ID:	MP Kettle #1
Superseded Permit Number:	13-04384
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P027</b>
Company Equipment ID:	MP Kettle #2
Superseded Permit Number:	13-04384
General Permit Category and Type:	Not Applicable

**Group Name: Plant 2 - Curing Ovens**

<b>Emissions Unit ID:</b>	<b>P007</b>
Company Equipment ID:	P007, Curing Oven #1
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P031</b>
Company Equipment ID:	P031, Curing Oven #2
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P032</b>
Company Equipment ID:	P032, Curing Oven #3
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P033</b>
Company Equipment ID:	P033, Curing Oven #4
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P034</b>
Company Equipment ID:	P034, Curing Oven #5
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P035</b>
Company Equipment ID:	P035, Curing Oven #6
Superseded Permit Number:	P0108711
General Permit Category and Type:	Not Applicable



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

## **A. Standard Terms and Conditions**



**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the “Authorization” page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Cleveland Division of Air Quality in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

## **B. Facility-Wide Terms and Conditions**



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The emissions of hazardous air pollutants (HAPs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, shall not exceed 9.7 TPY for any individual HAP, as a rolling, 12-month summation, and 24.7 TPY for any combination of HAPs, as a rolling, 12-month summation.
3. The emissions of volatile organic compounds (VOCs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, shall not exceed 97 TPY, as a rolling, 12-month summation.
4. Substantive amounts of HAPs are emitted from the following emissions units:
  - a) P001, P002, P007, P008, P009, P024, P026, P027, P030 P031, P032, P033, P034, P035, and P036 (formaldehyde);
  - b) P003 (xylene and toluene); and
  - c) P021 (methanol).HAPs will also be emitted at negligible levels from the following emissions units:
  - d) P022 (methanol);
  - e) T043 (methanol);
  - f) T044 (methanol); and
  - g) N001 (metals, CDD/CDF, hydrochloric acid)
5. The permittee shall use calculation methodologies to estimate HAP emissions for this facility. The following calculations shall be performed monthly:
  - a) The HAP emissions from emissions units P001, P002, P003 P007, P008, P009, P021, P031, P032, P033, P034, and P035 shall be calculated as follows:  
  
$$\text{lb product/day} * \text{lb HAP emitted/lb product (from the latest emissions test for the worst case product)} * \text{days of operation/month} * \text{ton/2000 lb} = \text{tons of HAP (formaldehyde)/month}$$



The HAP emission factor determined from the most recent diagnostic testing shall be used to determine the HAP emissions from the above listed sources.

- b) The HAP emissions from emissions unit P003 shall be calculated as follows:

tons production/month \* weight fraction of organic solvent in product \* weight fraction of HAPs in solvent \* 0.02 evaporative loss = tons of HAPs (xylene and toluene)/month

The above calculation is based on US EPA publication AP-42, Section 6.4.1, Paint Manufacturing: "About 1 or 2 percent of the solvent is lost even under well-controlled conditions." DayGlo conservatively assumed the high end of this range - 2 percent evaporative loss.

- c) The HAP emissions from emissions unit P021 shall be calculated as follows:

dye batches filtered/month \* emission factor, lb methanol/batch \* ton/2000 lb = tons of HAP (methanol)/month

Performance testing of this unit conducted on 1/5/2001 determined that the unit's condenser achieved an average control efficiency of 97.78% for methanol. Subsequent testing conducted on 4/27/2005 through 4/28/2005 and 12/9/2008 through 12/10/2008 determined average hourly methanol emissions to be 0.47 lb per hour and 0.70 lb per hour (respectively). VOC emissions (including but not limited to methanol) shall be considered when determining compliance with the facility-wide HAP limitation referenced in the facility-wide terms and conditions section of this permit.

- d) The HAP emissions from bulk liquid storage of raw materials P022, T043, and T044 shall be calculated using the latest version of the US EPA, TANKS program or equivalent calculations from US EPA publication AP-42, Chapter 7.

- e) The HAP emissions from emissions unit N001 shall be calculated as follows:

tons trash combusted/month \* emission factor, lb HAP/ton trash = tons of HAP/month

The emission factor for each of the various HAPs (metals, CDD/CDF, and hydrochloric acid) shall be taken from US EPA publication AP-42, Table 2.1-9 (Refuse Combustion).

The permittee shall maintain records of all the above-mentioned monthly calculations.

6. The permittee shall keep records for each month of the following information:

- a) Diagnostic and compliance emission test data (including HAP emission factors) and the hours of operation for emissions units (P001, P007, P008, P009, P024, P031, P032, P033, P034, P035, and P036).
- b) Production quantity, in pounds or tons, and batch records indicating solvent and HAPs contents for emissions units P003 and P021.
- c) Diagnostic and compliance emission test data (lb methanol/batch) and number of dye batches filtered for emissions unit P021.



- d) The methanol throughput, in gallons, for emissions units P022, T043, and T044.
  - e) Quantity of trash combusted, in pounds or tons, for emissions unit N001.
7. The permittee shall keep monthly records for the entire facility of the following information:
- a) The total facility-wide emissions (and associated calculations) for each individual HAP, in pounds or tons per year (TPY) (calculated by summing the individual HAP emission rates from all the emissions units at the facility; see B.10. for a current list of emissions units).
  - b) The total facility-wide emissions (and associated calculations) for all combined HAPs, in pounds or TPY (calculated by summing all the HAPs emission rates from all the emissions units at the facility; see B.10. for a current list of emissions units).
  - c) The rolling, 12-month summation of the total individual HAP emissions rates for each HAP from all the emissions units at the facility (see B.10. for a current list of emissions units), in tons.
  - d) The rolling, 12-month summation of the total combined HAPs emissions rates from all the emissions units at the facility (see B.10. for a current list of emissions units), in tons.
8. The permittee shall submit quarterly deviation (excursion) reports, in accordance with the Standard Terms and Conditions of this permit, of the following information:
- a) An identification of each month during which the rolling 12-month emissions rate (from the facility) for an individual HAP exceeded 9.7 tons, and the actual rolling, 12-month summation of each individual HAP emissions rate (see B.10. for a current list of emissions units) for each such month.
  - b) An identification of each month during which the rolling, 12-month emissions rate (from the facility) for combined HAPs exceeded 24.7 tons, and the actual rolling, 12-month summation of the combined HAPs emissions rates (see B.10. for a current list of emissions units) for each such month.
  - c) An identification of each month during which the rolling, 12-month emissions rate (from the facility) for VOC emissions exceeded the 97 tons limitation.
9. The permittee shall submit annual reports that summarize the annual emissions of each individual HAP and the combined emissions of all the HAPs for the facility (see B.10. for a current list of emissions units). These reports shall cover the previous calendar year and shall be submitted by January 31 of each year.
10. Current emissions units at this facility that emit HAPs include P001, P002, P003, P007, P008, P009, P021, P022, P024, P026, P027, P030, P031, P032, P033, P034, P035, P036, T043, T044, N001, and any future emissions units.
11. The following table identifies all emissions units located at this facility and each unit's permit status as of the issuance of this permit:



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<b>EU ID</b>	<b>DESCRIPTION</b>	<b>PERMIT STATUS</b>
B001	1.46 MMBtu/hr NG fired boiler	Permit Exempt
B002	1.46 MMBtu/hr NG fired boiler	Permit Exempt
B003	2.29 MMBtu/hr NG fired boiler	Permit Exempt
B004	1.61 MMBtu/hr NG fired boiler	Permit Exempt
B006	2.5 MMBtu/hr NG fired Boiler	Permit Exempt
B007	6.27 MMBtu/hr NG fired Boiler	Permit Exempt
B008	0.675 MMBtu/hr NG fired Emergency Electrical Generator	Permit Exempt
B009	1.56 MMBtu/hr NG fired Boiler	Permit Exempt
B010	5.58 MMBtu/hr Clayton NG fired boiler #10 - Plant #6	Permit Exempt
F001	Plant #2 - Central Vacuum System	Permit Exempt
N001	Garbage Incinerator	Permit Exempt
P001	Plant #1 ink and toner pigments manufacturing line	P0112662
P002	Plant #1 - 3 mixers (dispensers)	P0112662
P003	Plant #1 Hi-Solv Dispensers (x2)	P0112662
P005	Plant #1 - 1st Floor - Fabric Filter	P0112662
P007	Plant #2 - Curing Oven #1	P0112662
P008	Plant #2 - Pigment Kettle #1	P0112662
P009	Plant #2 - Pigment Kettle #2	P0112662
P014	Plant #2 - Pigment Silos 1 - 9	De Minimis
P015	Plant #2 - Fine Grind & Bagging	De Minimis
P019	Plant #6 - Fitz Mill Baghouse	Permit Exempt 3745-31-03(A)(1)(y)
P021	Plant #7 - Funda Filter and Rotary Dryer	P0112662
P023	R&D Hoods in Administrative Building	Permit Exempt 3745-31-03(A)(1)(i)(i)
P024	Plant #2 - Pigment Kettle #3	P0112662
P026	Plant #6 - Pigment Resin Kettle #1	P0112662
P027	Plant #6 - Pigment Resin Kettle #2	P0112662
P030	Plant #6 - Pigment Drying System	P0112662
P031	Plant #2 - Curing Oven #2	P0112662
P032	Plant #2 - Curing Oven #3	P0112662
P033	Plant #2 - Curing Oven #4	P0112662
P034	Plant #2 - Curing Oven #5	P0112662
P035	Plant #2 - Curing Oven #6	P0112662
P036	5,000 gallon reactor and associate wet scrubber	P0112662
T032	6,000 gal Acrylic Resin Tank	Permit Exempt



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<b>EU ID</b>	<b>DESCRIPTION</b>	<b>PERMIT STATUS</b>
T033	6,000 gal Ink Vehicle Tank	Permit Exempt
T034	6,000 gal Ink Oil Tank	Permit Exempt
T035	6,000 gal Phthalate Plastisizer Tank	Permit Exempt
T038	6,000 gal Ink Vehicle Tank	Permit Exempt
T039	6,000 gal, 2 compartment Ink Oil Tank	Permit Exempt
T040	6,000 gal Tung Oil Tank	Permit Exempt
T041	4,000 gal Linseed Oil Tank	Permit Exempt
T042	6,000 gal Ink Vehicle Tank	Permit Exempt
T043	10,000 gallon Methanol UST	De Minimis
T044	10,000 gallon Waste Methanol UST	De Minimis



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## **C. Emissions Unit Terms and Conditions**



**1. P001, Plant #1 - 1st Floor - 2 Kettles and 3-Roll Mills (x2)**

**Operations, Property and/or Equipment Description:**

Plant #1 ink base, ink and toner pigments manufacturing line - a 400-lb and a 800-lb kettle in parallel, transfer equipment, holding tubs, and two (2) parallel 3-roll mills- all the equipment except the mills are covered and vented directly to a packed tower scrubber and a venturi scrubber, in series. The mills are hooded and then vented to the packed tower scrubber, then the venturi scrubber. (The venturi scrubber is also shared with emissions unit P002.)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	<p>Volatile organic compound (VOC) emissions from both P001 and P002 combined shall not exceed 3.12 pounds per hour and 13.66 tons per year (TPY).</p> <p>Particulate emissions (PE) from the venturi scrubber stack shall not exceed 0.030 grain per dry standard cubic foot (gr/dscf).</p>
b.	OAC rule 3745-17-07(A)(1)	<p>Visible PE from the venturi scrubber stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
d.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)d. below.

(2) Additional Terms and Conditions

a. The venturi scrubber serving this emissions unit is shared with P002.

This permit requires said venturi scrubber to be tested for PE. During the emission testing, P001 shall be operated at maximum capacity and all equipment possible in P002 also shall be operated, in order to load the scrubber as heavily as possible.

b. To determine compliance with the grain loading PE limitation, the allowable emission rate for P002 shall be added to the allowable emission rate from P001. If the tested grain loading PE rate is less than this calculated figure, both emissions units shall be deemed to be in compliance. If the tested grain loading PE rate exceeds this figure, both emissions units shall be deemed to be out of compliance.

c. All the VOC emissions and PE from all the equipment comprising this emissions unit shall be vented to the packed tower scrubber and venturi scrubber.

d. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the venturi scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:



- a. the color of the emissions;
- b. the total duration of any visible emission incident; and
- c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of stack observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions; and
- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings if any visible emissions are observed.

- (2) The rate of recirculation of the scrubbing liquor to the packed tower scrubber shall be maintained at a minimum of 80 gallons per minute (gpm) when the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (3) The pH of the scrubbing liquor in the packed tower scrubber shall be maintained at a minimum of 10.0. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value based upon the operation of the scrubber during the last emissions test.
- (4) The pressure drop across the venturi scrubber shall be maintained at a minimum of 4 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop value based upon the operation of the scrubber during that emissions test.
- (5) The scrubber liquor recirculation rate to the venturi scrubber shall be continuously maintained at a minimum value of 70 gpm at all times while the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (6) The permittee shall properly operate and maintain equipment to monitor the packed tower scrubber recirculation flow rate and the pH of the scrubber liquor, while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.



The permittee shall collect and record the following information each day:

- a. the scrubber liquor recirculation flow rate, in gpm, on a twice-per-shift basis, but not less than 4 hours apart during each shift;
  - b. the scrubber liquor pH; and
  - c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
- (7) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the venturi scrubber, as well as the scrubber liquor recirculation flow rate while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pressure drop across the scrubber;
- b. the scrubber liquor recirculation flow rate, in gpm, on a twice-per-shift basis, but not less than 4 hours apart during each shift; and
- c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the following packed tower scrubber parameters were not maintained within the required levels:
  - a. the scrubber liquor recirculation flow rate; and
  - b. the pH of the scrubber liquor.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following venturi scrubber parameters were not maintained within the required levels:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber liquor recirculation flow rate.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
- (4) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.



- (5) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identify all days during which any visible PE were observed from the venturi scrubber stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE.
  - (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

VOC emissions from both P001 and P002 combined shall not exceed 3.12 lbs/hr

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.
    - b. Emission Limitation:

VOC emissions from both P001 and P002 combined shall not exceed 13.66 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.
    - c. Emission Limitation:

PE from the venturi scrubber stack shall not exceed a grain loading rate of 0.030 gr/dscf.



Applicable Compliance Method:

Compliance with this emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03(B)(10).

d. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

e. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with the requirements specified in f)(2).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 24 months of the issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate of particulates in the exhaust stream and overall control efficiency limitation for VOCs.

Testing shall be conducted to determine:

- i. the PE rate, in gr/dscf, from the outlet of the venturi scrubber;
- ii. the VOC emissions rate, in pounds per hour, from the outlet of the packed tower scrubber;
- iii. the VOC emissions rate of the inlet and the outlet to the packed tower scrubber for the calculation of the overall VOC control efficiency for the worst case product, and;
- iv. the proper operating values for the pressure drops, pH, and scrubber liquor recirculation rates (in gpm) for both scrubbers.



- c. Emissions units P001 and P002 shall be performance tested simultaneously while both units are operating at maximum capacity.

- d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 – 4 included with each of the methods below.

Particulates: Method 5, 40 CFR Part 60, Appendix A

Volatile Organic Compounds by GC: Method 18, 40 CFR Part 60, Appendix A

Volatile Organic Compounds: Method 25, 40 CFR Part 60, Appendix A

Formaldehyde: Method 316, 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

- e. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ). Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).



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- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

g) Miscellaneous Requirements

- (1) None.



**2. P002, Plant #1 - 2nd Floor**

**Operations, Property and/or Equipment Description:**

Plant #1 - 2<sup>nd</sup> Floor – Myers Kettle, Alkyd Kettle, Grinder, 5-gal Mixer, 2500 Tank, LOx Tank, Target Coating Tank, and Pigment Kettle vented to Heil Xerxes Venturi Scrubber.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	<p>Volatile organic compound (VOC) emissions from both P001 and P002 combined shall not exceed 3.12 pounds per hour and 13.66 tons per year (TPY).</p> <p>Particulate emissions (PE) from the venturi scrubber stack shall not exceed a grain loading rate of 0.030 grain per dry standard cubic foot (gr/dscf).</p>
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the venturi scrubber stack shall not exceed twenty percent opacity as a 6-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a 3-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)c. below
e.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
f.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)g. below.

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible fugitive PE through the employment of reasonably available control measures in order to prevent the fugitive dust from becoming airborne.

These measures shall include, but not be limited to, the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
- ii. collection efficiencies that are sufficient to minimize or eliminate visible emissions of fugitive dust at the points of capture to the extent possible with good engineering design.
- b. This emissions unit consists of six pieces of equipment which may operate independently of each other.
- c. The venturi scrubber serving this emissions unit is shared with P001.

This permit requires said venturi scrubber to be tested for PE. During the emission testing, P001 shall be operated at maximum capacity and all equipment possible in P002 also shall be operated, in order to load the scrubber as heavily as possible.



- d. To determine compliance with the grain loading PE limitation, the allowable emission rate for P002 shall be added to the allowable emission rate from P001. If the tested grain loading PE rate is less than this calculated figure, both emissions units shall be deemed to be in compliance. If the tested grain loading PE rate exceeds this figure, both emissions units shall be deemed to be out of compliance.
  - e. The PE from all equipment comprising this emissions unit shall be vented to the venturi scrubber.
  - f. The permittee shall employ the oven only to evaporate water from any solid materials.
  - g. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).
- c) Operational Restrictions
- (1) None.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The pressure drop across the venturi scrubber shall be maintained at a minimum of 4 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop value based upon the operation of the scrubber during that emissions test.
  - (2) The scrubber liquor recirculation rate to the venturi scrubber shall be continuously maintained at a minimum of 70 gallons per minute (gpm) at all times while the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
  - (3) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the venturi scrubber, as well as the scrubber liquor recirculation flow rate while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pressure drop across the scrubber;
- b. the scrubber liquor recirculation flow rate, in gpm, on a twice-per-shift basis, but not less than 4 hours apart during each shift; and
- c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.



- (4) The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the venturi scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (5) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions of fugitive dust from the egress points (building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (6) Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of stack and/or fugitive visual observations from daily to weekly for this emissions unit if the following conditions are met:
  - a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
  - b. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings if any visible emissions are observed.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following venturi scrubber parameters were not maintained within the required levels:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber liquor recirculation flow rate.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.



- (3) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
  - (4) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the venturi scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
  - (5) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible emissions of fugitive dust.
  - (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

VOC emissions from both P001 and P002 combined shall not exceed 3.12 lbs/hr

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.
    - b. Emission Limitation:

VOC emissions from both P001 and P002 combined shall not exceed 13.66 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.



c. Emission Limitation:

PE from the venturi scrubber stack shall not exceed a grain loading rate of 0.030 gr/dscf.

Applicable Compliance Method:

Compliance with this emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03(B)(10).

d. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9. For purposes of verifying compliance with this limitation, visible emission observations shall be performed at all non-stack egress points (e.g., windows, doors, roof monitors) serving this emissions unit.

f. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with the requirements specified in f)(2).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 24 months of the issuance of this permit.

b. The emission testing shall be conducted to determine:

i. the PE rate, in gr/dscf, from the outlet of the venturi scrubber;



- ii. the VOC emissions rate, in pounds per hour, from the outlet of the packed tower scrubber;
  - iii. the VOC emissions rate of the inlet and the outlet to the packed tower scrubber for the calculation of the overall VOC control efficiency for the worst case product, and;
  - iv. the proper operating values for the pressure drops, pH, and scrubber liquor recirculation rates (in gpm) for both scrubbers.
- c. Emissions units P001 and P002 shall be performance tested simultaneously while both units are operating at maximum capacity.
- d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 – 4 included with each of the methods below.

Particulates: Method 5, 40 CFR Part 60, Appendix A

Volatile Organic Compounds by GC: Method 18, 40 CFR Part 60, Appendix A

Volatile Organic Compounds: Method 25, 40 CFR Part 60, Appendix A

Formaldehyde: Method 316, 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- e. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ). Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).



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- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

g) Miscellaneous Requirements

- (1) None.



**3. P003, Plant #1 Hi-Solv Dispensers (x2) with Dust Collector**

**Operations, Property and/or Equipment Description:**

Plant #1 – Hi-Solv Dispensers (x2) with Tri-Mer Whirl Wet Dust Collector

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	Volatile organic compound (VOC) emissions shall not exceed 3.98 pounds per hour and 13.96 tons per year (TPY).  Particulate Emissions (PE) shall not exceed 0.040 pounds per hour and 0.14 TPY.
b.	OAC rule 3745-17-07(A)(1)	Visible emission from the scrubber stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
f.	OAC rule 3745-21-09 (QQ)(2)	See b)(2)b. below.

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible fugitive PE through the employment of reasonably available control measures in order to prevent the fugitive dust from becoming airborne.

These measures shall include, but not be limited to, the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
  - ii. collection efficiencies that are sufficient to minimize or eliminate visible emissions of fugitive dust at the points of capture to the extent possible with good engineering design.
- b. 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:
    - i. the opening for the mixer shaft shall be no larger than three inches in diameter; and
    - ii. 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.
  - c. All the equipment comprising this emissions unit shall be vented to the wet scrubber.
  - d. This emissions unit is a batch operation that is capable of operating a maximum of 7008 hours per year.

c) Operational Restrictions

- (1) None.



d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall perform checks daily, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the wet scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (2) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (3) Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of stack and/or fugitive visual observations from daily to weekly for this emissions unit if the following conditions are met:
  - a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
  - b. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings if any visible emissions are observed.
- (4) The pressure drop across the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 4 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop value based upon the operation of the scrubber during that emissions test.
- (5) The water feed rate to the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 60 gallons per hour (1 gallon per minute (gpm)) at the inlet to the scrubber when the emissions unit is in operation. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber water feed rate based upon the operation of the scrubber during that emissions test.



- (6) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the Tri-Mer Whirl Wet scrubber, as well as the water recirculation rate to the scrubber while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pressure drop across the scrubber, in inches of water column, on a twice-per-shift basis, but not less than 4 hours apart during each shift;
- b. the water flow rate to the scrubber, in gpm, on a twice-per-shift basis, but not less than 4 hours apart during each shift; and
- c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

e) Reporting Requirements

- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information (a) identifies all days during which any visible PE were observed from the wet scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (2) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop and the scrubber water feed rate were not maintained at or above the required values.
- (4) The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
- (5) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

VOC emissions shall not exceed 3.98 pounds per hour

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.

b. Emission Limitation:

VOC emissions shall not exceed 13.96 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by the maximum 7008 operating hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitation:

PE shall not exceed 0.040 pound per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).

d. Emission Limitation:

PE shall not exceed 0.14 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by the maximum 7008 operating hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emissions limitation shall also be demonstrated.



e. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average from the scrubber stack.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

f. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9. For purposes of verifying compliance with this limitation, visible emission observations shall be performed at all non-stack egress points (e.g., windows, doors, roof monitors) serving this emissions unit.

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 24 months of the issuance of this permit.

b. The emission testing shall be conducted to determine:

i. the PE rate, in pounds per hour, from the outlet of the scrubber;

ii. the VOC emissions rate, in pounds per hour, from the outlet of the scrubber, and;

iii. the proper operating values for the pressure drops, pH, and scrubber liquor recirculation rates (in gpm).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 – 4 included with each of the methods below.

Particulates: Method 5, 40 CFR Part 60, Appendix A

Volatile Organic Compounds by GC: Method 18, 40 CFR Part 60, Appendix A

Volatile Organic Compounds: Method 25, 40 CFR Part 60, Appendix A



Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ). Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).
- f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

g) **Miscellaneous Requirements**

- (1) None.



**4. P005, Plant #1 - Mixers, Weigh Station, and Fabric Filter**

**Operations, Property and/or Equipment Description:**

Plant #1 - 1<sup>st</sup> Floor – Mixers (x2), Weigh Station and Blender with Fabric Filter.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	Particulate emissions (PE) shall not exceed 1.54 pounds per hour and 6.75 tons per year (TPY).
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the stack serving this emissions unit shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)(1)	The allowable PE rate specified by this rule is less stringent than the particulate limitation established pursuant to OAC rule 3745-31-05(F).

(2) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible fugitive PE through the employment of reasonably available control measures in order to prevent the fugitive dust from becoming airborne.

These measures shall include, but not be limited to, the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
- ii. collection efficiencies that are sufficient to minimize or eliminate visible emissions of fugitive dust at the points of capture to the extent possible with good engineering design.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following:

- a. the amount, in tons, of solids processed through this emissions unit;
- b. the hours of operation for the emissions unit;
- c. the average hourly process rate, in tons of solids/hour, determined by dividing d)(1)a. by d)(1)b.; and
- d. the rolling, 12-month summation of the amount of solids processed, in tons.

- (2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the fabric filter stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. the total duration of any visible emission incident; and



- c. any corrective actions taken to eliminate the visible emissions.
- (3) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (4) Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of stack and/or fugitive visual observations from daily to weekly for this emissions unit if the following conditions are met:
- a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
  - b. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any abnormal visible emissions are observed.

e) Reporting Requirements

- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the fabric filter stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (2) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible emissions of fugitive dust were observed from the egress points (building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible emissions of fugitive dust.
- (3) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PE shall not exceed 1.54 pounds per hour.

Applicable Compliance Method:

Compliance with the short term PE limitation shall be determined through the record keeping requirements specified under d)(1) above and by multiplying the average hourly process rate, in tons of solids processed per hour, by an emissions factor of 20 pounds particulate per ton solids (AP-42, Fifth Edition, Volume I Chapter 6: Organic Chemical Process Industry Table 6.4-1) and multiplied by  $(1 - 0.99)$  for the fabric filter control efficiency of 99%.

b. Emission Limitation:

PE shall not exceed 6.75 TPY.

Applicable compliance method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pound per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.



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Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9. For purposes of verifying compliance with this limitation, visible emission observations shall be performed at all non-stack egress points (e.g., windows, doors, roof monitors) serving this emissions unit.

g) Miscellaneous Requirements

- (1) This emissions unit was installed 1/1/1960.
- (2) PE limitations based on maximum hourly production rate of 15,400 pounds (7.7 tons) per hour.



**5. P021, Plant #7 – Funda Filter & Rotary Dryer System**

**Operations, Property and/or Equipment Description:**

Plant #7 - Funda Filter and Rotary Dryer System

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)a., c)(1), d)(1), e)(1), f)(1)a.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)(1)(b)	<p>Volatile organic compound (VOC) emissions shall not exceed 11.45 pounds per hour and 9.16 tons per rolling, 12-month period.</p> <p>Methanol emissions shall not exceed 9.49 pounds per hour and 7.59 tons per rolling, 12-month period.</p> <p>See c)(1) and c)(2) below.</p> <p>Particulate Emissions (PE) shall not exceed 0.13 pound per hour and 0.56 ton per rolling, 12-month period.</p> <p>See b)(2)b. below.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the stacks shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity as a 3-minute average.
d.	OAC rule 3745-17-08(B)	See b)(2)c. below.
e.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
e.	OAC rule 3745-21-07(M)(1) and (M)(2)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five per cent, by weight.
g.	OAC rule 3745-21-09 (QQ)(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) Additional Terms and Conditions

- a. The permittee shall minimize or eliminate visible fugitive PE through the employment of reasonably available control measures in order to prevent the fugitive dust from becoming airborne.

These measures shall include, but not be limited to, the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
  - ii. collection efficiencies that are sufficient to minimize or eliminate visible emissions of fugitive dust at the points of capture to the extent possible with good engineering design.
- b. When dry materials are added to the rotary drier, the rotary drier shall be vented to the Funda filter. At no time shall the Funda filter emit more than 0.13 pound PE per hour.



- c. The VOC emissions from all the equipment comprising this emissions unit shall be vented to the condenser.
- c) Operational Restrictions
  - (1) The permittee shall process no more 50 batches per rolling, 12-month period through this emissions unit.
  - (2) The permittee shall process no more than 699,300 pounds of raw material per rolling, 12-month period through this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall maintain monthly records of the following information:
    - a. the number of batches processed through this emissions unit;
    - b. the rolling, 12-month summation of batches processed through this emissions unit;
    - c. the name and amount, in pounds, of each type of material processed through this emissions unit; and
    - d. the rolling, 12-month summation, in pounds or tons, of each type of material processed through this emissions unit.
  - (2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the Funda filter stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the total duration of any visible emission incident; and
    - c. any corrective actions taken to eliminate the visible emissions.
  - (3) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions of fugitive dust from the egress points (e.g., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the total duration of any visible emission incident; and
    - c. any corrective actions taken to eliminate the visible emissions.



- (4) Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of stack and/or fugitive visual observations from daily to weekly for this emissions unit if the following conditions are met:
- a. for 1 full quarter the facility's visual observations indicate no visible emissions; and
  - b. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any abnormal visible emissions are observed.

- (5) The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for the thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within  $\pm 1$  percent of the temperature being measured or  $\pm 5$  degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information for the condenser for each day:

- a. The average temperature of the exhaust gases from the condenser during each of the eight (8) 3-hour blocks of time during the day when this emissions unit is operating.
  - b. The downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (6) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 35.6 degrees Fahrenheit.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:  
  
exceedance of the 50 batches per rolling, 12-month period limitation;  
  
exceedance of the 699,300 pounds of raw material per rolling, 12-month period limitation; and
  - b. the probable cause of each deviation (excursion);



- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality (Cleveland DAQ).

- (2) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the Funda filter stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
  - (3) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible emissions of fugitive dust were observed from the egress points (e.g., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible emissions of fugitive dust.
  - (4) The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
  - (5) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (6) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:  
VOC emissions shall not exceed 11.45 pounds per hour.



Applicable Compliance Method:

The hourly VOC emissions limitation represents the emissions unit's potential to emit based on processing a batch size of 13,986 pounds.

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.

During the 12/9/2008 volatile organic compound (VOC) emissions test for P021 an emissions rate of 0.026207 lb VOC/lb of product was documented.

b. Emission Limitation:

VOC emissions shall not exceed 9.16 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual VOC emissions limitation shall be determined through the monitoring and recordkeeping requirements specified under d)(1) through the following equation:

$$(\text{lbs product/month})(\text{lb VOC emitted/lb product [from the latest emissions test for the worst case product]})(2000 \text{ pounds}) = \text{tons VOC emitted/month}$$

During the 12/9/2008 VOC emissions test for P021 an emissions rate of 0.026207 lb VOC/lb of product was documented.

c. Emission Limitation:

VOC (methanol) emissions shall not exceed 9.49 pounds per hour.

Applicable Compliance Method:

The hourly methanol emissions limitation represents the emissions unit's potential to emit based on processing a batch size of 13,986 pounds.

Compliance with the hourly methanol emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.

During the 12/9/2008 VOC emissions test for P021 an emissions rate of 0.021714 lb methanol/lb of product was documented.

d. Emission Limitation:

VOC (methanol) emissions shall not exceed 7.59 tons per rolling, 12-month period.



Applicable Compliance Method:

Compliance with the annual methanol emissions limitation shall be determined through the monitoring and recordkeeping requirements specified under d)(1) through the following equation:

$(\text{lbs product/month})(\text{lb methanol emitted/lb product [from the latest emissions test for the worst case product]})/(2000 \text{ pounds}) = \text{tons methanol emitted/month}$

During the 12/9/2008 VOC emissions test for P021 an emissions rate of 0.021714 lb methanol/lb of product was documented.

e. Emission Limitation:

PE shall not exceed 0.13 pound per hour from the Funda filter.

Applicable Compliance Method:

If required, compliance with this emissions limitation shall be determined through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-10 (B)(10).

f. Emission Limitation:

PE shall not exceed 0.56 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual PE limitation shall be determined through the monitoring and recordkeeping requirements specified under d)(1) through the following equation:

$(\text{lbs product/month})(\text{lb particulate emitted/lb product [from the latest emissions test for the worst case product]})/(2000 \text{ pounds}) = \text{tons methanol emitted/month}$

g. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.



Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9. For purposes of verifying compliance with this limitation, visible emission observations shall be performed at all non-stack egress points (e.g., windows, doors, roof monitors) serving this emissions unit.

i. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with the requirements specified in f)(2).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 36 months of the issuance of this permit.
- b. The emission testing shall be conducted to determine the allowable mass emissions rates for VOC and methanol, overall control efficiency of VOC between the inlet and outlet of the control equipment, and the average temperature of the exhaust gases from the condenser.
- c. The following test method(s) shall be employed to determine the mass emission rate(s):

Methods 1 – 4 included with each of the methods below.

Particulates: Method 5, 40 CFR Part 60, Appendix A

Volatile Organic Compounds by GC: Method 18, 40 CFR Part 60, Appendix A

Volatile Organic Compounds: Method 25, 40 CFR Part 60, Appendix A

Methanol: Method 308, 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected



shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).
- f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

g) **Miscellaneous Requirements**

- (1) This emission unit is a source of VOC emissions. Performance testing of this unit conducted on 1/5/2001 determined that the unit's condenser achieved an average control efficiency of 97.78% for methanol. Subsequent testing conducted on 4/27/2005 through 4/28/2005 and 12/9/2008 through 12/10/2008 determined average hourly methanol emissions to be 0.47 lb per hour and 0.70 lb per hour (respectively). This unit is not subject to an VOC emission limitation, however VOC emissions (including but not limited to methanol) shall be considered when determining compliance with the facility-wide hazardous air pollutant (HAP) limitation referenced in the facility-wide terms and conditions section of this permit.



**6. P024, Plant #2 - Pigment Kettle #3**

**Operations, Property and/or Equipment Description:**

Plant #2 – Pigment Kettle #3

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-04335 issued 2/5/2008)	Particulate emissions (PE) shall not exceed 1.0 pound per hour and 4.38 tons per year (TPY).  Volatile organic compound (VOC) emissions shall not exceed 1.16 pounds per hour and 5.07 TPY.  The requirements of this rule include compliance with the requirements of OAC rule 3745-17-07(A)(1).
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the scrubber stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)b. below.

(2) Additional Terms and Conditions

- a. The volatile organic compound (VOC) emissions and PE from all the equipment comprising this emissions unit shall be vented to the fluidized bed scrubber.
- b. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the fluidized bed scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions; and



- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any visible emissions are observed.

- (2) The pressure drop across the fluidized bed scrubber shall be maintained at a minimum of 6 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop range based upon the operation of the scrubber during that emissions test.
- (3) The scrubber liquor recirculation rate for the fluidized bed scrubber shall be maintained at a minimum of 200 gallons per minute (gpm). After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pressure drop range based upon the operation of the scrubber during that emissions test.
- (4) The pH of the scrubber liquor in the fluidized bed scrubber, when the emissions unit is in operation, shall be maintained at a minimum of 8.5. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value of the scrubber liquor based upon the operation of the scrubbers during that emissions test.
- (5) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the fluidized bed scrubber, as well as the scrubber liquor recirculation rate, while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pressure drop across the fluidized bed scrubber, in inches of water column, twice per shift (not less than 4 hours apart);
  - b. the scrubber liquor recirculation rate to the scrubber, in gpm, twice per shift (not less than 4 hours apart);
  - c. the pH; and
  - d. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (6) The permittee shall collect and record the following information each day for this emissions unit:
    - a. the name and identification of each product produced;
    - b. the pounds of each product produced per batch;



- c. the total VOC emissions for all product batches produced, in pounds, determined per f)(1)c. below;
- d. the number of hours of operation; and
- e. the average hourly VOC emissions rate in pounds per hour (c/d).

e) Reporting Requirements

- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the fluidized bed scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following fluidized bed scrubber parameters did not comply with the requirements specified above:
  - a. the pressure drop across the scrubber;
  - b. the scrubbing liquor recirculation rate to the scrubber; and
  - c. the pH.
- (3) The permittee shall include in the annual PER information that identify each day during which the average pounds VOC per hour emission rate (calculated from records maintained by the requirement in d)(6)) did not comply with the VOC limitation specified above.
- (4) The permittee shall include in the annual PER, information that identifies each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
- (5) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (6) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation:

PE shall not exceed 1.0 pound per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).

b. Emission Limitation:

PE shall not exceed 4.38 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

c. Emission Limitation:

VOC emissions shall not exceed 1.16 pounds per hour.

Applicable Compliance Method:

The pounds VOC per hour may be calculated from records required in d)(6) by using the following formula:

$$(\text{pounds product/day})(\text{pounds VOC emitted/pound product [from the latest emissions test for the worst case product]}) / (\text{hours of operation/day}) = \text{pounds VOC emitted/hour}$$

During the July 2007 VOC emissions test for P009 (which is a similar emission unit) an emission rate of 0.00163 pound VOC/pound of product was documented.

If required, emissions testing shall be performed in accordance with OAC rule 3745-21-10(C).

d. Emission Limitation:

VOC emissions shall not exceed 5.07 TPY.

Applicable Compliance Method:

The pounds VOC per year may be calculated from records required in d)(6) by using the following formula:

$$(\text{pounds product/year})(\text{pounds VOC emitted/pounds product [from the latest emissions testing for the worst case product]}) = \text{pounds VOC emitted/year}$$



An emission factor of 0.00163 pound VOC emitted/pound product was developed by Day-Glo and their consultants, based on a weighted average of the three major ingredients in the pigment resin being produced in this emissions unit, from the July 2007 emissions test for P009 which is a similar emissions unit.

e. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack)

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

f. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with OAC rule 3745-21-10(C).

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any pollutant that has a listed threshold limit value to increase to above 1.0 TPY may require the permittee to apply for and obtain a new permit to install.



**7. Emissions Unit Group - Plant #6 – Pigment Kettles #1 & #2**

Operations, Property and/or Equipment Description:

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P026	Pigment Resin Kettle #1
P027	Pigment Resin Kettle #2

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-04384 issued 11/26/2004)	Particulate emissions (PE) from this emissions unit shall not exceed 0.385 pound per hour and 1.69 tons per year (TPY).  Visible PE from the scrubber stack shall not exceed 5 percent opacity as a 6-minute average.
b.	OAC rule 3745-31-05(F)	Volatile organic compound (VOC) emissions shall not exceed 5.53 pounds per hour and 24.2 TPY for P026 and P027 combined.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(A)(1)	The visible stack emission limitation established by this rule is less stringent than the visible stack emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)b. below.

(2) Additional Terms and Conditions

- a. The volatile organic compound (VOC) emissions and PE from all the equipment comprising this emissions unit shall be vented to the MP process packed bed scrubber.
- b. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each day for this emissions unit to calculate the average VOC emitted in pounds per hour in accordance with f)(1)d.:
  - a. the name and identification of each product produced;
  - b. the pounds of each product produced per batch;
  - c. the total VOC emissions for all product batches produced, in pounds per f)(1)f.;
  - d. the number of hours of operation; and
  - e. the average hourly VOC emissions rate in pounds per hour (c/d).



- (2) The scrubber liquor recirculation rate for the MP process packed bed scrubber shall be continuously maintained at a value of not less than 80 gallons per minute (gpm) at all times while the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubbing liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (3) The pH of the scrubber liquor in the MP process packed bed scrubber, when the emissions unit is in operation, shall be maintained at a minimum value of 8.5. After each round of emissions testing which demonstrated that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value of the scrubber liquor based upon the operation of the scrubbers during that emissions test.
- (4) The permittee shall properly operate and maintain equipment to monitor the scrubber liquor recirculation rate for the MP process packed bed scrubber, as well as the pH, while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall collect and record the following information each day:

- a. the scrubber liquor recirculation rate, in gpm, twice per shift (not less than four hours apart during each shift);
  - b. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation; and
  - c. the pH.
- (5) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the MP process packed bed scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions ;
    - b. the total duration of any visible emission incident; and
    - c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions; and



- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings if any visible emissions are observed.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following MP process packed bed scrubber parameters were not maintained within the required levels:
  - a. the scrubber liquor recirculation flow rate; and
  - b. the pH.
- (2) The permittee shall include in the annual Permit Evaluation Report (PER), information that identifies each day during which the average pounds of VOC per hour (calculated from records maintained by d)(1) above) did not comply with the VOC limitations specified above.
- (3) The permittee shall include in the annual PER, information that identifies each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
- (4) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- (5) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible PE were observed from the MP packed bed wet scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation:

PE shall not exceed 0.385 pounds per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).

b. Emission Limitation:

PE shall not exceed 1.69 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

c. Emission Limitation:

Visible PE shall not exceed 5 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

VOC emissions shall not exceed 5.53 pounds per hour for P026 and P027 combined.

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be calculated from records required in d)(1) through the following equation:

$$(\text{lbs product/day})(\text{lb VOC emitted/lb product [from the latest emissions test for the worst case product]})(\text{hours of operation/day}) = \text{lbs VOC emitted/hour}$$

During the 12/5/2006 VOC emissions test for P026 emissions rates of 0.00463 lb VOC/lb of product and 0.000177 lb formaldehyde/lb of product were documented.

If required, compliance with the hourly VOC emission limitation shall be determined through emissions tests performed in accordance with OAC rule 3745-21-10(C).



e. Emission Limitation:

VOC emissions shall not exceed 24.2 TPY for P026 and P027 combined.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pound per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

f. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with OAC rule 3745-21-10(C).

(2) The permittee shall operate emissions units P026, P027, and P030 simultaneously while at maximum capacity during all compliance testing events. The emissions units shall not exceed the following emission rates combined:

- a. 1.36 pounds PE per hour,
- b. 5.53 pounds VOC per hour, and
- c. 0.21 pound formaldehyde per hour.

g) **Miscellaneous Requirements**

(1) Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed threshold limit value to increase to above 1.0 TPY may require the permittee to apply for and obtain a new permit to install.

(2) Annual emissions limitations for VOC and formaldehyde based on the following maximum production rates:

- a. 811.11 batches per year
- b. 1,135,554 pounds material per year



**8. P030, Plant #6 – MP Pigment Drying System**

**Operations, Property and/or Equipment Description:**

Plant #6 – MP Pigment Drying System.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-04384 issued 11/26/2004)	Particulate emissions (PE) from this emissions unit shall not exceed 0.5 pound per hour and 2.19 tons per year (TPY).  Visible PE from the scrubber stack shall not exceed 5 percent opacity as a 6-minute average.
b.	OAC rule 3745-31-05(D)	Volatile organic compound (VOC) emissions shall not exceed 0.544 pound per hour and 2.38 TPY.
c.	OAC rule 3745-17-07(A)(1)	The visible emissions limitation established by this rule is less stringent than the visible emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is as stringent as the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.

(2) Additional Terms and Conditions

- a. The volatile organic compound (VOC) and emissions PE from all the equipment comprising this emissions unit shall be vented to the packed bed scrubber designated for this emissions unit.
- b. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The scrubber liquor recirculation rate of the packed tower scrubber shall be maintained at a minimum of 80 gallons per minute (gpm) when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (2) The pH of the scrubber liquor in the packed tower scrubber, when the emissions unit is in operation, shall be maintained at a minimum of 8.5. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value of the scrubber liquor based upon the operation of the scrubbers during that emissions test.
- (3) The permittee shall properly operate and maintain equipment to monitor the packed bed scrubber recirculation rate and pH while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall collect and record the following information each day:



- a. The scrubber liquor recirculation rate, in gpm, twice per shift (not less than 4 hours apart during each shift);
  - b. the pH; and
  - c. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit is in operation.
- (4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the packed bed scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the total duration of any visible emissions incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions; and
- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings if any visible emissions are observed.

- (5) The permittee shall collect and record the following information each day for this emissions unit:
- a. the name and identification of each product produced;
  - b. the pounds of each product produced per batch;
  - c. the total VOC emissions for all product batches produced, in pounds, determined per f)(1)d.;
  - d. the number of hours of operation; and
  - e. the average hourly VOC emissions rate, in pounds per hour (c/d).

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following packed tower scrubber parameters did not comply with the requirements specified above:



- a. the scrubbing liquor recirculation rate to the scrubber; and
  - b. the pH.
- (2) The permittee shall include in the annual Permit Evaluation Report (PER), information that identifies each day during which the average lbs VOC/hour emission rate (calculated from records maintained by d)(5) above) did not comply with the VOC limitations specified above.
  - (3) The permittee shall include in the annual PER, information that identifies each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
  - (4) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
  - (5) The permittee shall include in the annual PER, information that (a) identifies all days during which any visible emissions were observed from the packed tower scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
  - (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

PE shall not exceed 0.5 pound per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).



b. Emissions Limitation:

PE shall not exceed 2.19 TPY.

Applicable Compliance Method:

The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

c. Emission Limitation:

Visible PE shall not exceed 5 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

VOC emissions shall not exceed 0.544 pound per hour.

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be calculated from records required in d)(1) through the following equation:

$$(\text{lbs product/day}) / (\text{lb VOC emitted/lb product [from the latest emissions test for the worst case product]}) / (\text{hours of operation/day}) = \text{lbs VOC emitted/hour}$$

During the 12/6/2006 VOC emissions test for P030 emissions rates of 0.00591 lb VOC/lb of product and 0.000044 lb formaldehyde/lb of product were documented.

e. Emission Limitation:

VOC emissions shall not exceed 2.38 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.



f. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

If required, compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with OAC rule 3745-21-10(C).

(2) The permittee shall operate emissions units P026, P027, and P030 simultaneously while at maximum capacity during all compliance testing events. The emissions units shall not exceed the following emission rates combined:

- a. 1.36 pounds PE per hour,
- b. 5.53 pounds VOC per hour, and
- c. 0.21 pound formaldehyde per hour.

g) **Miscellaneous Requirements**

(1) Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed threshold limit value to increase to above 1.0 TPY may require the permittee to apply for and obtain a new permit to install.

(2) Annual emissions limitations for OC/VOC and formaldehyde based on the following maximum production rates:

- a. 333.71 batches per year
- b. 800,904 pounds material per year



**9. P036, 5,000-gallon reactor with wet scrubber.**

**Operations, Property and/or Equipment Description:**

5,000 gallon reactor with associated wet scrubber.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)f. and g)(1)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) as effective 11/30/2001.  Initial PTI P0111064 issued final 2/6/2013	<u>Reactor Emissions:</u> Volatile organic compound (VOC) emissions shall not exceed 80.30 pounds per batch and 4.01 tons per year (TPY). Particulate emissions (PE) shall not exceed 3.01 pounds per batch and 0.15 TPY.  <u>Drum Loading Emissions:</u> VOC emissions shall not exceed 24 pounds per batch and 1.2 TPY. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) as effective 12/01/2006.	See b)(2)b. below.



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(F)	<p><u>Reactor Emissions:</u> VOC emissions shall not exceed 80.3 pounds per batch and 4.01 TPY. PE shall not exceed 3.01 pounds per batch and 0.15 TPY.</p> <p><u>Drum Loading Emissions:</u> VOC emissions shall not exceed 24 pounds per batch and 1.2 TPY. See b)(2)g. and c)(1) below.</p>
d.	OAC rule 3745-17-07(A)(1)	Visible PE from the stack serving this emissions unit shall not exceed twenty percent opacity, as a 6-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC Rule 3745-31-05(F).
f.	OAC rule 3745-114-01	See g)(1) below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten TPY. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.
- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0111064 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution



control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A(3):

- i. in-line product condenser with 87% control efficiency; and
  - ii. wet scrubber 99% control efficiency to control formaldehyde emissions
- c. All of the VOC emissions from this emissions unit shall be vented to a condenser that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
  - d. The emissions from this emissions unit shall be vented to a wet scrubber at all times the emissions unit is in operation.
  - e. The requirements of OAC rule 3745-21-14 do not apply in accordance with OAC rule 3745-21-14(A)(5).
  - f. The voluntary limits in b)(1)c. shall apply after the SIP is approved and the BAT limits in b)(1)a. no longer apply per b)(2)a. above.

c) Operational Restrictions

- (1) The permittee shall not process more than 100 batches of PTA-303 Resin Solution per year through this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be more than 11 degrees Fahrenheit above the average temperature measured during the most recent performance test that demonstrated the emissions unit(s), controlled by the condenser, was/were in compliance. Until compliance testing has been conducted, the condenser shall be operated and maintained in accordance with the manufacturer's recommendations. Emissions testing shall be conducted during the summer months (June, July, or August) of CY 2013 as specified in f)(2)a. of the testing requirements.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within  $\pm 1$  percent of the temperature being measured or  $\pm 5$  degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:



- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the condenser was/were in operation, during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
  - b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
  - b. the magnitude of the deviation at that time;
  - c. the date the investigation was conducted;
  - d. the name(s) of the personnel who conducted the investigation; and
  - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was deviation;
- j. the temperature readings of the exhaust gas from condenser immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The exhaust gas temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the



Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted exhaust gas temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the exhaust gas temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the pressure drop across the scrubber and liquid flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) and the scrubber liquid flow rate (in gallons per minute) of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid's flow rate on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable liquid flow rate and the pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.
- (6) Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
  - a. the date and time the deviation began;
  - b. the magnitude of the deviation at that time;
  - c. the date the investigation was conducted;
  - d. the name(s) of the personnel who conducted the investigation; and
  - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:



- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop and liquid flow rate, are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify:
  - a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature of the exhaust gases measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
  - b. any records of downtime (date and length of time) for the capture (collection) system, the condenser, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and
  - c. a log of the operating time for the capture system, condenser, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:



- a. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the condenser;
  - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases from the condenser into compliance with the acceptable range, was determined to be necessary and was not taken, and
  - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).
- (3) For the scrubber, the permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber or the liquid flow rate was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
  - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop or liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.



- (5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

Reactor Emissions Limitations:

a. Emission Limitation:

VOC emissions shall not exceed 80.3 pounds per batch.

Applicable Compliance Method:

Compliance with the short term VOC emission limitation shall be demonstrated through the testing requirements specified in f)(2) below.

b. Emission Limitation:

VOC emissions shall not exceed 4.01 TPY.

Applicable Compliance Method:

Compliance with the annual VOC limitation shall be determined by multiplying the VOC emissions factor of lbs VOC/batch as determined by the most recent emission testing as specified in f)(2), by the number of batches processed per year and divided by 2000 lbs/ton.

c. Emission Limitation:

PE shall not exceed 3.01 pounds per batch.

Applicable Compliance Method:

Compliance with the short term PE limitation shall be determined by multiplying the maximum production rate in tons of solids per batch (15.06 tons solids/batch) by an emissions factor of 20 lbs particulate/ton solids (AP-42, Fifth Edition, Volume I Chapter 6: Organic Chemical Process Industry Table 6.4-1) and multiplied by the fabric filter control efficiency of 99%.

Compliance with the short term PE limitation shall also be demonstrated through the testing requirements specified in f)(2) below.



d. Emission Limitation:

PE shall not exceed 0.15 TPY.

Applicable Compliance Method:

Compliance with the annual PE limitation shall be determined by multiplying the short term PE limitation by the number of batches processed per year and divided by 2000 lbs/ton.

e. Emission Limitation:

Visible PE from the stack shall not exceed 20 percent opacity as a 6-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible PE limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

Drum Loading Operation Emissions Limitations:

f. Emission Limitation:

VOC emissions shall not exceed 24 pounds per batch.

Applicable Compliance Method:

Compliance with the short term VOC limitation shall be determined through the following loading loss equation taken from (AP-42, Fifth Edition, Volume I Chapter 5: Petroleum Industry Equation (1)):

$$E_x = 12.46 * ((S * P * M * Q) / (T))$$

Where:

S = 1.45 (Splash Loading Normal Operations (AP – 42 Tale 5.2-1)

P = 6.46 psia (Vapor Pressure of material @ 100C)

M = 116.16 lb/lb mole (Molecular weight of VOC species)

Q = 1.19 (1,000 gallons/batch) – 8,670 lbs Butyl Acetate/batch with 0.877 specific gravity)

T = 671.67°Rankine

$E_x = 24.0$  lbs VOC/batch (Total Emissions from load in: lbs/batch)

$$12.46 * ((1.45 * 6.46 * 116.16 * 1.19) / 671.67) = 24 \text{ lbs VOC/batch}$$



g. Emission Limitation:

VOC emissions shall not exceed 1.2 TPY.

Applicable Compliance Method:

Compliance with the annual VOC limitation shall be determined by multiplying the short term emissions limitation (calculated above) by the number of batches produced per year (not to exceed 100 batches) and dividing by 2000 lbs/ton. Compliance with the short term emissions limitation shall ensure compliance with the annual limitation.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 TPY. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the material, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 TPY may require the permittee to apply for and obtain a new permit to install.
- (2) Wet scrubber Manufacturer Data:
  - a. 99% control efficiency (formaldehyde emissions)
  - b. Recommended pressure drop - 9.5" water
  - c. Scrubber liquid flow rate - 20 gallons per minute
- (3) Initial performance testing of this emissions unit was conducted 9/23/2013 through 9/25/2013.



10. Emissions Unit Group - Plant #2 - Curing Ovens: P007,P031,P032,P033,P034,P035

EU ID	Operations, Property and/or Equipment Description
P007	Curing Oven #1 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.
P031	Curing Oven #2 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.
P032	Curing Oven #3 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.
P033	Curing Oven #4 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.
P034	Curing Oven #5 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.
P035	Curing Oven #6 - Electrically heated, thermoset pigment, Grieve tray curing oven directly vented to a venturi scrubber and a tray tower scrubber, in series.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-04335 issued 2/5/2008) (Modified PTI # P0108711 issued 11/28/2011)	Particulate emissions (PE) shall not exceed 1.2 pounds per hour and 5.26 tons per year (TPY) combined for P007, P031, P032, P033, P034, and P035. See b)(2)a. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the tray tower scrubber stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-21-07(M)(4)	The emission limitations established by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The emissions of volatile organic compounds (VOCs) from the six curing ovens, combined, shall not exceed 7.5 TPY, based upon a rolling, 12-month summation of the monthly emissions. The six curing ovens at Day-Glo Color Corporation are P007, P031, P032, P033, P034, and P035. This emission limitation is more stringent than the emission limitation established pursuant to OAC rule 3745-21-07(M)(4).

c) Operational Restrictions

(1) The pressure drop across the venturi scrubber shall be maintained at a minimum of 5 inches of water column when the emissions unit is in operation. After each round of emission testing that demonstrates that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new, minimum pressure drop based upon the operation of the scrubber during the emission test.

(2) The scrubber liquor recirculation rate for the venturi scrubber shall be continuously maintained at a value of not less than 70 gallons per minute (gpm) at all times while the emissions unit is in operation. After each round of emission testing that demonstrates



that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new, minimum scrubber liquor recirculation rate based upon the operation of the scrubber during the emission test.

- (3) The fresh water intake rate to the tray tower scrubber shall be maintained at a value of not less than 10 gpm at all times while the emissions unit is in operation. After each round of emissions testing that demonstrates that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new fresh water intake rate based upon the operation of the scrubber during the emission test.
- (4) The pH of the scrubber liquor in the tray tower scrubber shall be maintained at a value of not less than 10.0 when the emissions unit is in operation. After each round of emission testing that demonstrates that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new, minimum pH value for the scrubber liquor based upon the operation of the scrubbers during the emission test.
- (5) This emissions unit shall be maintained under negative pressure when in operation.
- (6) The permittee shall follow the Ohio EPA-approved (March 28, 1991 letter from Mr. Thomas Rigo) operator training program for the proper operation and maintenance of the control equipment, as described in the March 28, 1991 Director's Final Findings & Orders, or such alternative program approved by the Cleveland Division of Air Quality (Cleveland DAQ) that is consistent with the Final Findings & Orders.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the venturi scrubber, as well as the scrubber liquor recirculation flow rate, while the emissions unit is in operation. The monitoring devices shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pressure drop across the scrubber, in inches of water column, twice per shift (not less than 4 hours apart);
- b. the scrubber liquor recirculation flow rate, in gpm, twice per shift (not less than 4 hours apart); and
- c. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

- (2) The permittee shall properly operate and maintain equipment to continuously monitor the tray tower fresh water intake rate, while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:



- a. the fresh water intake rate, in gpm, twice per shift (not less than 4 hours apart); and
  - b. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (3) The permittee shall properly operate and maintain equipment to continuously monitor the pH of the tray tower scrubber liquor, while the emissions unit is in operation. The pH monitor shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pH of the scrubber liquor, twice per shift (not less than 4 hours apart); and
  - b. the down times for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (4) The permittee shall collect and record the following information each day for emissions units P007, P031, P032, P033, P034, and P035:

- a. the name and identification of each product produced;
- b. the total amount of product produced, in pounds; and
- c. the amount of VOC emissions for all six curing ovens, calculated using the following equation:

$$(0.0032777 \text{ pounds VOC/pounds product}) \times (\text{total pounds product/day}) = \text{pounds VOC emissions/day}$$

(The above emission factor was determined from stack testing for a worst case product. This stack test was performed in October of 2007. The emission factor was also confirmed with a stack test performed in October of 2006.)

- (5) The permittee shall collect and record the following information each month for emissions units P007, P031, P032, P033, P034, and P035:
- a. the amount of VOC emissions, in tons ( $\sum d)(4)c./2,000$ ); and
  - b. the rolling, 12-month summation of VOC emissions, in tons.
- (6) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:



- a. the color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions; and
- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any visible emissions are observed.

e) Reporting Requirements

- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the wet scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following venturi scrubber parameters were not maintained within the required levels:
  - a. the static pressure drop across the scrubber; and
  - b. the scrubber liquor recirculation flow rate.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following tray tower scrubber parameters were not maintained within the required levels:
  - a. the scrubber liquor recirculation flow fresh water intake rate; and
  - b. the pH of the scrubber liquor.
- (4) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.
- (5) The permittee shall include in the annual PER, information that identifies each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.
- (6) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.



- (7) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (8) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

PE shall not exceed 1.2 pounds per hour combined for P007, P031, P032, P033, P034, and P035.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5 and the procedures specified in OAC rule 3745-17-03(B).
    - b. Emission Limitation:

PE shall not exceed 5.26 TPY combined for P007, P031, P032, P033, P034, and P035.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.
    - c. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

d. Emission Limitation:

VOC emissions shall not exceed 7.5 tons per rolling, 12-month period, for the list of emissions units in b)(2)a.

Applicable Compliance Method:

Compliance shall be based upon the recordkeeping requirements specified in d)(4) and d)(5).

g) Miscellaneous Requirements

(1) None.



**11. P008, Plant #2 - Pigment Kettle #1**

EU ID	Operations, Property and/or Equipment Description
P008	Plant #2 no. 1 kettle system for manufacturing thermoplastic/thermoset resin pigments vented to a Tri-Mer Whirl Wet dust collector and packed tower scrubber, in series.

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	Volatile organic compound (VOC) emissions shall not exceed 0.26 pound per hour and 1.15 tons per year (TPY). Formaldehyde emissions shall not exceed 0.16 pound per hour 0.7 TPY. Particulate Emissions (PE) shall not exceed 0.36 pound per hour or 1.59 TPY.
b.	OAC rule 3745-17-07(A)(1)	Visible PE from this scrubber stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
d.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)c. below.

(2) Additional Terms and Conditions

- a. All the volatile organic compound (VOC) emissions and PE from all the equipment comprising this emissions unit shall be vented to the Tri-Mer wet scrubber and packed tower scrubber.
- b. The permittee shall emit no air contaminant or combination of air contaminants in such manner or amounts as to endanger the health, safety, or welfare of the public, or cause unreasonable injury or damage to property, as specified in OAC rule 3745-15-07.
- c. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

- (1) The permittee shall follow the Ohio EPA-approved (March 28, 1991 letter from Mr. Thomas Rigo) operator training program for the proper operation and maintenance of the control equipment, as described in the above-referenced Director's Final Findings & Orders, or such alternative program approved by the Cleveland Division of Air Quality that is consistent with the Final Findings & Orders.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the packed tower scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and



- c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions;  
and
- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any visible emissions are observed.

- (2) The pressure drop across the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 4 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop range based upon the operation of the scrubber during that emissions test.
- (3) The scrubber liquor fresh water flow rate for the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 60 gallons per hour (1 gallon per minute (gpm)). After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubbing liquor fresh water flow rate based upon the operation of the scrubber during that emissions test.
- (4) The scrubber liquor recirculation rate of the packed tower scrubber shall be maintained at a minimum of 10 gpm when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (5) The pH of the scrubber liquor in the packed tower scrubber, when the emissions unit is in operation, shall be maintained at a minimum of 10.0. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value of the scrubber liquor based upon the operation of the scrubbers during that emissions test.
- (6) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the Tri-Mer Whirl Wet scrubber, as well as the scrubber fresh water flow rate, while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:



- a. the pressure drop across the Tri-Mer Whirl Wet scrubber, in inches of water column, twice per shift (not less than 4 hours apart during each shift);
  - b. the water flow rate to the scrubber, in gpm, twice per shift for the fresh make-up city water (not less than 4 hours apart during each shift); and
  - c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (7) The permittee shall properly operate and maintain equipment to monitor the packed tower scrubber liquor recirculation rate and pH, while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the scrubber liquor recirculation rate, in gpm, twice per shift (not less than 4 hours apart during each shift);
  - b. the pH; and
  - c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- e) Reporting Requirements
- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the packed tower scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
  - (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following Whirl Wet scrubber parameters were not maintained within the required levels:
    - a. the static pressure drop across the scrubber; and
    - b. the water flow rate.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following packed tower scrubber parameters were not maintained within the required levels:
    - a. the pH; and
    - b. the scrubbing liquor recirculation rate to the scrubber.
  - (4) The permittee shall include in the annual PER, information that identify each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.



- (5) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
  - (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

VOC emissions shall not exceed 0.26 pound per hour.

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.
    - b. Emission Limitation:

VOC emissions shall not exceed 1.15 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.
    - c. Emission Limitation:

Formaldehyde emissions shall not exceed 0.16 pound per hour.

Applicable Compliance Method:

Compliance with the hourly formaldehyde emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.



d. Emission Limitation:

Formaldehyde emissions shall not exceed 0.7 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitation:

PE shall not exceed 0.36 pound per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).

f. Emission Limitation:

PE shall not exceed 1.59 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

h. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

If required, compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with OAC rule 3745-21-10(C)(1).

g) Miscellaneous Requirements

(1) None.



**12. P009, Plant #2 - Pigment Kettle #2**

P009 Plant #2 no. 2 kettle system for manufacturing thermoplastic/thermoset resin pigments, vented to a Tri-Mer Whirl Wet wet dust collector and a packed tower scrubber, in series.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F)	<p>Volatile organic compound (VOC) emissions shall not exceed 2.75 pounds per hour and 12.05 tons per year (TPY).</p> <p>Formaldehyde emissions shall not exceed 0.16 pound per hour 0.7 TPY.</p> <p>Particulate Emissions (PE) shall not exceed 0.40 pound per hour or 1.76 TPY.</p>
b.	OAC rule 3745-17-07(A)(1)	<p>Visible PE from this scrubber stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by rule.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)(1)	The emissions limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
d.	OAC rule 3745-21-07(M)(3)(a) and (b)	This emission unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the VOC emissions by an overall control efficiency of at least eighty-five percent, by weight.  See b)(2)c. below.

(2) Additional Terms and Conditions

- a. All the VOC emissions and PE from all the equipment comprising this emissions unit shall be vented to the Tri-Mer wet scrubber and packed tower scrubber.
- b. The permittee shall emit no air contaminant or combination of air contaminants in such manner or amounts as to endanger the health, safety, or welfare of the public, or cause unreasonable injury or damage to property, as specified in OAC rule 3745-15-07.
- c. The permittee shall submit notification to Ohio EPA that this emissions unit shall be specified in OAC rule 3745-21-07(M)(1).

c) Operational Restrictions

- (1) The permittee shall follow the Ohio EPA-approved (March 28, 1991 letter from Mr. Thomas Rigo) operator training program for the proper operation and maintenance of the control equipment, as described in the above-referenced Director's Final Findings & Orders, or such alternative program approved by the Cleveland Division of Air Quality (Cleveland DAQ) that is consistent with the Final Findings & Orders.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the packed tower scrubber stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and



- c. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified below, the permittee may reduce the frequency of visual observations from daily to weekly for this emissions unit if the following conditions are met:

- d. for 1 full quarter the facility's visual observations indicate no visible emissions;  
and
- e. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to readings of daily if any visible emissions are observed.

- (2) The pressure drop across the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 4 inches of water column when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new pressure drop range based upon the operation of the scrubber during that emissions test.
- (3) The scrubber liquor fresh water flow rate for the Tri-Mer Whirl Wet scrubber shall be maintained at a minimum of 60 gallons per hour (1 gallon per minute (gpm)). After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubbing liquor fresh water flow rate based upon the operation of the scrubber during that emissions test.
- (4) The scrubber liquor recirculation rate of the packed tower scrubber shall be maintained at a minimum of 10 gpm when the emissions unit is in operation. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum scrubber liquor recirculation rate based upon the operation of the scrubber during that emissions test.
- (5) The pH of the scrubber liquor in the packed tower scrubber, when the emissions unit is in operation, shall be maintained at a minimum of 10.0. After each round of emissions testing which demonstrate that the emissions unit was operating in compliance with the applicable requirements, the permittee may establish a new minimum pH value of the scrubber liquor based upon the operation of the scrubbers during that emissions test.
- (6) The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the Tri-Mer Whirl Wet scrubber, as well as the scrubber fresh water flow rate, while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:



- a. the pressure drop across the Tri-Mer Whirl Wet scrubber, in inches of water column, twice per shift (not less than 4 hours apart during each shift);
  - b. the water flow rate to the scrubber, in gpm, twice per shift for the fresh make-up city water (not less than 4 hours apart during each shift); and
  - c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- (7) The permittee shall properly operate and maintain equipment to monitor the packed tower scrubber liquor recirculation rate and pH, while the emissions unit is in operation. The monitoring devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the scrubber liquor recirculation rate, in gpm, twice per shift (not less than 4 hours apart during each shift);
  - b. the pH; and
  - c. the downtimes for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.
- e) Reporting Requirements
- (1) The permittee shall include in the annual Permit Evaluation Report (PER), information that (a) identifies all days during which any visible PE were observed from the packed tower scrubber stack serving this emissions unit and (b) describes any corrective actions taken to eliminate the visible PE.
  - (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following Whirl Wet scrubber parameters were not maintained within the required levels:
    - a. the static pressure drop across the scrubber; and
    - b. the water flow rate.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following packed tower scrubber parameters were not maintained within the required levels:
    - a. the pH; and
    - b. the scrubbing liquor recirculation rate to the scrubber.
  - (4) The permittee shall include in the annual PER, information that identify each day during which the emissions unit was in operation and the capture (collection) system and/or control device were not in operation.



- (5) The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
  - (6) The permittee shall submit an annual PER to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:

VOC emissions shall not exceed 2.75 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.
    - b. Emission Limitation:

VOC emissions shall not exceed 12.05 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.
    - c. Emission Limitation:

Formaldehyde emissions shall not exceed 0.16 pound per hour.

Applicable Compliance Method:

Compliance with the hourly formaldehyde emission limitation shall be determined through emission testing as specified in f)(2) of these terms and conditions.



d. Emission Limitation:

Formaldehyde emissions shall not exceed 0.7 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitation:

PE shall not exceed 0.40 pound per hour.

Applicable Compliance Method:

If required, compliance with the mass emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B).

f. Emission Limitation:

PE shall not exceed 1.76 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 6-minute average (stack).

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

h. Emission Limitation:

VOC emissions shall be reduced by an overall control efficiency of at least eighty-five percent, by weight.

Applicable Compliance Method:

Compliance with the overall VOC emission reduction requirement shall be determined through emissions tests performed in accordance with the requirements specified in f)(2).



(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 36 months of the issuance of this permit for unit P009 (most recent testing of P009 conducted 7/28/2004 through 7/30/2004)\*.

\* Emissions units P008 and P009 are identical emissions units. The permittee may test one of these emission units and the results will be representative of the emissions for each of the identical emissions units. After one of these identical emission units is stack tested, the other emission unit may be stack tested in the next required stack testing cycle. Emission unit P008 was last tested on 5/6/2008 and 5/7/2008 (stack test report # 080507).

b. The emission testing shall be conducted to:

i. demonstrate compliance with the overall control efficiency limitation for VOC at the outlet of the packed tower scrubber for the worst case product

ii. determine the actual PE rate in pounds per hour from the packed tower scrubber,

iii. to determine the VOC emission rate at the inlet to the Tri-Mer wet scrubber for the calculation of the overall VOC control efficiency for the worst case product, and;

iv. to establish proper operating values for the pressure drops, pH, and scrubber liquor recirculation rates (in gpm) for both scrubbers.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 – 4 included with each of the methods below.

Particulates: Method 5, 40 CFR Part 60, Appendix A

Volatile Organic Compounds by GC: Method 18, 40 CFR Part 60, Appendix A

Volatile Organic Compounds: Method 25, 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.



**Draft Permit-to-Install and Operate**

Day-Glo Color Corp.

**Permit Number:** P0112662

**Facility ID:** 1318006552

**Effective Date:** To be entered upon final issuance

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
  - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).
  - f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  - g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Cleveland DAQ.
- g) Miscellaneous Requirements
- (1) None.