



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

2/6/2013

Certified Mail

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1318006552
Permit Number: P0111064
Permit Type: Initial Installation
County: Cuyahoga

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/pemitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
CDAQ; Pennsylvania; Canada



FINAL

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

Facility ID:	1318006552
Permit Number:	P0111064
Permit Type:	Initial Installation
Issued:	2/6/2013
Effective:	2/6/2013



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

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Final Permit-to-Install
Day-Glo Color Corp.
Permit Number: P0111064
Facility ID: 1318006552
Effective Date: 2/6/2013

Authorization

Facility ID: 1318006552
Facility Description: manufacture of fluorescent pigments, ink bases, and dyes
Application Number(s): A0045619
Permit Number: P0111064
Permit Description: PTI for the initial installation of a 5,000-gallon reactor (P036) equipped with an in-line condenser, wet scrubber, and baghouse connected to an associated drum loading system.
Permit Type: Initial Installation
Permit Fee: \$1,000.00
Issue Date: 2/6/2013
Effective Date: 2/6/2013

This document constitutes issuance to:

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

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

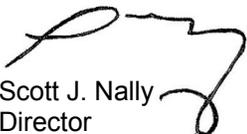
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Final Permit-to-Install
Day-Glo Color Corp.
Permit Number: P0111064
Facility ID: 1318006552
Effective Date:2/6/2013

Authorization (continued)

Permit Number: P0111064

Permit Description: PTI for the initial installation of a 5,000-gallon reactor (P036) equipped with an in-line condenser, wet scrubber, and baghouse connected to an associated drum loading system.

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

Emissions Unit ID:	P036
Company Equipment ID:	5,000-gallon reactor with wet scrubber.
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Day-Glo Color Corp.
Permit Number: P0111064
Facility ID: 1318006552
Effective Date: 2/6/2013

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Cleveland Division of Air Quality.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Cleveland Division of Air Quality. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Cleveland Division of Air Quality every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Cleveland Division of Air Quality in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Cleveland Division of Air Quality concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Cleveland Division of Air Quality.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Cleveland Division of Air Quality. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Final Permit-to-Install
Day-Glo Color Corp.
Permit Number: P0111064
Facility ID: 1318006552
Effective Date: 2/6/2013

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) 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. Substantive amounts of HAPs are emitted from the following non-insignificant 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 insignificant emissions units:

- d) P022 (methanol);
- e) T043 (methanol);
- f) T044 (methanol); and
- g) N001 (metals, CDD/CDF, hydrochloric acid)

4. 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 each of non-insignificant emissions units P001, P002, P003 P007, P008, P009, P021, P031, P032, P033, P034, P035, and P036 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 non-insignificant emissions unit P003 shall be calculated as follows:

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

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 non-insignificant 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 lbs per hour and 0.70 lbs per hour (respectively). This unit is not subject to an OC emission limitation or control measure, however OC 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 (insignificant emissions units 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 insignificant emission 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.

5. 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 unit P003.
- 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.

6. 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 (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 tons per year (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.
7. 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.
8. 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.
9. 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.



Final Permit-to-Install
Day-Glo Color Corp.
Permit Number: P0111064
Facility ID: 1318006552
Effective Date: 2/6/2013

C. Emissions Unit Terms and Conditions



1. P036, 5,000-gallon reactor with wet scrubber.

Operations, Property and/or Equipment Description:

5,000-gallon reactor with associated wet scrubber

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)e. and g)(1)

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.	<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.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(F)	<u>Reactor Emissions:</u> Volatile organic compound (VOC) emissions shall not exceed 80.3 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)g. and c)(1) below.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed twenty percent opacity, as a six-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 tons per year. 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 ± 1 percent of the temperature being measured or ± 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:
- b. the date and time the deviation began;
 - c. the magnitude of the deviation at that time;
 - d. the date the investigation was conducted;
 - e. the name(s) of the personnel who conducted the investigation; and
 - f. 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:

- g. a description of the corrective action;
- h. the date corrective action was completed;
- i. the date and time the deviation ended;
- j. the total period of time (in minutes) during which there was deviation;
- k. the temperature readings of the exhaust gas from condenser immediately after the corrective action was implemented; and
- l. 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 summaries 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) 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:

Particulate emissions shall not exceed 3.01 pounds per batch

Applicable Compliance Method:

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

d. Emission Limitation:

Particulate emissions shall not exceed 0.15 TPY



Applicable Compliance Method:

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

e. Emission Limitation:

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

Applicable Compliance Method:

Compliance with the stack visible particulate emissions 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.

(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 during the summer months (June, July, or August) of CY 2013 after issuance of the permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable lbs/batch mass emission rate(s) for VOCs, particulates, and opacity.

The length of each test run proposed by the permittee in the Intent To Test (ITT) Notification must be approved by the Cleveland DAQ.

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

Methods 1 – 4 of 40 CFR Part 60, Appendix A

Method 5 – particulates of 40 CFR Part 60, Appendix A

Method 9 – visible particulate emissions 40 CFR Part 60, Appendix A

Method 25 – VOC of 40 CFR Part 60, Appendix A

Method 25A – VOC of 40 CFR Part 60, Appendix A - if applicable

Method 316 – formaldehyde of 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) 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 ton per year. 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 ton per year 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