

Synthetic Minor Determination and/or Netting Determination

Permit To Install: 14-06016

A. Source Description

Degussa Corporation is a pigment mixing facility located in Cincinnati, Ohio. The facility mixes pigments to the customer demand for color and quantity. Once the pigment is mixed to the proper specifications, the material is then pumped into holding tanks before shipment to the customer.

B. Facility Emissions and Attainment Status

The annual allowable organic compound (OC) emissions for the facility will be 80.07 tons per year (TPY). The facility is located in Hamilton County which is non-attainment for ozone and particulate matter 2.5 microns and less in diameter and attainment for the rest of the criteria pollutants.

C. Source Emissions

Most of the emissions from the facility come from the solvent-based mixers (emissions units P007-P009). Emissions units P010-P017 and P019-P021 only mix aqueous-based products. This air permit to install (PTI) supercedes PTI 14-05805 issued 4/20/2006, for emissions units P007 - P009 and PTI 14-05811 issued 5/25/2006, for emissions units P010 - P017 and P019 -P021. The facility requested the permit change so that they could increase production. Emissions units P007 - P009 production will increase from the allowable of 6 million to 12 million pounds per year. Emissions units P010-P017 and P019-P021 production will increase from 50 million to 62.5 million pounds per year. No process changes are being made and the hourly emissions remain unchanged. The potential to emit for emissions units P007 - P021 is 261 TPY of OC, before permit limitations. The annual allowable OC emissions for the facility will be 80.07 TPY.

D. Conclusion

The permittee will maintain the material usage records to demonstrate compliance with the permit limitations. The facility will accept a facility-wide limitation of 80.07 TPY of OC to avoid being a major source for both new source review (NSR) and Title V and also accept facility-wide limitations of less than 10 tons per year for each individual HAP and less than 25 tons per year for combined HAP emissions to avoid Title V and maximum achievable control technology (MACT) requirements. The facility will also keep rolling, 12-month summation of both production and emission records to demonstrate compliance with the permit limitations.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

CERTIFIED MAIL

**RE: DRAFT PERMIT TO INSTALL
HAMILTON COUNTY
Application No: 14-06016
Fac ID: 1431260080**

Y	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 3/4/2008

Degussa Corporation
William Griffith
379 Interpace Parkway
Parsippany, NJ 07054

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on 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 proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$7000** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

HAMILTON COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL 14-06016 FOR AN AIR CONTAMINANT SOURCE
FOR Degussa Corporation

On 3/4/2008 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Degussa Corporation**, located at **620 Shepherd Drive, Lockland, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-06016:

Increase current permit production capacity.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Brad Miller, Hamilton County Department of Environmental Services, 250 William Howard Taft Pkwy, Cincinnati, OH 45219-2660 [(513)946-7777]



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 14-06016

Application Number: 14-06016
Facility ID: 1431260080
Permit Fee: **To be entered upon final issuance**
Name of Facility: Degussa Corporation
Person to Contact: William Griffith
Address: 379 Interpace Parkway
Parsippany, NJ 07054

Location of proposed air contaminant source(s) [emissions unit(s)]:
**620 Shepherd Drive
Lockland, Ohio**

Description of proposed emissions unit(s):
Increase current permit production capacity.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described 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

Chris Korleski
Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- 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 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 appropriate Ohio EPA District Office or local air agency. 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.)

3. Records Retention Requirements

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.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of 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 emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. 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.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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.

10. 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.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. 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 this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
Organic Compounds	34.73 based upon emissions units contained within this permit that qualify for the provisions listed in SB265.
Organic Compounds	80.07 based upon a rolling facility-wide limitation to avoid federal regulations

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Single HAP

9.9 based upon a rolling facility-wide limitation to avoid federal regulations

Combined HAP

24.9 based upon a rolling facility-wide limitation to avoid federal regulations

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P007

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P007) - South Premix Tanks and Mills, Solvent based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY.

Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.); and
 - f. the rolling, 12-month summation of the OC emissions, in tons (This shall include the information for the current month and the preceding eleven months.).
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
6.8 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds.

F is the emission factor in lb(s) per ton provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb}$$

E is the OC emission rate, TPY

A is the annual colorant production in pounds

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

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Issued: To be entered upon final issuance

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Emissions Unit ID: P007

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P008) - South Toning Mixer A and Tanks, Solvent Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 23.54 pounds per hour. See term and condition B.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.e.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.c, A.2.d, and B.1.

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of a cover.
- 2.b The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.c The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based

Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.e** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

1. The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons (This shall include the information for the current month and the preceding eleven months.).
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;

- e. the name and identification of each cleanup material employed;
- f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;
- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

- 1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

- 2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.d. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

- 3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
23.54 lbs/hr of OC.

Applicable Compliance Method:

Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F.$$

E is the OC emission rate, lb/hr.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

- b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb}.$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

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Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P008

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P009) - South Toning Mixer B and Tanks, Solvent Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 23.54 pounds per hour. See term and condition B.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.e.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.c, A.2.d, and B.1.

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of a cover.
- 2.b The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.c The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based

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Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P009

Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.e.** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

1. The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;

- e. the name and identification of each cleanup material employed;
- f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;
- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

- 1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

- 2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.d. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

- 3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
23.54 lbs/hr of OC.

Applicable Compliance Method:

Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F.$$

E is the OC emission rate, lb/hr.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

- b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb}$$

E is the OC emission rate, TPY

A is the annual colorant production in pounds

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Emissions Unit ID: P009

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P010****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P010) - North Premix Tanks and Mills, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021

(Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
0.35 ton per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, ton per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P010

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P011

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P011) - West Toning Mixer and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer

and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
5.4 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P011

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P012****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P012) - East Toning Mixer and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer

and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
5.4 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton}/2000 \text{ lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

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- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P013****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P013) - MMT Mixer A and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer

and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.); and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

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- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
5.6 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

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- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P014****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P014) - MMT Mixer B and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY.

Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
5.6 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P014

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P015

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P015) - MMT Mixer C and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)(b)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements.)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY.

Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
5.5 tons per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, tons per year.

A is the maximum hourly colorant production in pounds

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P015

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P016) - West Stir-in Mixer and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 2.36 pounds per hour. See term and condition B.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.e.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.c, A.2.d and B.1.

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of a cover.
- 2.b The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.c The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based

Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.** The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.

2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;
 - g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;

- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
 - or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.d. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
2.36 lbs/hr of OC.

Applicable Compliance Method:

Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F$$

E is the OC emission rate, lb/hr

A is the maximum hourly colorant production in pounds

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

- b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P016

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P017

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P017) - East Stir-in Mixer and Tanks, Aqueous Based Production

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 2.36 pounds per hour. See term and condition B.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.e.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR] and title V permitting)	See terms and conditions A.2.c, A.2.d and B.1.

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of a cover.
- 2.b The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.c The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production),

P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.e** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.d. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
2.36 lbs/hr of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F.$$

E is the OC emission rate, lb/hr.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb}.$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

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Emissions Unit ID: P017

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P019****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P019) - Stir-in Mixer and Tank V4043

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 2.36 pounds per hour. See term and condition B.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.e.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.c, A.2.d and B.1.

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and the use of a cover.
- 2.b The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.c The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production),

P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.e** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;

- g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];
- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3.** The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.d. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack

have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
2.36 lbs/hr of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F.$$

E is the OC emission rate, lb/hr.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

- b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb}$$

E is the OC emission rate, TPY

A is the annual colorant production in pounds

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P019

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P020****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P020) - Mixer and Tank V4071 with Associated Mill

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See term and condition A.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;
 - g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];

- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for

Chemical Substances and Physical Agents Biological Exposure Indices”;
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists’ (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “X” hours per day and “Y” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration”, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P020

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination

that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report

shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
0.04 ton per year of OC.

Applicable Compliance Method:

Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, ton per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

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- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

Degussa Corporation**PTI Application: 14-06016****Issued: To be entered upon final issuance****Facility ID: 1431260080****Emissions Unit ID: P021****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P021) - Mixer and Tank V4072 with Associated Mill

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See term and condition a.2.e.
OAC rule 3745-21-07(G)(2)	Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. See term and condition A.2.d.
OAC rule 3745-31-05(C) (Synthetic minor to avoid new source review [NSR], Title V permitting and MACT requirements)	See terms and conditions A.2.b, A.2.c, B.1 and B.2.

2. Additional Terms and Conditions

- 2.a The hourly emission limitation is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limitation.
- 2.b The organic compound (OC) emissions from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) shall not exceed 80.07 TPY. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.c** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P007 (South Premix Tanks Solvent Based Production), P008 (South Toning Mixer A and Tanks Solvent Based Production), P009 (South Toning Mixer B and Tanks Solvent Based Production), P010 (North Premix Tanks and Mills Aqueous Based Production), P011 (West Toning Mixture and Tanks Aqueous Based Production), P012 (East Toning Mixer and Tanks Aqueous Based Production), P013 (MMT Mixer A and Tanks Aqueous Based Production), P014 (MMT Mixer B and Tanks Aqueous Based Production), P015 (MMT Mixer C and Tanks Aqueous Based Production), P016 (West Stir-in Mixer and Tank Aqueous Based Production), P017 (East Stir-in Mixer and Tanks Aqueous Based Production), P019 (Mixer and Tank V4043), P020 (Mixer and Tank V4071 with associated Mill) and P021 (Mixer and Tank V4072 with associated Mill) and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

- 2.d** On February 18, 2008, OAC rule 3745-21 was revised to reserve paragraph (G); therefore, paragraph (G) does not contain specific requirements as currently listed in Ohio's State Implementation Plan (SIP). However, at the time of the issuance of this permit, the rule revision has not been submitted to U.S. EPA as a revision to Ohio's State Implementation Plan (SIP) and until the U.S. EPA approves the revisions to OAC rule 3745-21, the requirements of OAC rule 3745-21-07(G)(2) still exists as part of the federally-approved SIP for Ohio.
- 2.e** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound emissions from this air contaminant source since the uncontrolled potential to emit for organic compound emissions is less than 10 tons per year.

B. Operational Restrictions

- 1.** The maximum annual production rate in emissions units P007 through P017 and P019 through P021, combined shall not exceed 74,500,000 pounds of colorant per year, based on a rolling 12-month summation of the production rates.

The permittee has existing records to demonstrate compliance with this limitation upon permit issuance.

2. The permittee shall use fitted covers on this emissions unit while in operation or holding any material containing organic compounds.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the number of pounds of each colorant produced;
 - c. the organic compound content, in percent by weight, of each colorant produced;
 - d. the total organic compound emission rate for all colorants produced, in pounds or tons;
 - e. the updated rolling, 12-month summation of the total colorant usage, in pounds; (This shall include the information for the current month and the preceding eleven months.) and
 - f. the rolling, 12-month summation of the OC emissions, in tons.
2. The permittee shall collect and record the following information each month for emissions units P007 - P017 and P019 - P021:
 - a. the name and identification number of each colorant produced;
 - b. the individual hazardous air pollutant (HAP) content of each HAP of each colorant in pounds of individual HAP per pound of colorant, as applied;
 - c. the total combined HAP content of each colorant in pounds of combined HAPs per pound of colorant, as applied [sum of all the individual HAP contents from (b)];
 - d. the number of pounds of each colorant produced;
 - e. the name and identification of each cleanup material employed;
 - f. the individual hazardous air pollutant (HAP) content of each HAP of each cleanup material in pounds of individual HAP per pound of cleanup material, as applied;
 - g. the total HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum of all the individual HAP contents from (f)];

- h. the number of gallons of each cleanup material employed;
- i. the total individual HAP emissions for each HAP from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (b) times (d) times the emission factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (f) times (h) for each cleanup material]; and
- j. the total combined HAP emissions from all colorants produced and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor in E.1.a divided by 2000 lbs/ton for each colorant plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l. the updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

- 3. The permit to install for this/these emissions unit(s) [P007 - P017 and P019 - P021] was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for

Chemical Substances and Physical Agents Biological Exposure Indices”;
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists’ (ACGIH) “Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices”; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “X” hours per day and “Y” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

Pollutant: Ethylene Glycol
TLV (ug/m³): 100,000
Maximum Hourly Emission Rate (lbs/hr): 6.8
Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 842
MAGLC (ug/m³): 2381

The permittee, has demonstrated that emissions of ethylene glycol, from emissions unit(s) [P007 - P017 and P019 - P021], is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration”, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination

that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports which identify any exceedance of the OC emission limitation set forth in term A.2.b. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

2. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.c. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

3. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month colorant production limitation in term B.1. If no deviations occurred during the reporting period, the permittee shall state so in the report.

The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)

4. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report

shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in Section A of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
0.04 ton per year of OC.

Applicable Compliance Method:
Compliance with the OC emission rate from the colorant production shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 8760 \text{ hours per year} \times 1 \text{ ton per 2000 lbs.}$$

E is the OC emission rate, ton per year.

A is the maximum hourly colorant production in pounds.

F is the emissions factor provided in the PTI application 14-06016 submitted on January 23, 2008.

b. Emission Limitation:
80.07 TPY of OC for emission units P007 through P017 and P019 through P021 based upon a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be based upon the record keeping requirements as specified in term and condition C.1.

The OC emission rate from emission units P007 through P017 and P019 through P021 shall be determined by the following equation:

$$E = A \times 0.0005 \text{ ton/lb} \times F \times 0.0005 \text{ ton/lb.}$$

E is the OC emission rate, TPY.

A is the annual colorant production in pounds.

F is the emission factor for the colorant provided in the PTI application 14-06016 submitted on January 23, 2008.

Degussa Corporation

PTI Application: 14-06016

Issued: To be entered upon final issuance

Facility ID: 1431260080

Emissions Unit ID: P021

- c. Emission Limitation:
9.9 TPY for any single HAP and 24.9 TPY for combined HAP emissions based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the HAP emission limitations will be determined by the record keeping requirements specified in term and condition C.2.

- 2. Compliance with the rolling, 12-month colorant production limitation in term and condition B.1 shall be based upon the record keeping requirements specified in term and condition C.1.

F. Miscellaneous Requirements

- 1. The terms and conditions in this permit to install supersede Permit to Install 14-05811, for emissions units P007 through P009, as issued on May 25, 2006 and Permit to Install 14-05805, for emissions units P010 through P017 and P019 through P021, as issued April 20, 2006.
- 2. The following terms and conditions of this permit are federally enforceable: A, B, C.1, C.2, D and E.

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P007

EMISSIONS UNIT DESCRIPTION South Premix Tanks and Mills, Solvent based Production

DATE INSTALLED 12/97

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.55 lbs/hr		1.55 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: trimethyl benzene

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P008

EMISSIONS UNIT DESCRIPTION South Toning Mixer A and Tanks, Solvent Based Production

DATE INSTALLED 12/97

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	23.52 lbs/hr		23.52 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? No NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: trimethyl benzene

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P009

EMISSIONS UNIT DESCRIPTION South Toning Mixer B and Tanks, Solvent Based Production

DATE INSTALLED 12/1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	23.52 lbs/hr		23.52 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: trimethyl benzene

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P010

EMISSIONS UNIT DESCRIPTION North Premix Tanks and Mills, Aqueous Based Production

DATE INSTALLED 1980

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	0.08 lbs/hr		0.08 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P011

EMISSIONS UNIT DESCRIPTION West Toning Mixer and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.24 lbs/hr		1.24 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P012

EMISSIONS UNIT DESCRIPTION East Toning Mixer and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.24 lbs/hr		1.24 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P013

EMISSIONS UNIT DESCRIPTION MMT Mixer A and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.29 lbs/hr		1.29 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD?no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P014

EMISSIONS UNIT DESCRIPTION MMT Mixer B and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.29 lbs/hr		1.29 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P015

EMISSIONS UNIT DESCRIPTION MMT Mixer C and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	1.29 lbs/hr		1.29 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P016

EMISSIONS UNIT DESCRIPTION West Stir-in Mixer and Tanks, Aqueous Based Production

DATE INSTALLED 1998

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	2.36 lbs/hr		2.36 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P017

EMISSIONS UNIT DESCRIPTION East Stir-in Mixer and Tanks, Aqueous Based Production

DATE INSTALLED ?

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	2.36 lbs/hr		2.36 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P019

EMISSIONS UNIT DESCRIPTION Stir-in Mixer and Tank V4043

DATE INSTALLED July 2007

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	2.36 lbs/hr		2.36 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P020

EMISSIONS UNIT DESCRIPTION Mixer and Tank V4071 with Associated Mill

DATE INSTALLED July 2007

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	0.01 lbs/hr		0.01 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol

Degussa Corporation
PTI Application: 14-06016
Issued: To be entered upon final issuance

Facility ID: 1431260080

SIC CODE 2851 SCC CODE 30101430 EMISSIONS UNIT ID P021

EMISSIONS UNIT DESCRIPTION Mixer and Tank V4072 with Associated Mill

DATE INSTALLED July 2007

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	non attainment	0.01 lbs/hr		0.01 lbs/hr	80.07
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination - annual throughput limit,

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$na

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: ethylene glycol