State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
FRANKLIN COUNTY

Street Address: 122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address: Lazarus Gov. Center P.O. Box 1049

Application No: 01-08218

DATE: 8/8/2000

Tosoh SMD Inc
Donald York
3600 Gantz Rd
Grove City, OH 43123-1895

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: **USEPA** **CDO**

FINAL PERMIT TO INSTALL 01-08218

Application Number:	01-08218
APS Premise Number:	0125092141
Permit Fee:	**$1600**
Name of Facility:	Tosoh SMD Inc
Person to Contact:	Donald York
Address:	3600 Gantz Rd Grove City, OH 43123-1895

Location of proposed air contaminant source(s) [emissions unit(s)]:
3600 Gantz Rd
Grove City, **Ohio**

Description of proposed emissions unit(s):
Nine diamond cutting machines.

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

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 Related to Monitoring and Recordkeeping 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 quarterly, i.e., 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 are inadequate 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 prove to be inadequate 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

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 thirty (30) 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

Pollutant	Tons Per Year
Organic Compounds	50.4

Emissions Unit ID: **R001**

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R001 - Diamond cutting machine - Okuma, Type/LB25II	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R001:

   a. the number of gallons of alcohol employed;

   b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists

(ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R001. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R001.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R002 - Diamond Cutting Machine - Mori Seki, Model #SL-300A, Serial #50	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R002:

   a. the number of gallons of alcohol employed;

b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound

with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R002. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R002.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R003 - Diamond Cutting Machine - Mori Seki, Model #SL-45MC, Serial #50	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R003:

   a. the number of gallons of alcohol employed;

   b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound

with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R003. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R003.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

Emissions Unit ID: **R004**

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R004 - Diamond Cutting Machine - Mori Seki, Model #SL-45MC, Serial #42	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R004:

   a. the number of gallons of alcohol employed;

   b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the

handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R004. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R004.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R005 - Diamond Cutting Operation - Mori Seki, Model #SL-45MC, Serial #52	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R005:

   a. the number of gallons of alcohol employed;

b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R005. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R005.

These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R006 - Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #20	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R006:

   a. the number of gallons of alcohol employed;

   b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound

with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R006. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R006.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R007 - Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #14	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.
	OAC rule 3745-21-07(G)(9)(f)	Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R007:

   a. the number of gallons of alcohol employed;

b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R007. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R007.

These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R008 - Diamond Cutting Machine - Mori Seki, Model #SL-35MC, Serial #46	OAC rule 3745-31-05	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year. Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R008:

   a. the number of gallons of alcohol employed;

b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R008. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R008.

These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

   Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

   Applicable Compliance Method -
   Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R009 - Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #26	OAC rule 3745-31-05	Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year. Exempt from the requirements of OAC rule 3745-21-07(G)(2) by using nonphotochemically reactive materials.

2. Additional Terms and Conditions

2.a The permittee shall not use any photochemically reactive material as defined in OAC rule 3745-21-01(C).

B. Operational Restrictions

1. The permittee shall not employ an alcohol with an organic compound content greater than 6.59 pounds per gallon.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for R009:

   a. the number of gallons of alcohol employed;

   b. the density of the alcohol, in pounds per gallon;

c. the percent of organic compounds, by weight;

d. the total number of hours the emissions units was in operation;

e. the total uncontrolled organic compound emissions, in pounds per day; and

f. the average hourly uncontrolled organic compound emission rate for alcohol, in pounds per hour (average).

2. The permit to install for this emissions unit R001 - R009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol

TLV (mg/m3): 1880

Maximum Hourly Emission Rate (lbs/hr): 17.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7705

MAGLC (ug/m3): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound

with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from R009. This report shall be submitted by January 31 of each year.

2. The permittee shall submit deviation (excursion) reports which identify each day during which any photochemically reactive materials were employed in R009.

   These reports are due by the dates described in Part I. - General Terms and Conditions of this permit under Section A.1.

E. Testing Requirements

Compliance with the emissions limitation(s) in Section A of these terms and conditions shall be determined in accordance with the following method(s):

1. Emission Limitation: Organic compound emissions shall not exceed 1.92 pounds per hour and 5.6 tons per year.

Applicable Compliance Method -
Compliance shall be demonstrated by multiplying the density of the alcohol by the daily alcohol usage (in gallons) and the percent of organic compounds, by weight, and then dividing by the hours of operation.

Formulation data derived from MSDS or USEPA Method 24 shall be used to determine the organic compound content of the alcohol.

2. Emission Limitation: Organic compound emissions shall not exceed 5.6 tons per year.

Applicable Compliance Method -
Compliance shall be demonstrated by multiplying the density of the alcohol by the annual alcohol usage [a summation of the daily records of alcohol usage (in gallons)] and the percent of organic compounds, by weight, and then dividing by 2000 to convert to ton(s).

F. Miscellaneous Requirements

None.

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R001

EMISSIONS UNIT DESCRIPTION Diamond cutting machine - Okuma, Type/LB25II

DATE INSTALLED 5/12/98

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R002

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-300A, Serial #50

DATE INSTALLED 1/12/98

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R003

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-45MC, Serial #50

DATE INSTALLED 9/25/95

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R004

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-45MC, Serial #42

DATE INSTALLED 9/15/94

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R005

EMISSIONS UNIT DESCRIPTION Diamond Cutting Operation - Mori Seki, Model #SL-45MC, Serial #52

DATE INSTALLED 9/27/95

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R006

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #20

DATE INSTALLED 1/24/96

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R007

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #14

DATE INSTALLED 10/17/94

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R008

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-35MC, Serial #46

DATE INSTALLED upon PTI issuance

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

3427.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

SIC CODE 3449 SCC CODE 40100297 EMISSIONS UNIT ID R009

EMISSIONS UNIT DESCRIPTION Diamond Cutting Machine - Mori Seki, Model #SL-65MC, Serial #26

DATE INSTALLED upon PTI issuance

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	attainment			1.92	5.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination In compliance with applicable rules and regulations and Air Toxics Policy

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $not given

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: ethanol

NEW SOURCE REVIEW FORM B

PTI Number: 01-08218 Facility ID: 0125092141

FACILITY NAME Tosoh SMD Inc

FACILITY DESCRIPTION Metal finishing facility CITY/TWP Grove City

Emissions Unit ID: **R009**

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit hard copy items to **Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkbox does not work, replace it with an 'X'	Electronic	**Additional information** File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	☐	0000000**c**.wpd	☒	
Modeling form/results	☐	0000000**s**.wpd	☒	☐
PTI Application (complete or partial)*	☐	0000000**a**.wpd	☒	☐
BAT Study	☐	0000000**b.**wpd	☒	☐
Other/misc.	☐	0000000**t**.wpd	☐	☒

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Applicable Federal Rules and Regulations

(1) NSPS - n/a

(2) NESHAPS - n/a

(3) PSD -

Attainment Area - YES

Facility on 28 Source Category PSD Rule List - NO

Current Facility Potential Emissions >= 250 tpy - NO

- Facility is not a PSD Facility

New Source Emissions >= 250 tpy - NO

- Not a Major Modification - No PSD Permit Needed

Applicable State Rules and Regulations

The pollutant emitted from this emissions unit is ethanol. In these emissions units, ethanol is used during the finishing of the diamond cuts to provide diamond tool cooling, cleaning and lubrication. The tool that is used is made of metal. The diamond cuts are made on sputtering targets used by semiconductor manufacturers.

The definition for a cold cleaner in OAC rule 3745-21-02 is a batch-operated device that employs a solvent for cleaning and removing soils from metal surfaces by spraying, brushing, flushing, agitation or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition. The ethanol does serve this function for the diamond cutting tools as well as other functions. The ethanol is sprayed manually on the tool in the cutting process. Based on the components of a cold cleaner identified

in OAC rule 3745-21-09(O) like a cover, reservoir, etc., this operation is not a cold cleaner but certainly has cold cleaning properties. Therefore, it will not be considered a cold cleaner based on the fact that it does not have any of the components identified in the applicable rule for cold cleaners and the fact that ethanol is not considered a photochemically reactive material.

The applicable rule will be OAC rule 3745-21-07(G)(9)(f) which states " the use of any material, in any article, machine, equipment or other contrivance described in paragraph (G)(1), (G)(2), (G)(3), or (G)(4) of this rule, if it can be demonstrated to the director's satisfaction that the emissions of organic materials into the atmosphere from such article, machine, equipment, or other contrivance are not photochemically reactive. This regulation was chosen because ethanol is a liquid organic material that performs the some of the operations identified in (G)(2) but it is not photochemically reactive.

New Source Review

The emissions from this units do trigger the Air Toxics Policy because more than one ton of a pollutant with a TLV (ethanol) is emitted. Please see the modeling which has been submitted hard copy.

The overall pte is 50.4 tons per year for all nine machines. Seven of these machines were part of research and development until July 1, 1999 when they were approved for production use. As a result of this change in operating status, they are required to obtain a PTI. The pte from these seven processes is 39.2 tpy which is below the significant emission rate that triggers new source modeling. These seven diamond cut operations were evaluated for modeling independent of the other two diamond cut operations because their installation dates were different (officially July 1, 1999). The pte for the two processes that will be installed upon PTI issuance is 11.2 tpy which is below the significant emission rate that triggers new source modeling. Therefore, new source modeling is not required for any of the emissions units.

Please complete:

SUMMARY (for informational purposes only)

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
Organic Compounds	50.4