



State of Ohio Environmental Protection Agency

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RE: PERMIT TO INSTALL MODIFICATION  
PUTNAM COUNTY  
Application No: 03-09777

CERTIFIED MAIL

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

DATE: 9/14/2000

Philips Display Components Ottawa Plant  
Charles Melquist  
700 North Pratt Street  
Ottawa, OH 458751554

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

NWDO



ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-09777

Application Number: **03-09777**

APS Premise Number: **0369000128**

Permit Fee: **\$100**

Name of Facility: **Philips Display Components Ottawa Plant**

Person to Contact: **Charles Melquist**

Address: **700 North Pratt Street  
Ottawa, OH 458751554**

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**700 North Pratt Street  
Ottawa, OHIO**

Description of modification:

**Modification to PTI #03-09777 issued 08/27/97 to change wording of limitations for P179 which shall not exceed 0.37lb/VOC hr and 1.62 TPY VOC.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

**GENERAL PERMIT CONDITIONS**

**TERMINATION OF PERMIT TO INSTALL**

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

**NOTICE OF INSPECTION**

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

**CONSTRUCTION OF NEW SOURCES**

The proposed source(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 source(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 Ohio Administrative Code (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 applicable standards.

**PERMIT TO INSTALL FEE**

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

**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.

**APPLICABILITY**

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

**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.

**PERMIT TO OPERATE APPLICATION**

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

**SOURCE OPERATION 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 and regulations.

## AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Philips Display Components Ottawa Plant** located in **PUTNAM** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P176	32 V Lacquer Line (Phase 1)	Catalytic Incinerator with 95% destruction efficiency and 100% capture efficiency	3745-31-05 3745-21-07(G)(2)	0.46 lb/hr OC 2.02 TPY OC 0.36 lb/hr Toluene 1.56 TPY Toluene 0.10 lb/hr Methanol 0.44 TPY Methanol
P177	32 V Rewash Line	Wet Scrubber with 95% operating control efficiency and 96% operating capture efficiency	3745-31-05	0.10 lb/hr PM 0.44 TPY PM 0.03 lb/hr HF 0.13 TPY HF 0.018 lb/hr HNO <sub>3</sub> 0.08 TPY HNO <sub>3</sub> 0.03 lb/hr HCl 0.13 TPY HCl
P178	32 V Panel Washer	Wet Scrubber with 95% operating control efficiency and 96% operating capture efficiency	3745-31-05	0.10 lb/hr PM 0.44 ton/hr PM 0.034 lb/hr HNO <sub>3</sub> 0.15 TPY HNO <sub>3</sub> 0.007 lb/hr PVA 0.03 TPY PVA 0.002 lb/hr HCl 0.009 TPY HCl 0.06 lb/hr HF 0.26 TPY HF
P179	32 V Lehr Oven (Phase 1)	Catalytic incinerator with 95% destruction efficiency and 30% operating capture efficiency	3745-31-05 3745-21-07(G)(1) 3745-17-07 3745-17-10	3 lbs/hr and 15 lbs/day OC 0.02 lb/MMBtu Particulate Matter

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P180	3 2 V Frit Application (Phase 1)	Catalytic incinerator and wet scrubber with 95% operating control efficiency and 96% operating capture efficiency	3745-31-05	0.10 lb/hr OC 0.44 TPY OC
P181	32 V Funnel Washer	Wet scrubber with 95% control efficiency and 96% operating capture efficiency	3745-31-05	0.09 lb/hr HF 0.39 TPY HF
P182	32 V Line External Coating (Phase 1)	Compliance with allowables and with permit terms and conditions	3745-31-05	0.301 lb/hr OC 1.32 TPY OC 0.22 lb/hr NH <sub>3</sub> 0.097 TPY NH <sub>3</sub>
P183	32 V Anode Silicon Layer (Phase 1)	Compliance with allowables and with permit terms and conditions	3745-31-05 3745-21-07(G)(2)	8 lbs/hr and 40 lbs/day OC

**SUMMARY****TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons/Year</u>
OC	13.82
PM	0.89
HF	0.78
HNO <sub>3</sub>	0.23
PVA	0.03
HCl	0.139
NH <sub>3</sub>	0.10

**PERFORMANCE TEST REQUIREMENTS**

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

- A. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District Office or Local Air Pollution Control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
- B. Two copies of the test results shall be submitted within 30 days after the completion of the performance test.
- C. Tests shall be performed for the following source(s) and pollutants(s):

**Source**

**Pollutant(s)**

P176	Toluene, Methanol and Total OC
P178	PM, HNO <sub>3</sub> , HF, PVA, HCl
P179	OC, PM
P180	OC
P183	OC
P177	PM, HNO <sub>3</sub> , HF, HCl

**WASTE DISPOSAL**

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

**MAINTENANCE OF EQUIPMENT**

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

**MALFUNCTION/ABATEMENT**

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the Ohio Environmental Protection Agency Northwest District Office - DAPC, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

### **AIR POLLUTION NUISANCES PROHIBITED**

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

### **NINETY DAY OPERATING PERIOD**

The facility will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

### **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.

### **ADDITIONAL SPECIAL TERMS AND CONDITIONS**

#### **A. Introduction:**

Philips Display Components Company (hereinafter referred to as “permittee”) is a television picture-tube manufacturer at Ottawa in Putnam County. This permit to install (PTI) is for the 32 V Phase I manufacturing process in their new building location. In addition, the permittee is increasing the capacity of Frit Application, Funnel Washer, External Coating, and Anode Silicon Application from the present permit limit of 25 tubes (funnels)/hour to a new limit of 75 tubes (funnels)/hr. These emissions units were previously assigned Ohio EPA emissions unit numbers P090 & P091, P101, R011, and R010 respectively and are being reassigned to P180, P181, P182, and P183 respectively.

#### **B. Applicable Emission Limitations and/or Control Requirements:**

1. The applicable emission limitations and/or control requirements for emissions unit P176 (32 V Lacquer Line - Phase I) are as follows:
  - a. organic compound (OC) emissions shall not exceed 0.46 pound per hour (lb/hr) and 2.02 tons per year (TPY). Toluene emissions shall not exceed 0.36 lb/hr and 1.56 TPY. Methanol emissions shall not exceed 0.10 lb/hr and 0.44 TPY; and
  - b. the permittee shall employ a catalytic incinerator to reduce captured OC emissions by at least 95%. The lacquer line shall be maintained within a permanent total enclosure which shall provide 100% capture efficiency of all OC emitted from the lacquer line.

2. The applicable emission limitations and/or control requirements for emissions unit P177 (32 V Rewash Line) are as follows:
  - a. hydrogen fluoride (HF) emissions shall not exceed 0.3 lb/hr and 0.13 TPY. Particulate Matter emissions shall not exceed 0.10 lb-PM/hr and 0.44 TPY. Nitric acid (HNO<sub>3</sub>) emissions shall not exceed 0.018 lb/hr and 0.08 TPY. Hydrochloric acid/Hydrogen Chloride (HCl) emissions shall not exceed 0.03 lb/hr and 0.13 TPY; and,
  - b. the permittee shall employ a packed tower scrubber as a control device for emissions unit P177. The scrubber shall achieve a minimum operating control efficiency of 95% with a minimum operating capture efficiency of 96%.
3. The applicable emission limitations and/or control requirements for emissions unit P178 (32 V Panel Washer) are as follows:
  - a. hydrogen fluoride emissions shall not exceed 0.06 lb/hr and 0.26 TPY. Particulate Matter emissions shall not exceed 0.10 lb/hr and 0.44 TPY. Nitric Acid (HNO<sub>3</sub>) emissions shall not exceed 0.034 lb/hr and 0.15 TPY. Hydrogen Chloride (HCl) emissions shall not exceed 0.002 lb/hr and 0.009 TPY. Polyvinyl Acetate (PVA) emissions shall not exceed 0.007 lb/hr and 0.03 TPY; and
  - b. the permittee shall employ a packed tower scrubber as a control device for emissions unit P178. The scrubber shall achieve a minimum operating control efficiency of 95% with a minimum operating capture efficiency of 96%.
4. The applicable emission limitations and/or control requirements for emissions unit P179 (32 V Lehr Oven) are as follows:
  - a. particulate matter emissions shall not exceed 0.02 lb/MMBtu. Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.10 lb/hr and 0.44 TPY. Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/hr and 0.44 TPY. Carbon monoxide (CO) emissions shall not exceed 0.12 lb/hr and 0.53 TPY. Volatile Organic Compound (VOC) emissions shall not exceed 0.37 lb/hr and 1.62 TPY. This emission limit is based upon the emissions unit's potential-to-emit. Also, pursuant to OAC rule 3745-21-07(G)(1), Organic compound emissions shall not exceed 3 lbs/hr and 15 lbs/day of OC, unless said discharge has been reduced by 85%; and
  - b. the permittee shall employ a catalytic incinerator to reduce captured OC and CO emissions by at least 95%. The minimum capture efficiency of the catalytic incinerator shall be 30%.
5. The applicable emission limitations and/or control requirements for emissions unit P180 (32 V Frit Application - Phase I) are as follows:
  - a. OC emissions shall not exceed 0.10 lb/hr and 0.44 TPY; and

- b. the permittee shall employ a catalytic incinerator to reduce captured OC emissions by at least 95%.
6. The applicable emission limitations and/or control requirements for emissions unit P181 (32 V Funnel Washer) are as follows:
  - a. hydrogen fluoride emissions shall not exceed 0.09 lb/hr and 0.39 TPY; and
  - b. the permittee shall employ a packed tower scrubber as a control device for emissions unit P178. The scrubber shall achieve a minimum operating control efficiency of 95% with a minimum operating capture efficiency of 96%.
7. The applicable emission limitations and/or control requirements for emissions unit P182 (32 V Line External coating - Phase I) are as follows:
  - a. organic compound emissions shall not exceed 0.301 lb/hr and 1.32 TPY. Ammonia (NH<sub>3</sub>) emissions shall not exceed 0.22 lb/hr and 0.96 TPY.
8. The applicable emission limitations and/or control requirements for emissions unit P183 (32 V Anode Silicon Layer - Phase I) are as follows:
  - a. organic compound emissions shall not exceed 8 lbs/hr and 40 lbs/day.

**C. Operational Restrictions:**

1. Any of the following changes may be deemed a “modification” to the emissions units and, as such, prior notification to and approval from the Ohio EPA, Northwest District Office are required, including the possible issuance of modification to PTI number 03-09777 and the operating permit:
  - a. any change in the composition of the cleaning solvent, or the use of new cleaning solvent, 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 specified in the above table;
  - b. any change to the emissions unit or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height) that would result in an increased of any MAGLC specified in the above table;
  - c. a reduction in the TLV by the ACGIH for any of the cleaning solvent that at the maximum hourly emission rate specified in the above table, would result in an exceedance of the MAGLC;
  - d. any change to the emissions unit or its method of operation that would either require an increase in the emission limitation(s) established by this permit or would otherwise be considered a “modification” as defined in OAC rule 3745-31-01;

- e. any change in the composition of the cleaning solvent, or use of new cleaning solvent, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)]; and
  - f. any change in the composition of the cleaning solvent, or use of the new cleaning solvent, that would result in an increase in emissions of any "Hazardous Air Pollutants" (HAPs) as defined in OAC rule 3745-77-01(V).
2. Operational restrictions for emissions unit P176 are as follows:
- a. the door to the lacquer line shall remain closed at all times except for entry or exit or for an emergency;
  - b. to minimize fugitive emissions, all spent cleanup solvent which will not be reused shall be returned to the waste recovery tank from a point within the permanent total enclosure of the lacquer line room;
  - c. toluene shall be the only organic compound (OC) in the lacquer, and in the edgewipe. The prewet spray shall not exceed 12% methanol by volume, and methanol shall be the only OC in the prewet spray;
  - d. the permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (in inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - e. the average temperature of the exhaust gases at the inlet to the catalytic incinerator, for any three-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. The average temperature difference across the catalyst bed, for any 3-hour block of time, shall not be less than 50 degrees Fahrenheit.
3. Operational restrictions for emissions unit P177 are as follows:
- a. the concentration of Hydrogen Fluoride aqueous solution shall not exceed 8% HF by weight.
4. Operational restrictions for emissions unit P178 are as follows:
- a. the concentration of Sodium Carbonate solution shall not exceed 4% Na<sub>2</sub>CO<sub>3</sub> by weight. The concentration of Polyvinyl Acetate solution shall not exceed 2.5% PVA by weight. The concentration of Hydrogen Fluoride solution shall not exceed 8% HF by weight. The concentration of Hydrochloric/Nitric acid solution shall not exceed 2% HCl/HNO<sub>3</sub> by weight.

5. Operational restrictions for emissions unit P179 are as follows:
  - a. the frit shall contain no more than 8% amyl acetate by weight, and amyl acetate shall be the only VOC in the frit; and
  - b. the permittee shall maintain a minimum operating temperature of 385 degrees Centigrade (725 degrees Fahrenheit) in the Lehr oven.
6. Operational restrictions for emissions unit P180 are as follows:
  - a. the frit shall contain no more than 8% amyl acetate by weight, and amyl acetate shall be the only VOC in the frit;
  - b. the permittee shall maintain the frit applicator in an enclosed room, with the only exhaust being through the drying tunnel to the catalytic incinerator; and
  - c. the permittee shall use only non-photochemically reactive coatings and cleanup/purge material(s). The definition of "photochemically reactive" and "non-photochemically reactive" is based upon OAC 3745-21-01(C)(5).
7. Operational restrictions for emissions unit P181 are as follows:
  - a. the concentration of Hydrogen Fluoride cleaning agent shall not exceed 4% HF by weight.
8. Operational restrictions for emissions unit P182 are as follows:
  - a. the coating solvent shall not contain more than 4.3% by volume of Octyl alcohol, and Octyl alcohol shall be the only OC in the coating. The ammonia content of the coating solvent shall not exceed 0.4% by volume. Acetone shall be the only cleanup solvent used; and
  - b. the permittee shall use only non-photochemically reactive coatings and cleanup/purge material(s). The definition of "photochemically reactive" and "non-photochemically reactive" is based upon OAC 3745-21-01(C)(5).
9. Operational restrictions for emissions unit P183 are as follows:
  - a. toluene content of the coating shall not exceed 98.3% by volume; and
  - b. the permittee shall not use photochemically reactive cleanup/purge material(s). The definition of "photochemically reactive" is based upon OAC 3745-21-01(C)(5).

**D. Monitoring and/or Record Keeping Requirements:**

1. Monitoring and/or Record Keeping Requirements for emissions unit P176 are as follows:

- a. the permittee shall maintain the lacquer line room, at all times when the catalytic incinerator is operating, at an air pressure which is less than the pressure of the air immediately outside the lacquer line room. The minimum differential pressure between the air inside and that outside the room shall be established at the time of emissions testing, and shall be approved in writing by the Ohio EPA. A pressure gauge capable of measuring this differential pressure shall be installed in an easily accessible location. The differential pressure readings shall be monitored and recorded continuously;
- b. the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the combustion temperature immediately upstream and downstream of the incinerator's catalyst bed when emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within  $\pm 1$  percent of the temperature being measured or  $\pm 5$  degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals;

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

- i. the average temperature of the exhaust gases immediately before and after the catalyst bed of the incinerator and the average temperature difference across the catalyst bed during each of the eight 3-hour blocks of time during the day; and
  - ii. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
- c. all lacquer supplied to the lacquer line shall be supplied through one flow meter capable of measuring and recording the volume of lacquer employed daily to an accuracy of plus or minus 0.2%. The volume percent of toluene in the lacquer shall be considered to be 97% for the purpose of these calculations. The volume of toluene in the lacquer supplied shall be converted to pounds and recorded daily. The daily pounds shall be summed for each calendar month and recorded;
  - d. all pure toluene supplied to emissions unit P176 shall be supplied through one flow meter capable of measuring and recording the volume of lacquer employed daily to an accuracy of plus or minus 0.2%. The volume of toluene supplied shall be converted to pounds and recorded daily. The daily pounds shall be summed for each calendar month and recorded;
  - e. the monthly sums of toluene usage recorded pursuant to paragraphs (c) and (d) above shall be added and recorded monthly;

- f. the weight of all methanol supplied to emissions unit P176 shall be either determined gravimetrically or through the use of a flow meter capable of measuring and recording the volume of lacquer employed daily to an accuracy of plus or minus 0.2%. The volume of methanol supplied shall be converted to pounds and recorded daily. The daily pounds shall be summed for each calendar month and recorded;
- g. the weights of toluene and methanol recovered from the waste recovery tank shall be calculated each month from the total weight of recovered material and the analysis of a representative sample. If no recovery has been made in a particular calendar month, the weights shall be recorded as zero. The weights of toluene and methanol recovered from the waste recovery tank shall each be recorded for each calendar month. The weight of toluene recovered each month shall be subtracted from the weight of toluene usage each month as determined in paragraph (7). The resulting number shall be recorded each month as the nominal weight of the methanol emitted before controls; and
- h. the permittee shall also collect and record the following information each month:
  - i. the name and identification of each cleanup material employed in the line;
  - ii. the number of gallons of each coating and cleanup material employed;
  - iii. the OC content of each cleanup material, in pounds of OC per gallon;
  - iv. the calculated, uncontrolled OC emission rate from all cleanup materials, using an overall capture and destruction efficiency of 95%, in pounds and tons per month;
  - v. the calculated, controlled OC emission rate from all cleanup materials, using an overall capture and destruction efficiency of 95%, in pounds and tons per month;
  - vi. the total controlled OC emissions from all the lacquer, pure toluene, methanol solution employed, calculated from the nominal weights of toluene and methanol emitted before using an overall capture and destruction efficiency of 95%, in pounds and tons per month;
  - vii. the total controlled OC emissions from all the lacquer, pure toluene, methanol solution and cleanup materials employed, in pounds and tons per month, calculated from sections (d) and (e) of this paragraph; and
  - viii. the 12 calendar month summation of the total controlled OC emissions from all the lacquer, pure toluene, methanol solution and cleanup materials employed, in tons.

2. Monitoring and/or Record Keeping Requirements for emissions units P177 and P178 are as follows:
  - a. the permittee shall properly operate and maintain equipment to monitor the water flow rate (gallons/minute), water pressure (psig), and pressure drop (inches of water) for the scrubber. The water flow rate, water pressure, and pressure drop shall be recorded daily while the emissions unit is in operation.
  
3. Monitoring and/or Record Keeping Requirements for emissions unit P179 are as follows:
  - a. the permittee shall maintain monthly records which list the following information for the emissions unit:
    - i. the number of funnels dried;
    - ii. the pounds of frit applied per funnel;
    - iii. the pounds of VOC per pound of frit applied;
    - iv. the estimated percent of VOC evaporated in this process (% VOC evaporated from the dryer and the % VOC evaporated from the conveyor leaving the dryer; and
    - v. the tons of VOC emitted ( $E_{VOC}$ ), determined in accordance with the following equation:

$$E_{VOC} = \text{funnels} * (\text{lb-frit/funnel}) * (\text{lb-VOC/lb-frit}) * (\text{ton}/2000 \text{ lb}) * (1/100\%) * \% \text{VOC released}$$

$$^a * [(100\% - A * .95)/100\% + (100\% - B * .95 * .85)/100\%]$$

where, A = % VOC released from over prior to autoignition  
 B = % VOC evaporated from conveyor

- b. for the catalytic incinerator employed, the same as in D(1)(b) above.
  
4. Monitoring and/or Record Keeping Requirements for emissions unit P180 are as follows:
  - a. the permittee shall maintain monthly records which list the following information for the emissions unit:
    - i. the number of funnels processed;
    - ii. the pounds of frit applied per funnel;
    - iii. the pounds of VOC per pound of frit applied; and

- iv. the estimated ( $E_{VOC}$ ), determined in accordance with the following equation:

$$E_{VOC} = \text{funnels} * (\text{lb-frit/funnel}) * (\text{lb-VOC/lb-frit}) * (\text{ton}/2000 \text{ lb}) * (1/100\%) * \%VOC \text{ released}$$

where, a = % VOC released from oven prior to autoignition

5. Monitoring and/or Record Keeping Requirements for emissions unit P181 are as follows:

- a. for the wet scrubber employed, the same as in D(2)(a) above.

6. Monitoring and/or Record Keeping Requirements for emissions unit P182 are as follows:

- a. the permittee shall collect and record the following information each day:

- i. the name and identification of each coating and cleanup material employed (the coating information must be for coatings **as employed**, including any thinning solvents added at the emissions unit);
- ii. the number of gallons of each coating and cleanup material employed;
- iii. the OC and ammonia content of each coating and cleanup material, in pounds of OC (and/or ammonia) per gallon;
- iv. the calculated, OC and ammonia emissions rate from all coatings and cleanup materials, in pounds per day;
- v. the total number of hours the emissions unit was in operation;
- vi. the average hourly OC and ammonia emissions rate for all coatings and cleanup materials, i.e., pounds per hour (average); and
- vii. the 12 calendar month summation of total OC and ammonia emissions from all coatings and cleanup materials used, in tons.

7. Monitoring and/or Record Keeping Requirements for emissions unit P183 are as follows:

- a. the permittee shall collect and record the following information each day:

- i. the name and identification of each coating and cleanup material employed (the coating information must be for the coatings **as employed**, including any thinning solvents added at the emissions unit);
- ii. documentation on whether or not each coating is a photochemically reactive material pursuant to OAC rule 3745-21-01(C)(5);

- iii. the number of gallons of each coating, and cleanup material employed;
- iv. the OC content of each coating and cleanup material, in pounds of OC per gallon;
- v. the total OC emissions rate from all coatings and cleanup materials, in pounds per day;
- vi. the total number of hours the emissions unit was in operation;
- vii. the average hourly OC and ammonia emissions rate for all coatings and cleanup materials, i.e., pounds per hour (average); and
- viii. the 12 calendar month summation of total OC and ammonia emissions from all the coatings and cleanup materials employed, in tons.

**E. Reporting Requirements:**

1. Reporting requirements for all emissions units in this permit are as follows:

- a. all records, and any supporting analysis, shall be retained in the permittee's files for a period of not less than five (5) years and shall be made available to the Director or any authorized representative of the Director for review during business hours. All reports are to be submitted to the Ohio EPA, Northwest District Office, Division of Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

2. Reporting requirements for emissions unit P176 are as follows:

- a. the permittee shall submit quarterly reports to the Ohio EPA documenting each exceedance of the emissions limitations, the pressure differential requirement, and the incinerator temperature limitation, including the following additional information:
  - i. the cause of the deviation;
  - ii. for the temperature deviation, an identification of all 3-hour blocks of time during which the average temperature of the exhaust gases immediately before the catalyst bed is more than 50 degrees Fahrenheit below the average temperature of the exhaust gases during the most recent performance test that demonstrated the emissions unit was in compliance, and all 3-hour blocks of time during which the average temperature difference across the catalyst bed is less than 50 degrees Fahrenheit; and
  - iii. the steps that have been/and or will be taken to correct the violation and prevent further deviations.

the reports shall be submitted by April 30, July 31, October 31 and January 31 and shall cover the previous calendar quarters. If there have been no exceedances, the reports stating that fact shall be submitted; and

- b. the permittee shall submit by January 31, an annual report of organic compound and ammonia emissions for the previous calendar year.
3. Reporting requirements for emissions units P177, P178 and P181 are as follows:
  - a. the permittee shall submit deviation (excursion) reports which identify (by date, duration, and measurement valves) all violations of the water flow rate, water pressure, and pressure drop limitations.
4. Reporting requirements for emissions units P179 and P180 are as follows:
  - a. by January 31 of each year, the permittee shall submit an annual report which documents the organic compound emissions from each emissions unit in tons, for the previous calendar year.
5. Reporting requirements for emissions unit P183 are as follows:
  - a. the permittee shall submit deviation (excursion) reports which include the following information:
    - i. an identification of each day during which the average hourly organic compound emission rate (from coatings and photochemically reactive cleanup materials) exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day; and
    - ii. an identification of each day during which the average hourly organic compound emission rate (from coatings and photochemically reactive cleanup materials) exceeded 40 pounds per day, and the actual organic compound emission rate for each such day.

**F. Testing Requirements:**

1. Within ninety (90) days of the effective date of this permit, the permittee shall conduct, or have conducted, performance testing on the air contaminant emissions unit(s) in accordance with procedures approved by the Agency.
2. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Division of Air Pollution Control.
3. Personnel from the Ohio EPA Northwest District Office shall be allowed to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment.
4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an Intent to Test notification to the Ohio Environmental Protection Agency, Division of Air Pollution Control. The Intent to Test notification shall describe in detail the proposed test methods and procedures, the

emissions unit operation parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA Northwest District Office's refusal to accept the results of the emission tests.

5. Two (2) copies of the written report describing the test procedures followed and two (2) copies of the results of such tests shall be signed and submitted by the person(s) responsible for the test(s) within 30 days following completion of the tests.
6. The following shall apply to emissions units P176 and P180:
  - a. the emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rates for toluene, methanol and total organic compounds. In addition, compliance must be demonstrated with the capture efficiency and control efficiency limitations specified in this permit for toluene, methanol and total organic compounds;
  - b. the capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement); and
  - c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
7. The following shall apply to emissions units P177, P178 and P191:
  - a. the emissions testing shall be conducted to demonstrate compliance with the emissions limitations of this permit. In addition, compliance must be demonstrated with the capture efficiency and control efficiency limitations specified in this permit for the scrubber. The water flow rate, water pressure, and pressure drop limitations for the scrubber shall be established at the time of emissions testing, and shall be approved in writing by the Ohio EPA;
  - b. the capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.); and

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