

Facility ID: 0448010075 Issuance type: Title V Draft Permit

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. None

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

b State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

K003 - pilot line;
 P003 - embossing line;
 T001 - tank #1: 10,000-gallon plasticizer above ground storage;
 T002 - tank #2: 10,000-gallon plasticizer above ground storage;
 T003 - tank #3: 10,000-gallon plasticizer above ground storage;
 T006 - tank #6: 20,000-gallon plasticizer above ground storage;
 T007 - tank #7: 20,000-gallon plasticizer above ground storage;
 T008 - tank #8: 20,000-gallon plasticizer above ground storage;
 T009 - tank #22: 20,000-gallon plasticizer above ground storage;
 T010 - tank #23: 20,000-gallon plasticizer above ground storage;
 T011 - tank #13: 10,000-gallon double wall horizontal MEK/THF under ground storage;
 T012 - tank #12: 10,000-gallon double wall horizontal MEK/THF under ground storage;
 T013 - tank #18: 10,000-gallon double wall horizontal MEK under ground storage;
 T016 - tank #11: 10,000-gallon double wall horizontal MEK under ground storage;
 T017 - tank #17: 10,000-gallon double wall horizontal MEK under ground storage;
 T018 - tank #16: 10,000-gallon double wall horizontal THF under ground storage;
 T026 - tank #26: 10,000-gallon plasticizer above ground storage;
 T027 - tank #27: 10,000-gallon plasticizer above ground storage;
 Z002 - no. 3 calendar oil heater no. 2;
 Z008 - stabilizer hand loading station: calendaring;
 Z009 - resin drop points: calendaring;
 Z010 - antimony trioxide station: calendaring;
 Z011 - PVC addition hopper #1: calendaring;
 Z012 - PVC addition hopper #2: calendaring;
 Z013 - plasticizer mix/addition area: calendaring;
 Z014 - PVC/filler recycling station: calendaring;
 Z015 - silo shaker;
 Z016 - annealer;
 Z017 - cold cleaning tank #1;
 Z018 - cold cleaning tank #2;
 Z019 - 2 drum curing ovens;
 Z020 - 2 lab hoods: quality labs;
 Z021 - vacuum former: quality lab;
 Z022 - 5 ovens: quality lab;
 Z023 - 5 lab hoods: R&D lab #1;
 Z024 - 4 mini print machines: R&D lab #1;
 Z025 - mini calendar: R&D lab;
 Z026 - 2 mini mills: R&D lab #1;
 Z027 - oven: R&D lab #1;
 Z028 - oven: R&D lab #2;
 Z029 - 3 lab hoods: R&D lab #2;
 Z030 - sample prep table with hood: R&D lab #2;
 Z031 - print and finish color matching test hood (QA/QC);
 Z032 - Hydro-Tek distillation still;
 Z033 - soup room weight scale;
 Z034 - facility drum mixers;
 Z035 - 800-gallon colored plastisol tank #1: by plastisol line;
 Z036 - 800-gallon colored plastisol tank #2: by plastisol line;
 Z037 - 800-gallon colored plastisol tank #3: by plastisol line;

Z038 - 800-gallon colored plastisol tank #4: by plastisol line;
Z039 - 800-gallon colored plastisol tank #5: by plastisol line;
Z040 - 800-gallon colored plastisol tank #6: by plastisol line;
Z041 - 1,750-gallon colored plastisol tank #17: by large mixer;
Z042 - 1,550-gallon colored plastisol tank #18: by large mixer;
Z043 - 1,550-gallon colored plastisol tank #19: by large mixer;
Z044 - 750-gallon oil plasticizer tank #11332: new dope room;
Z045 - 750-gallon oil plasticizer tank #11331: new dope room;
Z046 - 1,050-gallon product 037 or 450 tank #11335: new dope room;
Z047 - 1,050-gallon product 037 or 450 tank #11336: new dope room;
Z048 - 2,150-gallon foam tank #11328: new dope room;
Z049 - 2,150-gallon skin tank #11325: new dope room;
Z050 - 1,500-gallon foam surge tank #11324: new dope room;
Z051 - 1,500-gallon skin surge tank #11322: new dope room;
Z052 - 5,600-gallon oil plasticizer 52338 tank #11320: new dope room;
Z053 - 1,350-gallon BFN tank #11317: new dope room;
Z054 - 3,350-gallon pigmented foam tank #11301: new tank area;
Z055 - 3,350-gallon pigmented foam tank #11302: new tank area;
Z056 - 3,350-gallon pigmented foam tank #11303: new tank area;
Z057 - 3,350-gallon pigmented foam tank #11304: new tank area;
Z058 - 3,350-gallon pigmented foam tank #11305: new tank area;
Z059 - 3,350-gallon pigmented foam tank #11306: new tank area;
Z060 - 3,350-gallon pigmented foam tank #11307: new tank area;
Z061 - 3,350-gallon pigmented foam tank #11308: new tank area;
Z062 - 3,350-gallon pigmented foam tank #11309: new tank area;
Z063 - 3,350-gallon clear skin tank #11310: new tank area;
Z064 - 3,350-gallon pigmented foam tank #11311: new tank area;
Z065 - 3,350-gallon clear skin tank #11312: new tank area;
Z066 - 3,350-gallon pigmented foam tank #11313: new tank area;
Z067 - 3,350-gallon clear skin tank #11314: new tank area;
Z068 - 3,350-gallon pigmented foam tank #11315: new tank area;
Z069 - 3,350-gallon clear skin tank #11316: new tank area;
Z070 - 1,250-gallon clear plastisol tank #43: plastisol dope room;
Z071 - 1,350-gallon BFN tank #44: plastisol dope room;
Z072 - 750-gallon BFN tank #45: plastisol dope room;
Z073 - 1,200-gallon BFN tank #46: plastisol dope room;
Z074 - 1,950-gallon clear plastisol tank #100: plastisol dope room;
Z075 - 1,950-gallon clear plastisol tank #101: plastisol dope room;
Z076 - 1,950-gallon clear plastisol tank #102: plastisol dope room;
Z077 - 1,950-gallon clear plastisol tank #103: plastisol dope room;
Z078 - 1,950-gallon clear plastisol tank #104: plastisol dope room;
Z079 - 1,950-gallon clear plastisol tank #105: plastisol dope room;
Z080 - 1,950-gallon clear plastisol tank #106: plastisol dope room;
Z081 - 1,950-gallon clear plastisol tank #107: plastisol dope room;
Z082 - 1,950-gallon clear plastisol tank #108: plastisol dope room;
Z083 - 1,950-gallon clear plastisol tank #109: plastisol dope room;
Z084 - 1,950-gallon clear plastisol tank #110: plastisol dope room;
Z085 - 1,850-gallon clear plastisol tank #111: plastisol dope room;
Z086 - 1,200-gallon pigment tank #21302: plastisol dope room;
Z087 - 800-gallon BFN tank #21388: bulk dope room;
Z088 - 1,300-gallon tank #21354: bulk dope room;
Z089 - 1,300-gallon tank #21353: bulk dope room;
Z090 - 1,600-gallon foams/skins tank #213138: bulk dope room;
Z091 - 1,150-gallon foams/skins tank #21390: bulk dope room;
Z092 - 1,400-gallon BFN tank #21351: bulk dope room;
Z093 - 1,550-gallon skin tank #21395: bulk dope room;
Z094 - 1,550-gallon foam mixer tank: bulk dope room;
Z095 - 550-gallon clear plastisol #21382: bulk dope room;
Z096 - 550-gallon clear plastisol tank #21381: bulk dope room;
Z097 - 3,250-gallon tank #21384: bulk dope room;
Z098 - 3,200-gallon tank #21385: bulk dope room;
Z099 - 750-gallon tank #659: bulk dope room;
Z100 - indoor CV makeup tank no. 1;
Z101 - indoor CV makeup tank no. 2;
Z102 - indoor CV makeup tank no. 3;
Z103 - indoor CV makeup tank no. 4;
Z104 - 750-gallon clear vinyl tank #11: soup room;
Z105 - 750-gallon clear vinyl tank #12: soup room;
Z106 - 750-gallon clear vinyl tank #13: soup room;
Z107 - 750-gallon clear vinyl tank #14: soup room;
Z108 - 750-gallon clear vinyl tank #15: soup room;
Z109 - 750-gallon clear vinyl tank #16: soup room;
Z110 - 750-gallon clear vinyl tank #17: soup room;
Z111 - 750-gallon clear vinyl tank #18: soup room;
Z112 - 750-gallon clear vinyl tank #19: soup room;
Z113 - 750-gallon clear vinyl tank #20: soup room;
Z114 - 750-gallon clear vinyl tank #21: soup room;
Z115 - 1,150-gallon clear vinyl tank #24: soup room;
Z116 - 1,150-gallon clear vinyl tank #25: soup room;
Z117 - 750-gallon clear vinyl tank #26: soup room;
Z118 - 750-gallon clear vinyl tank #27: soup room;
Z119 - 1,150-gallon clear vinyl tank #28: soup room;
Z120 - 150-gallon clear vinyl (MT) tank: soup room;
Z121 - 300-gallon silicone/tolulene tank #21209: soup room;
Z122 - 1,100-gallon Hydro-Tek distillation system scrap ink tank;

Z123 - 2 ovens: R&D lab #2;

Z124 - Despatch oven: Development Center;

Z125 - lab hood: Development Center;

Z126 - brabender: Development Center;

Z127 - pigment mixing operations; and

Z128 - #3 calendar oil heater.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

The following insignificant emissions units are located at this facility:

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T002 - tank #2: 10,000-gallon plasticizer above ground storage;

T003 - tank #3: 10,000-gallon plasticizer above ground storage;

T006 - tank #6: 20,000-gallon plasticizer above ground storage;

T007 - tank #7: 20,000-gallon plasticizer above ground storage;

T008 - tank #8: 20,000-gallon plasticizer above ground storage;

T009 - tank #22: 20,000-gallon plasticizer above ground storage;

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T018 - tank #16: 10,000-gallon double wall horizontal THF under ground storage;

T026 - tank #26: 10,000-gallon plasticizer above ground storage;

T027 - tank #27: 10,000-gallon plasticizer above ground storage;

Z002 - no. 3 calendar oil heater no. 2;

Z008 - stabilizer hand loading station: calendaring;

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Z012 - PVC addition hopper #2: calendaring;

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Z025 - mini calendar: R&D lab;

Z026 - 2 mini mills: R&D lab #1;

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Z029 - 3 lab hoods: R&D lab #2;

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Z044 - 750-gallon oil plasticizer tank #11332: new dope room;

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Z123 - 2 ovens: R&D lab #2;
Z124 - Despatch oven: Development Center;
Z125 - lab hood: Development Center;
Z126 - brabender: Development Center;
Z127 - pigment mixing operations; and
Z128 - #3 calendar oil heater.
Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: B001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
78 million Btu boiler fired with natural gas, LPG, or #2 fuel oil	OAC rule 3745-17-07(A)(1)	See A.I.2.a below.
	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of actual heat input
	OAC rule 3745-18-54(K)	1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

2. Additional Terms and Conditions

- a. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

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II. Operational Restrictions

1. The permittee shall burn only natural gas, LPG, or #2 fuel oil in this emissions unit.
2. The quality of the oil burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.0 pound of sulfur dioxide per million Btu of actual heat input. Compliance with this specification shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

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III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, LPG and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/million Btu).

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each day when a fuel other than natural gas, LPG, and/or #2 fuel oil was burned in this emissions unit.
2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
 - a. the total quantity of oil received in each shipment (gallons); and
 - b. the calculated sulfur dioxide emission rate (lb/million Btu) for each shipment of oil received during the calendar month.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

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V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

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

0.020 pound of particulate emissions per million Btu of actual heat input

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this limitation in accordance with the method (s) and procedures specified in OAC rule 3745-17-03(B)(9).
 - c. Emission Limitation:

1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements specified in section A.III. If required, the permittee shall demonstrate compliance with this limitation in accordance with the method (s) and procedures specified in OAC rule 3745-18-04(E).

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: B002 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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78 million Btu boiler fired with natural gas, LPG, or #2 fuel oil	OAC rule 3745-17-07(A)(1)	See A.I.2.a below.
	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of actual heat input
	OAC rule 3745-18-54(K)	1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

2. **Additional Terms and Conditions**

- a. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas, LPG, or #2 fuel oil in this emissions unit.
2. The quality of the oil burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.0 pound of sulfur dioxide per million Btu of actual heat input. Compliance with this specification shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas, LPG and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/million Btu).

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each day when a fuel other than natural gas, LPG, and/or #2 fuel oil was burned in this emissions unit.
2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
 - a. the total quantity of oil received in each shipment (gallons); and
 - b. the calculated sulfur dioxide emission rate (pounds/million Btu) for each shipment of oil received during the calendar month.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

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V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

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

- b. Emission Limitation:
 0.020 pound of particulate emissions per million Btu of actual heat input
 Applicable Compliance Method:
 If required, the permittee shall demonstrate compliance with this limitation in accordance with the method (s) and procedures specified in OAC rule 3745-17-03(B)(9).
- c. Emission Limitation:
 1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil
 Applicable Compliance Method:
 Compliance shall be demonstrated through the record keeping requirements specified in section A.III. If required, the permittee shall demonstrate compliance with this limitation in accordance with the method (s) and procedures specified in OAC rule 3745-18-04(E).

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0448010075 Emissions Unit ID: B002 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

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Facility ID: 0448010075 Emissions Unit ID: K001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon

adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity

for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.

- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

ii. Solvent Determination

- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

- b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the capture and control

efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.

e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

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

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K001 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K004 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.

- ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this

emissions unit during which the VOC emissions were not vented to the control equipment:

- a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.
- If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
- capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions
- Applicable Compliance Method:
- 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.)
- 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. 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.
- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:
- Appendix D - "head space" test method
- i. Obtaining Sample
- Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.
- ii. Solvent Determination
- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.
- iii. Calculation
- From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.
- a. Capture efficiency shall be determined based on the following formula:
- $$\text{Capture efficiency} = (\text{VOC exhaust} + \text{VOC retained}) / \text{VOC applied};$$
- where:
- VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.
- VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.
- VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.
- b. Emission Limitation:
- 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter
- Applicable Compliance Method:
- If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with

the following requirements:

- a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
- d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
- e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

- 1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K004 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0448010075 Emissions Unit ID: K005 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.

- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are

employed;

- e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
 4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
 5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
 6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and

- c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.

- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

ii. Solvent Determination

- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

- b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
 - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
 - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
 - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. Miscellaneous Requirements

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K005 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or

control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K006 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not

- exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.1.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
 - c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
 - d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:

- a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
- a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.
- If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
- a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

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

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.
 - a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

 - i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.
 - ii. Solvent Determination
 - (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
 - (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.
 - iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.
- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate;

expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

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

a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.

e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

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

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K006 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K007 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.
2. Additional Terms and Conditions		
a.	The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.	
b.	When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC: <ul style="list-style-type: none"> i. a capture efficiency which is at least 75%, by weight; and ii. a control efficiency which is at least 90%, by weight. 	
c.	When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below: <ul style="list-style-type: none"> i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988. ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system. iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance. 	
d.	When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.	

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements

- specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
 3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
 4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
 5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
 6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in

the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and

c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

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

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.

- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

ii. Solvent Determination

- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:
- Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;
- where:
- VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.
- VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.
- VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.
- b. Emission Limitation:
- 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter
- Applicable Compliance Method:
- If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
- d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
- e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).
- Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K007 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0448010075 Emissions Unit ID: K008 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions

unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. **Monitoring and/or Record Keeping Requirements**

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.
 - a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

 - i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.
 - ii. Solvent Determination
 - (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
 - (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is

withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

- b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

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

a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.

e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

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

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent

retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

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Facility ID: 0448010075 Emissions Unit ID: K008 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K009 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may

bypass the capture and control system.

3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.
5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding,

ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.
 - a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

 - i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

ii. Solvent Determination

- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

- b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

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

a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.

e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

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

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the

test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. Miscellaneous Requirements

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K009 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0448010075 Emissions Unit ID: K010 Issuance type: Title V Draft Permit

A. **State and Federally Enforceable Section**

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

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II. **Operational Restrictions**

- 1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;

- b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
 3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
 4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity

measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.

- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:
- Appendix D - "head space" test method
- i. Obtaining Sample
- Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.
- ii. Solvent Determination
- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.
- iii. Calculation
- From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.
- a. Capture efficiency shall be determined based on the following formula:
- $$\text{Capture efficiency} = (\text{VOC exhaust} + \text{VOC retained}) / \text{VOC applied};$$
- where:
- VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.
- VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.
- VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.
- b. Emission Limitation:
- 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter
- Applicable Compliance Method:
- If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
- d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
- e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods

and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. **Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K010 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: K011 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- a. The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- b. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
 - i. a capture efficiency which is at least 75%, by weight; and
 - ii. a control efficiency which is at least 90%, by weight.
- c. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
 - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
 - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
 - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- d. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all

lines operating in the color-matching mode to the carbon adsorption system.

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II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
 - a. the permittee shall operate the capture system and carbon adsorption system;
 - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

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III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
 - a. the name and identification number of each coating, as applied;
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
 - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed);
 - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
 - a. the name and identification number of each coating, as applied; and
 - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall

be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

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IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
 - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
 - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.
2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
 - a. the results of each average hood slot air velocity measurement;
 - b. the results of each ventilation fan inspection; and
 - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions
control efficiency of at least 90%, by weight, for the VOC emissions

Applicable Compliance Method:

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.)

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. 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.

- a. The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

Appendix D - "head space" test method

i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

ii. Solvent Determination

- (a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.
- (b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

- a. Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

- b. Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for

control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.

e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

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

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

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VI. Miscellaneous Requirements

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

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Facility ID: 0448010075 Emissions Unit ID: K011 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0448010075 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K012 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
calendering line	OAC rule 3745-21-07(G)(2)	exempt
		See section A.II.1.

2. Additional Terms and Conditions

- (a) None

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II. Operational Restrictions

- 1. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C) (5), in this emissions unit.

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III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain records of the following information each month for the line:
 - a. the name and identification number of each coating, as applied; and
 - b. whether or not the coating is a photochemically reactive material.

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IV. **Reporting Requirements**

1. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: K012 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: K013 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
calendering line	OAC rule 3745-21-07(G)(2)	exempt
		See section A.II.1.

2. **Additional Terms and Conditions**

- (a) None

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II. **Operational Restrictions**

1. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C) (5), in this emissions unit.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the following information each month for the line:
 - a. the name and identification number of each coating, as applied; and
 - b. whether or not the coating is a photochemically reactive material.

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IV. **Reporting Requirements**

1. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0448010075 Emissions Unit ID: K013 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: P014 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
7,500 pounds per hour Plastisol line controlled with an electrostatic precipitator	OAC rule 3745-17-07(A)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	9.9 pounds per hour of particulate emissions
	OAC rule 3745-21-07(G)(1)	exempt see section A.I.2.b
	OAC rule 3745-21-07(G)(2)	exempt See section A.II.2.

2. Additional Terms and Conditions

- a. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
- b. The permittee has elected to comply with the requirements of OAC rule 3745-21-07(G)(3) by employing only non-photochemically reactive materials in the coating stations of this emissions unit and through the exemption provisions of OAC rule 3745-21-07(G)(9)(d). Therefore, the permittee's oven emissions are exempt from OAC rule 3745-21-07(G)(3) and the permittee shall maintain compliance with the restrictions in OAC rule 3745-21-07(G)(9)(d).

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II. Operational Restrictions

1. The permittee shall operate the electrostatic precipitator whenever this emissions unit is in operation.
2. The permittee shall not employ any photochemically reactive materials, as defined in OAC rule 3745-21-01(C) in the coating stations of this emissions unit.
3. The permittee shall only employ coating materials in this emissions unit that comply with the following:
 - a. The volatile content of each coating employed does not exceed twenty percent by volume, and
 - b. The volatile content of each such coating is not a photochemically reactive material.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records that document any time periods when the electrostatic precipitator was not in service when the emissions unit was in operation.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- 3. The permittee shall maintain the following information each month for the coating line:
 - a. the name and identification number of each coating, as applied;
 - b. whether or not each coating is a photochemically reactive material;
 - c. records showing whether the volatile content of each coating applied is a photochemically reactive material; and
 - d. records showing that whether the volatile content of each coating applied exceeds twenty percent by volume.

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IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when the ESP was not in service when the emissions unit was in operation.
- 2. The permittee shall submit semi-annual written reports that (a) identify all days during which any visible particulate emissions were observed from the the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Toledo Division of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.
- 3. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of any coating applied where the volatile content is a photochemically reactive material; and,
 - b. an identification of any coating applied where the volatile content exceeds twenty percent, by volume.
 - c. if no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period. These reports shall be submitted to the Toledo Division of Environmental Services by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.
The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of any coating applied where the volatile content is a photochemically reactive material; and,
 - b. an identification of any coating applied where the volatile content exceeds twenty percent, by volume.
 - c. if no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period. These reports shall be submitted to the Toledo Division of Environmental Services by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.

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V. Testing Requirements

- 1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
 - 20% opacity as a 6-minute average
 - Applicable Compliance Method:
 - Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation:
 - 9.9 lbs/hr of particulate emissions
 - Applicable Compliance Method:

Compliance may be demonstrated by the particulate emissions rate determined during the most recent stack test that demonstrated compliance (2.2 lb of particulates per hour) based on the stack test conducted on September 15, 1988 in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and the methods and procedures specified in OAC rule 3745-17-03(B)(10).

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

- a. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate; for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

If required, the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Toledo Division of Environmental Services's refusal to accept the results of the emission test(s).

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0448010075 Emissions Unit ID: P014 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: P018 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
11,375 pounds per hour plastisol line controlled with a thermal incinerator	OAC rule 3745-17-07(A)(1)	See section A.I.2.a.
	OAC rule 3745-17-11(B)(1)	16.5 pounds per hour of particulate emissions 3 lbs/hr and 15 lbs/day of organic compounds (OC), unless reduced by at least 85%
	OAC rule 3745-21-07(G)(1)	
	OAC rule 3745-21-07(G)(2)	exempt
	OAC rule 3745-31-05(A)(3) (PTI 04-406)	See section A.II.3. 0.11 pound of VOC per gallon of coating, excluding water and exempt solvents, as applied
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-11(B)(1).
		See section A.I.2.b.

2. **Additional Terms and Conditions**

- a. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
- b. The permittee shall employ a thermal incinerator for this emissions unit that maintains a minimum control efficiency of 95%, by weight, for particulates and VOC emissions. The total organic emission is the sum of the Method 5 and the Method 18 or 25 measurements.

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II. Operational Restrictions

1. The permittee shall burn only natural gas and/or #2 fuel oil in this emissions unit.
2. The permittee shall operate the capture system and thermal incinerator control system whenever this emissions unit is in operation.

The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, 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.
3. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C) (5), in this emissions unit.

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III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:
 - a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance; and
 - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall maintain records of the following information each month for the line:
 - a. the name and identification number of each coating, as applied; and
 - b. whether or not the coating is a photochemically reactive material.
4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in permit to install 04-406, issued on Sept. 9, 1987: section A.III.3. The monitoring and record keeping requirements contained in the above-referenced permit to install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with the requirements constitutes compliance with the underlying monitoring and record keeping requirements in the permit to install.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas and/or #2 fuel oil was burned in this emissions units.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.
3. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.
4. The quarterly deviation reports in section A.IV.2 shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

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V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
20% opacity as a 6-minute average
Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).
- b. Emission Limitation:
Thermal incinerator which demonstrates a minimum control efficiency of 95%, by weight, for particulates and VOC emissions
Applicable Compliance Method:
The most recent stack test that demonstrated compliance (99.5%) was performed on September 15, 1988. If required, 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 Method 5 and Method 18 or 25 of 40 CFR Part 60, Appendix A. 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. Since all particulate matter is considered to be VOC at temperatures above 265 degrees Fahrenheit, the permittee shall not be required to perform Method 5 testing, if stack temperatures are maintained above 265 degrees Fahrenheit during the Method 25 stack test.
- c. Emission Limitation:
0.11 pound of VOC per gallon of coating, excluding water and exempt solvents, as applied
Applicable Compliance Method:
Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3. USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
- d. Emission Limitation:
16.5 pounds per hour of particulate emissions
Applicable Compliance Method:
If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(10).
- e. Emission Limitation:
3 lbs/hr and 15 lbs/day of organic compounds (OC), unless reduced by at least 85%
Applicable Compliance Method:
If required, compliance shall be based upon the emission testing methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or 25A.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: P018 Issuance type: Title V Draft Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under

state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: Z001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
pneumatic conveying systems for railcar unloading, truck unloading and bulk handling with 9 fabric filters	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from all of the pneumatic systems shall not exceed 13 pounds per hour (based upon Figure II).

2. **Additional Terms and Conditions**

(a) None

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II. **Operational Restrictions**

1. The permittee shall operate each fabric filter whenever the associated emissions unit is in operation.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records that document any time periods when any fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall perform visible emission checks every other day for the railcar and truck unloading operations and weekly checks for the other bulk handling operations, when the equipment is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from each stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation:

13 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: Z001 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0448010075 Emissions Unit ID: Z004 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
automated PVC resin de-bagging operation with fabric filter for no. 41 plastisol line	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from the automatic de-bagging system shall not exceed 4.4 pounds per hour.

2. Additional Terms and Conditions

- (a) None

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II. Operational Restrictions

1. The permittee shall operate the fabric filter whenever this emissions unit is in operation.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records that document any time periods when the fabric filter was not in service when the emissions unit was in operation.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the fabric filter was not in service when the emissions unit was in operation.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I -

General Term and Condition A.1.c.

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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation:

4.4 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: Z004 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: Z005 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
two automated PVC resin de-bagging operations with two fabric filters for no. 51 plastisol line	OAC rule 3745-17-07(A)(1)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from both automatic de-bagging systems shall not exceed 14.7 pounds per hour.
	OAC rule 3745-31-05(A)(3) (PTI 04-406)	0% opacity as a 6-minute average
		See A.I.2.b below.

2. Additional Terms and Conditions

- a. The visible particulate emission limitation required by this applicable rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(B)(1).

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II. **Operational Restrictions**

1. The permittee shall operate each fabric filter whenever the associated emissions unit is in operation.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records that document any time periods when the fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the City of Toledo, Division of Environmental Services by January 31, April 30, July 31, and November 30 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

0% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation:

14.7 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0448010075 Emissions Unit ID: Z005 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None