

Facility ID: 0868090072 Issuance type: Final State Permit To Operate

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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 II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

- [Go to Part II for Emissions Unit P512](#)
- [Go to Part II for Emissions Unit P513](#)
- [Go to Part II for Emissions Unit P514](#)
- [Go to Part II for Emissions Unit P524](#)

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Facility ID: 0868090072 Emissions Unit ID: P512 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. 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>
P512-Resin Dissolving Tank #431 with condenser and RTO (normal and direct polymer and urethane adhesives)	OAC rule 3745-31-02(A)(2) PTI 08-03851	The organic compound (OC) emissions from this emissions unit shall not exceed 7.6 lbs/hour, 182 lbs/day, and 18.18 tons/year. Compliance with this rule also includes compliance with OAC rule 3745-35-07(B). See II.A.2.a, II.A.2.b., B.4, and B.5 See II.A.2.c., II.A.2.d., II.A.2.e., II.A.2.f, II.A.2.g, II.B.1., II.B.2., and II.B.3.
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

2. Additional Terms and Conditions

- (a) Normal and direct polymer solutions and urethane adhesives manufacturing includes the following equipment:

P512-resin dissolving tank #431 with condenser, RTO
 P513-resin dissolving tank #433 with condenser, RTO
 P514-resin dissolving tank #432 with condenser, RTO

and the following exempt equipment:

1,500 gallon rupture disk catch tank

The 7.6 lbs/hr and 182 lbs/day OC emission limitations were established for PTI purposes to reflect potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

The emission limitations for Normal Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 11,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.77 TPY OC, as a 12-month rolling limit.

The emission limitations for Direct Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 8,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.56 TPY OC, as a 12-month rolling limit.

The emission limitations for Urethane Adhesive Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 1,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.50 TPY OC, as a 12-month rolling limit.

The OC, individual hazardous air pollutant (HAP), and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

All of the HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 are OC. Therefore, provided compliance is shown with the rolling 12-month OC emissions limitation, compliance will also be shown with the rolling 12-month individual and combined HAPs emissions limitations and it is not necessary to develop record keeping

and/or reporting requirements to ensure compliance with the rolling 12-month individual and combined HAPs emissions limitations.

B. Operational Restrictions

1. Normal Polymer production in emissions units P512, P513 and P514 shall not exceed 11,000,000 pounds per year based on a 12-month rolling summation.
2. Direct Polymer production in emissions units P512, P513 and P514 shall not exceed 8,000,000 pounds per year based on a 12-month rolling summation.
3. Urethane adhesives production in emissions units P512, P513 and P514 shall not exceed 1,000,000 pounds per year based on a 12-month rolling summation.
4. The average combustion temperature within the regenerative thermal oxidizer, for any 3-consecutive 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.
5. The condensers installed on the affected emissions units are not operated primarily to control VOC loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) that is evolved during crucial batch periods and returning it to the reaction. The solvent reflux serves a vital role by controlling such parameters as reaction time and temperature. The reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the water shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012:
 - a. The name and identification each resin, adhesive intermediate and adhesive manufactured.
 - b. The weight, in tons, of each resin, adhesive intermediate and adhesive manufactured in each emissions unit.
 - c. The OC emissions factor for each resin, adhesive intermediate and adhesive manufactured, in pounds of OC emissions per ton of product manufactured.
 - d. The total OC emissions for all resin, adhesive intermediate and adhesive manufactured, in tons per month (the sum of b x c for each resin, adhesive intermediate and adhesive manufactured).
 - e. The rolling, 12-month summation of the monthly OC emissions from emissions units P512, P513 and P514 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
 - f. The rolling, 12-month summation of the monthly OC emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions units are 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 installed, 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-consecutive hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions units were 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.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions units were in operation.
3. The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

D. Reporting Requirements

1. The permittee shall submit semi-annual reports which specify the following information. The reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six months.
 - a. The total organic compound emission rates from each emissions unit, in tons per year, for the previous 12-months.
 - b. The production rate for each product type listed in term and condition II.C.1 in pounds per year, for the previous 12-months.
 - c. The individual HAP emissions, in tons per year, for the previous 12-months.
 - d. The total combined HAP emissions, in tons per year, for the previous 12-months.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following information for each product group which has an allowable organic compound emission rate:
 - a. All exceedances of the rolling 12-month, 11,000,000 pounds normal polymer manufacturing limitation.

- b. All exceedances of the rolling 12-month, 8,000,000 pounds direct polymer manufacturing limitation.
- c. All exceedances of the rolling 12-month, 1,000,000 pounds urethane adhesive manufacturing limitation.
- d. All exceedances of the rolling 12-month, 0.77 TPY OC emissions limitation for normal polymer manufacturing.
- e. All exceedances of the rolling 12-month, 0.56 TPY OC emissions limitation for direct polymer manufacturing.
- f. All exceedances of the rolling 12-month, 0.50 TPY OC emissions limitation for urethane adhesive manufacturing.
- g. All exceedances of the rolling 12-month emissions limitation from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 .
- h. All 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above.
- i. Any batches that were completed without water running to the condenser.

The quarterly deviation (excursion) reports shall be submitted as specified in section I.3.b. of the General Terms and Conditions.

E. Testing Requirements

1. Compliance with the emission limitations in this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 7.6 lbs/hour.

Applicable Compliance Method-
The 7.6 lbs/hr OC limitation was developed by multiplying the maximum hourly equipment capacity of 3.84 tons/hr by the engineering emissions estimate of 1.98 lbs/ton for urethane adhesives manufacturing.
 - b. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 182 lbs/day.

Applicable Compliance Method-
The 182 lbs/day OC limitation was developed by multiplying the maximum hourly emission rate of 7.6 lbs/hr by 24 hours/day.
 - c. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 18.18 tons/year.

Applicable Compliance Method-
Compliance shall be determined in accordance with the record keeping requirements of II.C.1 of this permit and shall be the sum of the TPY OC emission rates for all polymer and urethane adhesives manufacturing in this emissions unit.
 - d. Emission Limitation-
The total combined OC emission rate for normal polymer production in emissions units P512, P513 and P514 shall not exceed 0.77 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. and shall be the rolling sum of the emission rates for normal polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.
 - e. Emission Limitation-
The total combined OC emission rate for direct polymer production in emissions units P512, P513 and P514 shall not exceed 0.56 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for direct polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.
 - f. Emission Limitation-
The total combined OC emission rate for urethane adhesive production in emissions units P512, P513 and P514 shall not exceed 0.50 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for urethane adhesive production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.
 - g. Emission Limitation-
The OC, individual HAP and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. for OC and shall be the rolling sum of the emission rates for each emissions unit for the previous 12 months divided by 2000 lbs/ton.

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:
 - a. The emission testing shall be conducted within 12 months of expiration of this permit.
 - b. The emission testing shall be conducted to demonstrate the OC destruction efficiency of the RTO.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: for organic compounds Method 25 of 40 CFR Part 60, Appendix A.
 - d. The test(s) shall be conducted while the emissions units are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

 Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

F. Miscellaneous Requirements

1. The terms and conditions in Sections A, B, C, D, and E of this permit are federally enforceable, pursuant to OAC rule 3745-35-07.

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Facility ID: 0868090072 Emissions Unit ID: P513 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. 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>
P513-Resin Dissolving Tank #433 with condenser and RTO (normal and direct polymer and urethane adhesives)	OAC rule 3745-31-02(A)(2) PTI 08-03851	The organic compound (OC) emissions from this emissions unit shall not exceed 0.99 lb/hour, 23.8 lbs/day, and 4.34 tons/year. Compliance with this rule also includes compliance with OAC rule 3745-35-07(B). See II.A.2.a, II.A.2.b., B.4, and B.5 See II.A.2.c., II.A.2.d., II.A.2.e., II.A.2.f, II.A.2.g, II.B.1., II.B.2., and II.B.3.

2. Additional Terms and Conditions

- (a) Normal and direct polymer solutions and uerthane adhesives manufacturing includes the following equipment:

P512-resin dissolving tank #431 with condenser, RTO

P513-resin dissolving tank #433 with condenser, RTO
 P514-resin dissolving tank #432 with condenser, RTO

and the following exempt equipment:

1,500 gallon rupture disk catch tank

The 0.99 lb/hr and 23.8 lbs/day OC emission limitations were established for PTI purposes to reflect potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

The emission limitations for Normal Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 11,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.77 TPY OC, as a 12-month rolling limit.

The emission limitations for Direct Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 8,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.56 TPY OC, as a 12-month rolling limit.

The emission limitations for Urethane Adhesive Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 1,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.50 TPY OC, as a 12-month rolling limit.

The OC, individual hazardous air pollutant (HAP), and combined HAP emissions from emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

All of the HAP emissions from emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 are OC. Therefore, provided compliance is shown with the rolling 12-month OC emissions limitation, compliance will also be shown with the rolling 12-month individual and combined HAPs emissions limitations and it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with the rolling 12-month individual and combined HAPs emissions limitations.

B. Operational Restrictions

1. Normal Polymer production in emissions units P512, P513 and P514 shall not exceed 11,000,000 pounds per year based on a 12-month rolling summation.
2. Direct Polymer production in emissions units P512, P513 and P514 shall not exceed 8,000,000 pounds per year based on a 12-month rolling summation.
3. Urethane adhesives production in emissions units P512, P513 and P514 shall not exceed 1,000,000 pounds per year based on a 12-month rolling summation.
4. The average combustion temperature within the regenerative thermal oxidizer, for any 3-consecutive 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.
5. The condensers installed on the affected emissions units are not operated primarily to control VOC loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) that is evolved during crucial batch periods and returning it to the reaction. The solvent reflux serves a vital role by controlling such parameters as reaction time and temperature. The reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the water shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012:
 - a. The name and identification each resin, adhesive intermediate and adhesive manufactured.
 - b. The weight, in tons, of each resin, adhesive intermediate and adhesive manufactured in each emissions unit.
 - c. The OC emissions factor for each resin, adhesive intermediate and adhesive manufactured, in pounds of OC emissions per ton of product manufactured.
 - d. The total OC emissions for all resin, adhesive intermediate and adhesive manufactured, in tons per month (the sum of b x c for each resin, adhesive intermediate and adhesive manufactured).
 - e. The rolling, 12-month summation of the monthly OC emissions from emissions units P512, P513 and P514 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
 - f. The rolling, 12-month summation of the monthly OC emissions from emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions units are 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 installed, 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-consecutive hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions units were 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.

- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions units were in operation.
 - 3. The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.
- D. Reporting Requirements**

- 1. The permittee shall submit semi-annual reports which specify the following information. The reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six months.
 - a. The total organic compound emission rates from each emissions unit, in tons per year, for the previous 12-months.
 - b. The production rate for each product type listed in term and condition II.C.1 in pounds per year, for the previous 12-months.
 - c. The individual HAP emissions, in tons per year, for the previous 12-months.
 - d. The total combined HAP emissions, in tons per year, for the previous 12-months.
- 2. The permittee shall submit quarterly deviation (excursion) reports that include the following information for each product group which has an allowable organic compound emission rate:
 - a. All exceedances of the rolling 12-month, 11,000,000 pounds normal polymer manufacturing limitation.
 - b. All exceedances of the rolling 12-month, 8,000,000 pounds direct polymer manufacturing limitation.
 - c. All exceedances of the rolling 12-month, 1,000,000 pounds urethane adhesive manufacturing limitation.
 - d. All exceedances of the rolling 12-month, 0.77 TPY OC emissions limitation for normal polymer manufacturing.
 - e. All exceedances of the rolling 12-month, 0.56 TPY OC emissions limitation for direct polymer manufacturing.
 - f. All exceedances of the rolling 12-month, 0.50 TPY OC emissions limitation for urethane adhesive manufacturing.
 - g. All exceedances of the rolling 12-month emissions limitation from emissions units P051, P052, P053, P055, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 .
 - h. All 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above.
 - i. Any batches that were completed without water running to the condenser.

The quarterly deviation (excursion) reports shall be submitted as specified in section I.3.b. of the General Terms and Conditions.

E. Testing Requirements

- 1. Compliance with the emission limitations in this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 0.99 lb/hour.

Applicable Compliance Method-
The 0.99 lbs/hr OC limitation was developed by multiplying the maximum hourly equipment capacity of 0.5 ton/hr by the engineering emissions estimate of 1.98 lbs/ton for urethane adhesives manufacturing.
 - b. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 23.8 lbs/day.

Applicable Compliance Method-
The 23.8 lbs/day OC limitation was developed by multiplying the maximum hourly emission rate of 0.99 lb/hr by 24 hours/day.
 - c. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 4.34 tons/year.

Applicable Compliance Method-
Compliance shall be determined in accordance with the record keeping requirements of II.C.1 of this permit and shall be the sum of the TPY OC emission rates for all polymer and urethane adhesives manufacturing in this emissions unit.
 - d. Emission Limitation-
The total combined OC emission rate for normal polymer production in emissions units P512, P513 and P514 shall not exceed 0.77 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. and shall be the rolling sum of the emission rates for normal polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

e. Emission Limitation-

The total combined OC emission rate for direct polymer production in emissions units P512, P513 and P514 shall not exceed 0.56 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for direct polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

f. Emission Limitation-

The total combined OC emission rate for urethane adhesive production in emissions units P512, P513 and P514 shall not exceed 0.50 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for urethane adhesives production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

g. Emission Limitation-

The OC, individual HAP and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for OC and shall be the rolling sum of the emission rates for each emissions unit for the previous 12 months divided by 2000 lbs/ton.

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:
- The emission testing shall be conducted within 12 months of expiration of this permit.
 - The emission testing shall be conducted to demonstrate the OC destruction efficiency of the RTO.
 - The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: for organic compounds Method 25 of 40 CFR Part 60, Appendix A.
 - The test(s) shall be conducted while the emissions units are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

F. **Miscellaneous Requirements**

- The terms and conditions in Sections A, B, C, D, and E of this permit are federally enforceable, pursuant to OAC rule 3745-35-07.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0868090072 Emissions Unit ID: P514 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

- For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - None.
- For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - None.

A. 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>
P514-Resin Dissolving Tank #432 with condenser and RTO (normal and direct polymer and urethane adhesives)	OAC rule 3745-31-02(A)(2) PTI 08-03851	The organic compound (OC) emissions from this emissions unit shall not exceed 0.28 lb/hour, 6.72 lbs/day, and 1.23 tons/year. Compliance with this rule also includes compliance with OAC rule 3745-35-07(B). See II.A.2.a, II.A.2.b., B.4, and B.5
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	See II.A.2.c., II.A.2.d., II.A.2.e., II.A.2.f, II.A.2.g, II.B.1., II.B.2., and II.B.3.

2. Additional Terms and Conditions

- (a) Normal and direct polymer solutions and urethane adhesives manufacturing includes the following equipment:

P512-resin dissolving tank #431 with condenser, RTO
 P513-resin dissolving tank #433 with condenser, RTO
 P514-resin dissolving tank #432 with condenser, RTO

and the following exempt equipment:

1,500 gallon rupture disk catch tank
 The 0.28 lb/hr and 6.72 lbs/day OC emission limitations were established for PTI purposes to reflect potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
 The emission limitations for Normal Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 11,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.77 TPY OC, as a 12-month rolling limit.
 The emission limitations for Direct Polymer Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 8,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.56 TPY OC, as a 12-month rolling limit.
 The emission limitations for Urethane Adhesive Manufacturing in emissions units P512, P513 and P514 are based on the maximum annual production limit of 1,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.50 TPY OC, as a 12-month rolling limit.
 The OC, individual hazardous air pollutant (HAP), and combined HAP emissions from emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.
 All of the HAP emissions from emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 are OC. Therefore, provided compliance is shown with the rolling 12-month OC emissions limitation, compliance will also be shown with the rolling 12-month individual and combined HAPs emissions limitations and it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with the rolling 12-month individual and combined HAPs emissions limitations.

B. Operational Restrictions

1. Normal Polymer production in emissions units P512, P513 and P514 shall not exceed 11,000,000 pounds per year based on a 12-month rolling summation.
2. Direct Polymer production in emissions units P512, P513 and P514 shall not exceed 8,000,000 pounds per year based on a 12-month rolling summation.
3. Urethane adhesive production in emissions units P512, P513 and P514 shall not exceed 1,000,000 pounds per year based on a 12-month rolling summation.
4. The average combustion temperature within the regenerative thermal oxidizer, for any 3-consecutive 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.
5. The condensers installed on the affected emissions units are not operated primarily to control VOC loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) that is evolved during crucial batch periods and returning it to the reaction. The solvent reflux serves a vital role by controlling such parameters as reaction time and temperature. The reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the water shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P051, P052, P053, P055, P056, P057, P058, P059, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012:
 - a. The name and identification each resin, adhesive intermediate and adhesive manufactured.

- b. The weight, in tons, of each resin, adhesive intermediate and adhesive manufactured in each emissions unit.
 - c. The OC emissions factor for each resin, adhesive intermediate and adhesive manufactured, in pounds of OC emissions per ton of product manufactured.
 - d. The total OC emissions for all resin, adhesive intermediate and adhesive manufactured, in tons per month (the sum of b x c for each resin, adhesive intermediate and adhesive manufactured).
 - e. The rolling, 12-month summation of the monthly OC emissions from emissions units P512, P513 and P514 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
 - f. The rolling, 12-month summation of the monthly OC emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions units are 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 installed, 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-consecutive hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions units were 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.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions units were in operation.
- 3. The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

D. Reporting Requirements

- 1. The permittee shall submit semi-annual reports which specify the following information. The reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six months.
 - a. The total organic compound emission rates from each emissions unit, in tons per year, for the previous 12-months.
 - b. The production rate for each product type listed in term and condition II.C.1 in pounds per year, for the previous 12-months.
 - c. The individual HAP emissions, in tons per year, for the previous 12-months.
 - d. The total combined HAP emissions, in tons per year, for the previous 12-months.
- 2. The permittee shall submit quarterly deviation (excursion) reports that include the following information for each product group which has an allowable organic compound emission rate:
 - a. All exceedances of the rolling 12-month, 11,000,000 pounds normal polymer manufacturing limitation.
 - b. All exceedances of the rolling 12-month, 8,000,000 pounds direct polymer manufacturing limitation.
 - c. All exceedances of the rolling 12-month, 1,000,000 pounds urethane adhesive manufacturing limitation.
 - d. All exceedances of the rolling 12-month, 0.77 TPY OC emissions limitation for normal polymer manufacturing.
 - e. All exceedances of the rolling 12-month, 0.56 TPY OC emissions limitation for direct polymer manufacturing.
 - f. All exceedances of the rolling 12-month, 0.50 TPY OC emissions limitation for urethane adhesive manufacturing.
 - g. All exceedances of the rolling 12-month emissions limitation from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 .
 - h. All 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above.
 - i. Any batches that were completed without water running to the condenser.

The quarterly deviation (excursion) reports shall be submitted as specified in section I.3.b. of the General Terms and Conditions.

E. Testing Requirements

- 1. Compliance with the emission limitations in this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 0.28 lb/hour.

Applicable Compliance Method-

The 0.28 lb/hr OC limitation was developed by multiplying the maximum hourly equipment capacity of 0.14 ton/hr by the engineering emissions estimate of 1.98 lbs/ton for urethane adhesives manufacturing.

b. Emission Limitation-

The OC emissions from this emissions unit shall not exceed 6.72 lbs/day.

Applicable Compliance Method-

The 6.72 lbs/day OC limitation was developed by multiplying the maximum hourly emission rate of 0.28 lb/hr by 24 hours/day.

c. Emission Limitation-

The OC emissions from this emissions unit shall not exceed 1.23 tons/year.

Applicable Compliance Method-

Compliance shall be determined in accordance with the record keeping requirements of II.C.1 of this permit and shall be the sum of the TPY OC emission rates for all polymer and urethane adhesives manufacturing in this emissions unit.

d. Emission Limitation-

The total combined OC emission rate for normal polymer production in emissions units P512, P513 and P514 shall not exceed 0.77 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. and shall be the rolling sum of the emission rates for normal polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

e. Emission Limitation-

The total combined OC emission rate for direct polymer production in emissions units P512, P513 and P514 shall not exceed 0.56 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for direct polymer production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

f. Emission Limitation-

The total combined OC emission rate for urethane adhesive production in emissions units P512, P513 and P514 shall not exceed 0.50 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for and shall be the rolling sum of the emission rates for urethane adhesives production in emissions units P512, P513 and P514 for the previous 12 months divided by 2000 lbs/ton.

g. Emission Limitation-

The OC, individual HAP and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

Applicable Compliance Method-

Compliance shall be determined through the record keeping specified in term and condition II.C.1. for OC and shall be the rolling sum of the emission rates for each emissions unit for the previous 12 months divided by 2000 lbs/ton.

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:
 - a. The emission testing shall be conducted within 12 months of expiration of this permit.
 - b. The emission testing shall be conducted to demonstrate the OC destruction efficiency of the RTO.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: for organic compounds Method 25 of 40 CFR Part 60, Appendix A.
 - d. The test(s) shall be conducted while the emissions units are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

F. Miscellaneous Requirements

1. The terms and conditions in Sections A, B, C, D, and E of this permit are federally enforceable, pursuant to OAC

rule 3745-35-07.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0868090072 Emissions Unit ID: P524 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. 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>
P524-Reactor #145 with condenser and RTO (Y-intermediates, OSN manufacturing)	OAC rule 3745-31-02(A)(2) PTI 08-03851	The organic compound (OC) emissions from this emissions unit shall not exceed 0.34 lb/hour, 8.16 lbs/day, and 1.49 tons/year. Compliance with this rule also includes compliance with OAC rule 3745-35-07(B) and OAC rule 3745-21-07(G)(2). See II.A.2.a, II.A.2.b., II.B.2., and B.II.3 See II.A.2.c., II.A.2.d., and II.B.1. The emissions limits established by this rule are less stringent than the limits established by OAC rule 3745-31-02(A)(2).
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V) OAC rule 3745-21-07(G)(2)	

2. Additional Terms and Conditions

- (a) Normal and direct polymer solutions and uerthane adhesives manufacturing includes the following equipment:

P524-Reactor #145 with condenser, RTO

and the following exempt equipment:

75 hp Rietz chopper, rubber shredder
5,000 gallon polymer storage tank
2,000 gallon rupture disk catch tank #194

The 0.34 lb/hr and 8.16 lbs/day OC emission limitations were established for PTI purposes to reflect potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

The emission limitations for Y-intermediates for OSN Manufacturing in emissions units P524 is based on the maximum annual production limit of 1,000,000 lbs/year, as a 12-month rolling limit and shall not exceed 0.18 TPY OC, as a 12-month rolling limit.

The OC, individual hazardous air pollutant (HAP), and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

All of the HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 are OC. Therefore, provided compliance is shown with the rolling 12-month OC emissions limitation, compliance will also be shown with the rolling 12-month individual and combined HAPs emissions limitations and it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with the rolling 12-month individual and combined HAPs emissions limitations.

B. Operational Restrictions

1. Y-polymer for OSN production in emissions unit P524 shall not exceed 1,000,000 pounds per year based on a 12-month rolling summation.

2. The average combustion temperature within the regenerative thermal oxidizer, for any 3-consecutive 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 condensers installed on the affected emissions units are not operated primarily to control VOC loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) that is evolved during crucial batch periods and returning it to the reaction. The solvent reflux serves a vital role by controlling such parameters as reaction time and temperature. The reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the water shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012:
 - a. The name and identification each resin, adhesive intermediate and adhesive manufactured.
 - b. The weight, in tons, of each resin, adhesive intermediate and adhesive manufactured in each emissions unit.
 - c. The OC emissions factor for each resin, adhesive intermediate and adhesive manufactured, in pounds of OC emissions per ton of product manufactured.
 - d. The total OC emissions for all resin, adhesive intermediate and adhesive manufactured, in tons per month (the sum of b x c for each resin, adhesive intermediate and adhesive manufactured).
 - e. The rolling, 12-month summation of the monthly OC emissions from emissions units P524 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
 - f. The rolling, 12-month summation of the monthly OC emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 (the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit).
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions units are 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 installed, 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-consecutive hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions units were 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.
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions units were in operation.
3. The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

D. Reporting Requirements

1. The permittee shall submit semi-annual reports which specify the following information. The reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six months.
 - a. The total organic compound emission rates from each emissions unit, in tons per year, for the previous 12-months.
 - b. The production rate for each product type listed in term and condition II.C.1 in pounds per year, for the previous 12-months.
 - c. The individual HAP emissions, in tons per year, for the previous 12-months.
 - d. The total combined HAP emissions, in tons per year, for the previous 12-months.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following information for each product group which has an allowable organic compound emission rate:
 - a. All exceedances of the rolling 12-month, 1,000,000 pounds Y-intermediate for OSN manufacturing limitation.
 - b. All exceedances of the rolling 12-month, 1.69 TPY OC emissions limitation for normal polymer manufacturing.
 - c. All exceedances of the rolling 12-month emissions limitation from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 .
 - d. All 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above.
 - e. Any batches that were completed without water running to the condenser.

The quarterly deviation (excursion) reports shall be submitted as specified in section I.3.b. of the General Terms and Conditions.

E. Testing Requirements

1. Compliance with the emission limitations in this permit shall be determined in accordance with the following methods:

a. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 0.34 lb/hour.

Applicable Compliance Method-
The 0.34 lb/hr OC limitation was developed by multiplying the maximum hourly equipment capacity of 0.05 ton/hr by the engineering emissions estimate of 6.76 lbs/ton for polymer manufacturing.

b. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 8.16 lbs/day.

Applicable Compliance Method-
The 8.16 lbs/day OC limitation was developed by multiplying the maximum hourly emission rate of 0.34 lb/hr by 24 hours/day.

c. Emission Limitation-
The OC emissions from this emissions unit shall not exceed 1.69 tons/year.

Applicable Compliance Method-
Compliance shall be determined in accordance with the record keeping requirements of II.C.1 of this permit and shall be the sum of the TPY OC emission rates for all polymer manufacturing in this emissions unit.

d. Emission Limitation-
The OC emission rate for Y-polymer for OSN production in emissions unit P524 shall not exceed 1.69 TPY OC, on a rolling 12-month basis.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. and shall be the rolling sum of the emission rates for Y-polymer for OSN production in emissions unit P524 for the previous 12 months divided by 2000 lbs/ton.

e. Emission Limitation-
The OC, individual HAP and combined HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 shall not exceed 7.46 TPY based upon a rolling, 12-month summation of the monthly OC emissions.

Applicable Compliance Method-
Compliance shall be determined through the record keeping specified in term and condition II.C.1. for OC and shall be the rolling sum of the emission rates for each emissions unit for the previous 12 months divided by 2000 lbs/ton.

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

- a. The emission testing shall be conducted within 12 months of expiration of this permit.
- b. The emission testing shall be conducted to demonstrate the OC destruction efficiency of the RTO.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: for organic compounds Method 25 of 40 CFR Part 60, Appendix A.
- d. The test(s) shall be conducted while the emissions units are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

F. Miscellaneous Requirements

1. The terms and conditions in Sections A, B, C, D, and E of this permit are federally enforceable, pursuant to OAC rule 3745-35-07.