

Facility ID: 1677010000 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

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 P005](#)
- [Go to Part II for Emissions Unit P011](#)
- [Go to Part II for Emissions Unit P016](#)
- [Go to Part II for Emissions Unit P017](#)

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Facility ID: 1677010000 Emissions Unit ID: P005 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>
Synthetic rubber pilot plant - vessels & piping, including process vessels, evaporator, bench scale drum dryers and recycle tank car vapor collection system	OAC rule 3745-21-09(ZZ)	Flare designed and operated to reduce VOC emissions by at least 98% by weight
	OAC rule 3745-17-07	20% opacity, as a six-minute average, except as provided by rule
	OAC rule 3745-35-07	See A.2.a below.

2. Additional Terms and Conditions

- (a) Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period. The equipment covered by this emissions unit shall be vented to a flare that is designed and operated to reduce the VOC emissions by at least ninety-eight percent (98%), by weight. The flare shall meet the following requirements:
 - i. A pilot flame shall be maintained at all times in the flare's pilot light burner.
 - ii. The net heating value of the gas being combusted in the flare shall be two hundred BTU/scf or greater.
 - iii. The flare shall be designed and operated with an actual exit velocity less than sixty feet per second.
 - iv. The flare shall be operated at all times when emissions may be vented to it.
 - v. The flare must be operated and maintained in accordance with design specifications and good engineering practice.

B. Operational Restrictions

1. For the purposes of this permit, the following definitions apply:
 - a. "Mixed Hexane Solvent" is a mixture of C6 saturated hydrocarbon compounds used as process solvents, of which Firestone has determined that typically no more than 68.4% consists of the HAP n-hexane.
 - b. "Solvent Received" is the net weight in pounds of the Mixed Hexane Solvent received on site at Firestone in each tank car (weight of filled tank car minus weight of empty tank car), totalled for all tank cars received in each month.
 - c. "Solvent Collected" (for shipment to the Firestone recovery operation) is the net weight in pounds (weight of filled tank car minus weight of empty tank car minus weight of rubber as determined by laboratory analysis) of the collected Mixed Hexane Solvent, totalled for all tank cars shipped in each month.
 - d. "Net Usage" is the difference between Solvent Received and Solvent Collected.

2. As a voluntary federally enforceable condition designed to limit potential emissions to below the major source level, the following process throughput parameters shall not exceed the limits set forth below (for combined emissions units P005, P011, P016 and P017):
 - a. Solvent Received shall not exceed 2628 tons per rolling, 12-month period, of which no more than 1800 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.
 - b. Net Usage shall not exceed 552 tons per rolling, 12-month period, of which no more than 378 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.

Initial compliance with solvent usage restrictions shall be determined by reference to data for the twelve months preceding the issuance of this permit.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
2. The permittee shall record the following information each day:
 - a. all periods during which there was no pilot flame; and
 - b. all periods during which the monitoring equipment did not operate.
3. The permittee shall record the following information each month:
 - a. the monthly total of Solvent Received;
 - b. the monthly total of n-hexane in Solvent Received;
 - c. the monthly total of Solvent Collected;
 - d. the monthly total of n-hexane in Solvent Collected;
 - e. the monthly Net Usage;
 - f. the monthly n-hexane Net Usage;
 - g. the rolling, 12-month total of Solvent Received;
 - h. the rolling, 12-month total of n-hexane in Solvent Received;
 - i. the rolling, 12-month Net Usage;
 - j. the rolling, 12-month n-hexane Net Usage;
 - k. the supplier's analysis of the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - l. the supplier's analysis of the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following limitations:
 - a. the rolling, 12-month total of Solvent Received;
 - b. the rolling, 12-month total of n-hexane in Solvent Received;
 - c. the rolling, 12-month Net Usage; and
 - d. the rolling, 12-month n-hexane Net Usage.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following operational restrictions:
 - a. the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - b. the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.
3. The permittee shall submit deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.
4. The permittee shall submit an annual report of the following information for the facility:
 - a. the actual emissions of HAPs for the calendar year;
 - b. the actual emissions of VOC for the calendar year;
 - c. the total Solvent Received for the calendar year;

- d. the total of n-hexane in Solvent Received for the calendar year;
- e. the total Net Usage for the calendar year; and
- f. the total n-hexane Net Usage for the calendar year.

The report shall be submitted by January 31 of each year and shall cover the operations for the previous twelve calendar months (January through December).

- 5. All deviation reports shall be submitted on a semi-annual basis on January 31 and July 31 of each year and shall cover the previous six calendar months.

E. Testing Requirements

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

Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period.

Applicable Compliance Method:

Net Usage is deemed to represent all process emissions before controls. All such processes are controlled by either the flare or thermal oxidizer from which no more than two percent of incoming hydrocarbons are emitted. Based upon the rolling, 12-month Net Usage limitations of 552 tons Mixed Hexane Solvent (VOC) and 378 tons n-hexane (HAP), the corresponding rolling, 12-month, restricted potential to emit is 11.04 tons of VOC (versus 15.0 tons allowable) and 7.56 tons of the HAP n-hexane (versus 8.0 tons allowable). The flare and the enclosed combustion device are each designed to achieve a 98% reduction in VOC emissions, by weight, when operated in accordance with the terms of this permit. Hence, compliance with solvent usage limits and control device operating requirements will ensure compliance with these emission limits.

Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

- 1. The following terms and conditions have been incorporated into this permit in order to establish federally enforceable limitations on potential to emit, pursuant to OAC rule 3745-35-07: A, B, C, D, E, and F.

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

Facility ID: 1677010000 Emissions Unit ID: P011 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>
Fabricated drum dryer no. 1 (West)	OAC rule 3745-21-09(ZZ)	Enclosure stream: enclosed combustion device designed and operated to reduce VOC emissions by at least 98% by weight Condenser stream: flare designed and operated to reduce VOC emissions by at least 98% by weight

20% opacity, as a six-minute average, except as provided by rule

OAC rule 3745-17-07

See A.2.a below.

OAC rule 3745-35-07

2. Additional Terms and Conditions

- (a) Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period. The condenser stream shall be vented to a flare that is designed and operated to reduce the VOC emissions by at least ninety-eight percent (98%), by weight. The flare shall meet the following requirements:
- i. A pilot flame shall be maintained at all times in the flare's pilot light burner.
 - ii. The net heating value of the gas being combusted in the flare shall be two hundred BTU/scf or greater.
 - iii. The flare shall be designed and operated with an actual exit velocity less than sixty feet per second.
 - iv. The flare shall be operated at all times when emissions may be vented to it.
 - v. The flare must be operated and maintained in accordance with design specifications and good engineering practice. The enclosure stream shall be vented to an enclosed combustion device that is designed and operated to reduce VOC emissions by at least ninety-eight percent (98%), by weight. The enclosed combustion device shall be operated in accordance with design specifications and good engineering practice.

B. Operational Restrictions

1. For the purposes of this permit, the following definitions apply:
 - a. "Mixed Hexane Solvent" is a mixture of C6 saturated hydrocarbon compounds used as process solvents, of which Firestone has determined that typically no more than 68.4% consists of the HAP n-hexane.
 - b. "Solvent Received" is the net weight in pounds of the Mixed Hexane Solvent received on site at Firestone in each tank car (weight of filled tank car minus weight of empty tank car), totalled for all tank cars received in each month.
 - c. "Solvent Collected" (for shipment to the Firestone recovery operation) is the net weight in pounds (weight of filled tank car minus weight of empty tank car minus weight of rubber as determined by laboratory analysis) of the collected Mixed Hexane Solvent, totalled for all tank cars shipped in each month.
 - d. "Net Usage" is the difference between Solvent Received and Solvent Collected.
2. As a voluntary federally enforceable condition designed to limit potential emissions to below the major source level, the following process throughput parameters shall not exceed the limits set forth below (for combined emissions units P005, P011, P016 and P017):
 - a. Solvent Received shall not exceed 2628 tons per rolling, 12-month period, of which no more than 1800 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.
 - b. Net Usage shall not exceed 552 tons per rolling, 12-month period, of which no more than 378 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.

Initial compliance with solvent usage restrictions shall be determined by reference to data for the twelve months preceding the issuance of this permit.
3. The average temperature of the exhaust gases from the enclosed combustion device as measured at the thermocouple, for any 3-hour block of time, shall not be less than 1350 degrees Fahrenheit.
4. Emission units P011 and P017 (company ID "P36-Large Drum Dryer" and "Large Drum Dryer No. 2", respectively) shall not be operated simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures at the thermocouple location and records the temperature of the exhaust gases from the enclosed combustion device when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be specified by the manufacturer to be within (+) or (-) 1 percent of the temperature being measured or (+) or (-) 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day when the enclosed combustion device is in operation:

 - a. the average temperature of the exhaust gases from the enclosed combustion device during each of the 8 3-hour blocks of time during the day; and
 - b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment,

and the associated emissions unit.

2. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall record the following information each day:
 - a. all periods during which there was no pilot flame; and
 - b. all periods during which the monitoring equipment did not operate.
4. The permittee shall record the following information each month:
 - a. the monthly total of Solvent Received;
 - b. the monthly total of n-hexane in Solvent Received;
 - c. the monthly total of Solvent Collected;
 - d. the monthly total of n-hexane in Solvent Collected;
 - e. the monthly Net Usage;
 - f. the monthly n-hexane Net Usage;
 - g. the rolling, 12-month total of Solvent Received;
 - h. the rolling, 12-month total of n-hexane in Solvent Received;
 - i. the rolling, 12-month Net Usage;
 - j. the rolling, 12-month n-hexane Net Usage;
 - k. the supplier's analysis of the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - l. the supplier's analysis of the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.

D. Reporting Requirements

1. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the enclosed combustion device does not comply with the temperature limitation specified above.
2. The permittee shall submit a summary of the log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
3. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following limitations:
 - a. the rolling, 12-month total of Solvent Received;
 - b. the rolling, 12-month total of n-hexane in Solvent Received;
 - c. the rolling, 12-month Net Usage; and
 - d. the rolling, 12-month n-hexane Net Usage.
5. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following operational restrictions:
 - a. the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - b. the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.
6. The permittee shall submit an annual report of the following information for the facility:
 - a. the actual emissions of HAPs for the calendar year;
 - b. the actual emissions of VOC for the calendar year;
 - c. the total Solvent Received for the calendar year;
 - d. the total of n-hexane in Solvent Received for the calendar year;
 - e. the total Net Usage for the calendar year; and
 - f. the total n-hexane Net Usage for the calendar year.

The report shall be submitted by January 31 of each year and shall cover the operations for the previous twelve calendar months (January through December).

- 7. All deviation reports and required summaries shall be submitted on a semi-annual basis on January 31 and July 31 of each year and shall cover the previous six calendar months.

E. Testing Requirements

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

Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period.

Applicable Compliance Method:

Net usage is deemed to represent all process emissions before controls. All such processes are controlled by either the flare or thermal oxidizer from which no more than two percent of incoming hydrocarbons are emitted. Based upon the rolling, 12-month Net Usage limitations of 552 tons Mixed Hexane Solvent (VOC) and 378 tons n-hexane (HAP), the corresponding rolling, 12-month, restricted potential to emit is 11.04 tons of VOC (versus 15.0 tons allowable) and 7.56 tons of the HAP n-hexane (versus 8.0 tons allowable). The flare and the enclosed combustion device are each designed to achieve a 98% reduction in VOC emissions, by weight, when operated in accordance with the terms of this permit. Hence, compliance with solvent usage limits and control device operating requirements will ensure compliance with these emission limits.

Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

- 1. The following terms and conditions have been incorporated into this permit in order to establish federally enforceable limitations on potential to emit, pursuant to OAC rule 3745-35-07: A, B, C, D, E, and F.

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Facility ID: 1677010000 Emissions Unit ID: P016 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>
Fabricated batch desolventization system	OAC rule 3745-21-09(ZZ)	Flare designed and operated to reduce VOC emissions by at least 98% by weight
	OAC rule 3745-17-07	20% opacity, as a six-minute average, except as provided by rule
	OAC rule 3745-35-07	See A.2.a below.

2. Additional Terms and Conditions

- (a) Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period. The desolventizer and associated hexane recovery condenser shall be vented to a flare that is designed and operated to reduce the VOC emissions by at least ninety-eight percent (98%), by weight. The flare shall meet the following requirements:
 - i. A pilot flame shall be maintained at all times in the flare's pilot light burner.

- ii. The net heating value of the gas being combusted in the flare shall be two hundred BTU/scf or greater.
- iii. The flare shall be designed and operated with an actual exit velocity less than sixty feet per second.
- iv. The flare shall be operated at all times when emissions may be vented to it.
- v. The flare must be operated and maintained in accordance with design specifications and good engineering practice.

B. Operational Restrictions

1. For the purposes of this permit, the following definitions apply:
 - a. "Mixed Hexane Solvent" is a mixture of C6 saturated hydrocarbon compounds used as process solvents, of which Firestone has determined that typically no more than 68.4% consists of the HAP n-hexane.
 - b. "Solvent Received" is the net weight in pounds of the Mixed Hexane Solvent received on site at Firestone in each tank car (weight of filled tank car minus weight of empty tank car), totalled for all tank cars received in each month.
 - c. "Solvent Collected" (for shipment to the Firestone recovery operation) is the net weight in pounds (weight of filled tank car minus weight of empty tank car minus weight of rubber as determined by laboratory analysis) of the collected Mixed Hexane Solvent, totalled for all tank cars shipped in each month.
 - d. "Net Usage" is the difference between Solvent Received and Solvent Collected.
2. As a voluntary federally enforceable condition designed to limit potential emissions to below the major source level, the following process throughput parameters shall not exceed the limits set forth below (for combined emissions units P005, P011, P016 and P017):
 - a. Solvent Received shall not exceed 2628 tons per rolling, 12-month period, of which no more than 1800 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.
 - b. Net Usage shall not exceed 552 tons per rolling, 12-month period, of which no more than 378 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.

Initial compliance with solvent usage restrictions shall be determined by reference to data for the twelve months preceding the issuance of this permit.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
2. The permittee shall record the following information each day:
 - a. all periods during which there was no pilot flame; and
 - b. all periods during which the monitoring equipment did not operate.
3. The permittee shall record the following information each month:
 - a. the monthly total of Solvent Received;
 - b. the monthly total of n-hexane in Solvent Received;
 - c. the monthly total of Solvent Collected;
 - d. the monthly total of n-hexane in Solvent Collected;
 - e. the monthly Net Usage;
 - f. the monthly n-hexane Net Usage;
 - g. the rolling, 12-month total of Solvent Received;
 - h. the rolling, 12-month total of n-hexane in Solvent Received;
 - i. the rolling, 12-month Net Usage;
 - j. the rolling, 12-month n-hexane Net Usage;
 - k. the supplier's analysis of the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - l. the supplier's analysis of the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following limitations:
 - a. the rolling, 12-month total of Solvent Received;
 - b. the rolling, 12-month total of n-hexane in Solvent Received;
 - c. the rolling, 12-month Net Usage; and
 - d. the rolling, 12-month n-hexane Net Usage.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following operational restrictions:
 - a. the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - b. the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.
4. The permittee shall submit an annual report of the following information for the facility:
 - a. the actual emissions of HAPs for the calendar year;
 - b. the actual emissions of VOC for the calendar year;
 - c. the total Solvent Received for the calendar year;
 - d. the total of n-hexane in Solvent Received for the calendar year;
 - e. the total Net Usage for the calendar year; and
 - f. the total n-hexane Net Usage for the calendar year.

The report shall be submitted by January 31 of each year and shall cover the operations for the previous twelve calendar months (January through December).
5. All deviation reports shall be submitted on a semi-annual basis on January 31 and July 31 of each year and shall cover the previous six calendar months.

E. Testing Requirements

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

Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period.

Applicable Compliance Method:

Net Usage is deemed to represent all process emissions before controls. All such processes are controlled by either the flare or thermal oxidizer from which no more than two percent of incoming hydrocarbons are emitted. Based upon the rolling, 12-month Net Usage limitations of 552 tons Mixed Hexane Solvent (VOC) and 378 tons n-hexane (HAP), the corresponding rolling, 12-month, restricted potential to emit is 11.04 tons of VOC (versus 15.0 tons allowable) and 7.56 tons of the HAP n-hexane (versus 8.0 tons allowable). The flare and the enclosed combustion device are each designed to achieve a 98% reduction in VOC emissions, by weight, when operated in accordance with the terms of this permit. Hence, compliance with solvent usage limits and control device operating requirements will ensure compliance with these emission limits.
Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. The following terms and conditions have been incorporated into this permit in order to establish federally enforceable limitations on potential to emit, pursuant to OAC rule 3745-35-07: A, B, C, D, E, and F.

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

Facility ID: 1677010000 Emissions Unit ID: P017 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>
Fabricated drum dryer no. 2 (East)	OAC rule 3745-21-09(ZZ)	Enclosure stream: enclosed combustion device designed and operated to reduce VOC emissions by at least 98% by weight
		Condenser stream: flare designed and operated to reduce VOC emissions by at least 98% by weight
	OAC rule 3745-17-07	20% opacity, as a six-minute average, except as provided by rule
		See A.2.a below.
	OAC rule 3745-35-07	

2. Additional Terms and Conditions

- (a) Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of Mixed Hexane Solvent (VOC) per rolling, 12-month period. The condenser stream shall be vented to a flare that is designed and operated to reduce the VOC emissions by at least ninety-eight percent (98%), by weight. The flare shall meet the following requirements:
- A pilot flame shall be maintained at all times in the flare's pilot light burner.
 - The net heating value of the gas being combusted in the flare shall be two hundred BTU/scf or greater.
 - The flare shall be designed and operated with an actual exit velocity less than sixty feet per second.
 - The flare shall be operated at all times when emissions may be vented to it.
 - The flare must be operated and maintained in accordance with design specifications and good engineering practice. The enclosure stream shall be vented to an enclosed combustion device that is designed and operated to reduce VOC emissions by at least ninety-eight percent (98%), by weight. The enclosed combustion device shall be operated in accordance with design specifications and good engineering practice.

B. Operational Restrictions

1. For the purposes of this permit, the following definitions apply:
- "Mixed Hexane Solvent" is a mixture of C6 saturated hydrocarbon compounds used as process solvents, of which Firestone has determined that typically no more than 68.4% consists of the HAP n-hexane.
 - "Solvent Received" is the net weight in pounds of the Mixed Hexane Solvent received on site at Firestone in each tank car (weight of filled tank car minus weight of empty tank car), totalled for all tank cars received in each month.
 - "Solvent Collected" (for shipment to the Firestone recovery operation) is the net weight in pounds (weight of filled tank car minus weight of empty tank car minus weight of rubber as determined by laboratory analysis) of the collected Mixed Hexane Solvent, totalled for all tank cars shipped in each month.
 - "Net Usage" is the difference between Solvent Received and Solvent Collected.
2. As a voluntary federally enforceable condition designed to limit potential emissions to below the major source level, the following process throughput parameters shall not exceed the limits set forth below (for combined emissions units P005, P011, P016 and P017):
- Solvent Received shall not exceed 2628 tons per rolling, 12-month period, of which no more than 1800 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.
 - Net Usage shall not exceed 552 tons per rolling, 12-month period, of which no more than 378 tons per rolling, 12-month period shall be n-hexane and, of the balance, no more than a "de minimis" quantity shall be organic compounds classified as HAPs. "De minimis", for the purposes of this permit, shall be defined as less than or

equal to 1%, by weight, of each shipment of Mixed Hexane Solvent.

Initial compliance with solvent usage restrictions shall be determined by reference to data for the twelve months preceding the issuance of this permit.

3. The average temperature of the exhaust gases from the enclosed combustion device as measured at the thermocouple, for any 3-hour block of time, shall not be less than 1350 degrees Fahrenheit.
4. Emission units P011 and P017 (company ID "P36-Large Drum Dryer" and "Large Drum Dryer No. 2", respectively) shall not be operated simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures at the thermocouple location and records the temperature of the exhaust gases from the enclosed combustion device when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be specified by the manufacturer to be within (+) or (-) 1 percent of the temperature being measured or (+) or (-) 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day when the enclosed combustion device is in operation:

- a. the average temperature of the exhaust gases from the enclosed combustion device during each of the 8 3-hour blocks of time during the day; and
 - b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
2. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
 3. The permittee shall record the following information each day:
 - a. all periods during which there was no pilot flame; and
 - b. all periods during which the monitoring equipment did not operate.
 4. The permittee shall record the following information each month:
 - a. the monthly total of Solvent Received;
 - b. the monthly total of n-hexane in Solvent Received;
 - c. the monthly total of Solvent Collected;
 - d. the monthly total of n-hexane in Solvent Collected;
 - e. the monthly Net Usage;
 - f. the monthly n-hexane Net Usage;
 - g. the rolling, 12-month total of Solvent Received;
 - h. the rolling, 12-month total of n-hexane in Solvent Received;
 - i. the rolling, 12-month Net Usage;
 - j. the rolling, 12-month n-hexane Net Usage;
 - k. the supplier's analysis of the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - l. the supplier's analysis of the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.

D. Reporting Requirements

1. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the enclosed combustion device does not comply with the temperature limitation specified above.
2. The permittee shall submit a summary of the log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
3. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following limitations:
 - a. the rolling, 12-month total of Solvent Received;
 - b. the rolling, 12-month total of n-hexane in Solvent Received;
 - c. the rolling, 12-month Net Usage; and

- d. the rolling, 12-month n-hexane Net Usage.
- 5. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following operational restrictions:
 - a. the percentage, by weight, of n-hexane in each shipment of Mixed Hexane Solvent; and
 - b. the percentage, by weight, of organic compounds, other than n-hexane, that are classified as HAPs in each shipment of Mixed Hexane Solvent.
- 6. The permittee shall submit an annual report of the following information for the facility:
 - a. the actual emissions of HAPs for the calendar year;
 - b. the actual emissions of VOC for the calendar year;
 - c. the total Solvent Received for the calendar year;
 - d. the total of n-hexane in Solvent Received for the calendar year;
 - e. the total Net Usage for the calendar year; and
 - f. the total n-hexane Net Usage for the calendar year.

The report shall be submitted by January 31 of each year and shall cover the operations for the previous twelve calendar months (January through December).
- 7. All deviation reports and required summaries shall be submitted on a semi-annual basis on January 31 and July 31 of each year and shall cover the previous six calendar months.

E. Testing Requirements

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

Combined emissions from emissions units P005, P011, P016, & P017 shall not exceed 8.0 tons of n-hexane (HAP) and 15.0 tons of mixed hexane solvent (VOC) per rolling, 12-month period.

Applicable Compliance Method:

Net Usage is deemed to represent all process emissions before controls. All such processes are controlled by either the flare or thermal oxidizer from which no more than two percent of incoming hydrocarbons are emitted. Based upon the rolling, 12-month Net Usage limitations of 552 tons Mixed Hexane Solvent (VOC) and 378 tons n-hexane (HAP), the corresponding rolling, 12-month, restricted potential to emit is 11.04 tons of VOC (versus 15.0 tons allowable) and 7.56 tons of the HAP n-hexane (versus 8.0 tons allowable). The flare and the enclosed combustion device are each designed to achieve a 98% reduction in VOC emissions, by weight, when operated in accordance with the terms of this permit. Hence, compliance with solvent usage limits and control device operating requirements will ensure compliance with these emission limits.
Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

- 1. The following terms and conditions have been incorporated into this permit in order to establish federally enforceable limitations on potential to emit, pursuant to OAC rule 3745-35-07: A, B, C, D, E, and F.