

Facility ID: 1667000007 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 P004](#)
- [Go to Part II for Emissions Unit P013](#)
- [Go to Part II for Emissions Unit P101](#)
- [Go to Part II for Emissions Unit P103](#)
- [Go to Part II for Emissions Unit P105](#)
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THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1667000007 Emissions Unit ID: P004 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>
Latex polymerization & degassing process	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in 3.c below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in 3.c below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in 3.a above. Also, valves that are designated as difficult to inspect or

monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.

d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).

e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves, or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.

f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.

g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves, and 500 ppmv for flanges indicates a successful repair.

4. The permittee shall collect and record the following information for each day for the control equipment:

a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and

b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

5. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

6. To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:

a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.

b. When a leak is detected as described in C.3.e, the following information shall be recorded in the leak repair log:

i. The identification number of the leaking equipment.

ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.

iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.

iv. The methods of repair applied in each attempt to repair the leaking equipment.

v. One of the following entries within five working days after each attempt to repair the leaking equipment:

(a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or

(b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.

vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:

(a) "repair delayed" and the reason for the delay;

(b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;

(c) the expected date of successful repair of the leak; and

(d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.

vii. The date on which the leak was successfully repaired.

7. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.

8. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.
3. Semiannual reports shall be submitted by the first day of February and August, that include the following information for each month during the preceding semiannual period:
 - a. the number of pumps in styrene, butadiene, and acrylonitrile service for which leaks were detected as described in C.3.e;
 - b. the number of valves in styrene, butadiene, and acrylonitrile service for which leaks were not repaired within 30 calendar days after detection of the leak; and
 - c. the facts that explain the delay of each repair.
4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
6. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for styrene.
7. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
8. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Monthly styrene emissions from the facility shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
2. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.7 below.
3. To demonstrate compliance with the monthly and annual HAP limitations for 1,3-butadiene, the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in sections C.3 and C.6 of this permit. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
4. To demonstrate compliance with the monthly and annual HAP limitations for methyl ethyl ketone (MEK), the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of MEK by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of MEK, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of MEK will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of MEK will be determined using the EPA Screening Ranges Approach, as described in Section 2.3.2 (Page 2-18) of the

reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and the quantity of pumps, valves, and flanges in MEK service. Since physical screening will not be conducted for components in MEK service, each component will be assumed to exhibit a screening value of "less than 10,000 ppmv," as defined in the Protocol. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of MEK. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.

5. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
6. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (1), (3), (4), and (5), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
7. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A
 Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P013 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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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>
Modified wastewater effluent system	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

- 1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
- 2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
- 2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and

recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 4. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
 5. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
 6. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.
- D. Reporting Requirements**
1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
 2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.
 3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
 4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following

the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.

5. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
6. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.6 below.
2. To demonstrate compliance with the monthly and annual HAP limitations for 1,3-butadiene, the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in sections C.3 and C.6 of the permit for emissions unit P004. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
3. To demonstrate compliance with the monthly and annual HAP limitations for methyl ethyl ketone (MEK), the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of MEK by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of MEK, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of MEK will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of MEK will be determined using the EPA Screening Ranges Approach, as described in Section 2.3.2 (Page 2-18) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and the quantity of pumps, valves, and flanges in MEK service. Since physical screening will not be conducted for components in MEK service, each component will be assumed to exhibit a screening value of "less than 10,000 ppmv," as defined in the Protocol. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of MEK. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
4. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
5. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (2), (3), and (4), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
6. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A

Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P101 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>
Pilot plant 30-gallon reactors	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;

- (b) nitrogen oxides, 2.50 pounds per hour;
- (c) butadiene, 1.41 pounds per hour; and
- (d) styrene, 1.81 pounds per hour.

iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide.

Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions.

The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in 3.c below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in 3.c below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in 3.a above. Also, valves that are designated as difficult to inspect or monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.
 - d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves, or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.
 - f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.
 - g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves, and 500 ppmv for flanges indicates a successful repair.
4. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
5. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
6. To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:
 - a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.
 - b. When a leak is detected as described in C.3.e, the following information shall be recorded in the leak repair log:
 - i. The identification number of the leaking equipment.
 - ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.
 - iv. The methods of repair applied in each attempt to repair the leaking equipment.
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or
 - (b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.
 - vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:
 - (a) "repair delayed" and the reason for the delay;
 - (b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;
 - (c) the expected date of successful repair of the leak; and
 - (d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.
 - vii. The date on which the leak was successfully repaired.
7. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after

the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.

8. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.

3. Semiannual reports shall be submitted by the first day of February and August, that include the following information for each month during the preceding semiannual period:
 - a. the number of pumps in styrene, butadiene, and acrylonitrile service for which leaks were detected as described in C.3.e;
 - b. the number of valves in styrene, butadiene, and acrylonitrile service for which leaks were not repaired within 30 calendar days after detection of the leak; and
 - c. the facts that explain the delay of each repair.
4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
6. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for styrene.
7. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
8. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Monthly styrene emissions from the facility shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
2. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.6 below.
3. To demonstrate compliance with the monthly and annual HAP limitations for 1,3-butadiene, the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in sections C.3 and C.6 of this permit. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the

total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.

4. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
5. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (1), (3), and (4), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
6. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A
 Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P103 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>
Pilot plant latex strippers	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. **Additional Terms and Conditions**

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
- i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. **Operational Restrictions**

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

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

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (I) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in 3.c below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in 3.c below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in 3.a above. Also, valves that are designated as difficult to inspect or monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.
 - d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves, or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.
 - f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.
 - g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves, and 500 ppmv for flanges indicates a successful repair.
4. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
5. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
6. To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:
 - a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.
 - b. When a leak is detected as described in C.3.e, the following information shall be recorded in the leak repair log:
 -

- i. The identification number of the leaking equipment.
 - ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.
 - iv. The methods of repair applied in each attempt to repair the leaking equipment.
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or
 - (b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.
 - vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:
 - (a) "repair delayed" and the reason for the delay;
 - (b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;
 - (c) the expected date of successful repair of the leak; and
 - (d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.
 - vii. The date on which the leak was successfully repaired.
7. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
8. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.
- D. Reporting Requirements**
- 1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
 - 2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.
 - 3. Semiannual reports shall be submitted by the first day of February and August, that include the following information for each month during the preceding semiannual period:
 - a. the number of pumps in styrene, butadiene, and acrylonitrile service for which leaks were detected as described in C.3.e;
 - b. the number of valves in styrene, butadiene, and acrylonitrile service for which leaks were not repaired within 30 calendar days after detection of the leak; and
 - c. the facts that explain the delay of each repair.
 - 4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
 - 5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
 - 6. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for styrene.
 - 7. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
 - 8. The permittee shall submit annual reports which identify the following:

- a. the total actual emissions of organic compounds from the thermal oxidizer;
- b. the total actual emissions of each individual HAP from the facility; and
- c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Monthly styrene emissions from the facility shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
2. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.6 below.
3. To demonstrate compliance with the monthly and annual HAP limitations for 1,3-butadiene, the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in sections C.3 and C.6 of this permit. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
4. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
5. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (1), (3), and (4), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
6. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A
 Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P105 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>
Pilot plant acrylic latex polymerization	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in 3.c below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in 3.c below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in 3.a above. Also, valves that are designated as difficult to inspect or monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.
 - d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar

months in accordance with the method specified in OAC rule 3745-21-10 (F).

- e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves, or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.
 - f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.
 - g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves, and 500 ppmv for flanges indicates a successful repair.
4. The permittee shall collect and record the following information for each day for the control equipment:
- a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
5. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
6. To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:
- a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.
 - b. When a leak is detected as described in C.3.e, the following information shall be recorded in the leak repair log:
 - i. The identification number of the leaking equipment.
 - ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.
 - iv. The methods of repair applied in each attempt to repair the leaking equipment.
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or
 - (b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.
 - vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:
 - (a) "repair delayed" and the reason for the delay;
 - (b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;
 - (c) the expected date of successful repair of the leak; and
 - (d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.
 - vii. The date on which the leak was successfully repaired.
7. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
8. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.

D. Reporting Requirements

- 1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
- 2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene

values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.

3. Semiannual reports shall be submitted by the first day of February and August, that include the following information for each month during the preceding semiannual period:
 - a. the number of pumps in styrene, butadiene, and acrylonitrile service for which leaks were detected as described in C.3.e;
 - b. the number of valves in styrene, butadiene, and acrylonitrile service for which leaks were not repaired within 30 calendar days after detection of the leak; and
 - c. the facts that explain the delay of each repair.
4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
6. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for styrene.
7. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
8. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Monthly styrene emissions from the facility shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
2. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.6 below.
3. To demonstrate compliance with the monthly and annual HAP limitations for 1,3-butadiene, the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in sections C.3 and C.6 of this permit. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
4. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
5. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (1), (3), and (4), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.

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

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A
 Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

- 1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
- 2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P106 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>
Pilot plant in-mold coatings	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below. See A.2.e below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.a.i, A.2.a.ii, and A.2.c below.

OAC rule 3745-35-07

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
- i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be

submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (I) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in 3.c below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in 3.c below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in 3.a above. Also, valves that are designated as difficult to inspect or monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.
 - d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar months in accordance with the method specified in OAC rule 3745-21-10 (F).
 - e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves, or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.
 - f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.
 - g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves, and 500 ppmv for flanges indicates a successful repair.
4. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
5. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
6. To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:
 - a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.
 - b. When a leak is detected as described in C.3.e, the following information shall be recorded in the leak repair log:
 - i. The identification number of the leaking equipment.
 - ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.
 - iv. The methods of repair applied in each attempt to repair the leaking equipment.
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or

- (b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.
 - vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:
 - (a) "repair delayed" and the reason for the delay;
 - (b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;
 - (c) the expected date of successful repair of the leak; and
 - (d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.
 - vii. The date on which the leak was successfully repaired.
 - 7. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
 - 8. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.
- D. Reporting Requirements**
- 1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
 - 2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.
 - 3. Semiannual reports shall be submitted by the first day of February and August, that include the following information for each month during the preceding semiannual period:
 - a. the number of pumps in styrene, butadiene, and acrylonitrile service for which leaks were detected as described in C.3.e;
 - b. the number of valves in styrene, butadiene, and acrylonitrile service for which leaks were not repaired within 30 calendar days after detection of the leak; and
 - c. the facts that explain the delay of each repair.
 - 4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
 - 5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
 - 6. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for styrene.
 - 7. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
 - 8. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.
- E. Testing Requirements**
- 1. Monthly styrene emissions from the facility shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any

subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.

2. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.6 below.
3. To demonstrate compliance with the monthly and annual HAP limitations for methyl ethyl ketone (MEK), the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of MEK by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of MEK, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of MEK will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of MEK will be determined using the EPA Screening Ranges Approach, as described in Section 2.3.2 (Page 2-18) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and the quantity of pumps, valves, and flanges in MEK service. Since physical screening will not be conducted for components in MEK service, each component will be assumed to exhibit a screening value of "less than 10,000 ppmv," as defined in the Protocol. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of MEK. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
4. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
5. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (1), (3), and (4), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
6. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
 Styrene Method 18 40 CFR Part 60, Appendix A
 Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P107 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>
Pilot plant adhesive curative	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:
 - (a) organic compounds, 5.31 pounds per hour;
 - (b) nitrogen oxides, 2.50 pounds per hour;
 - (c) butadiene, 1.41 pounds per hour; and
 - (d) styrene, 1.81 pounds per hour.
 - iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month. The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer. The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
4. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
5. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
6. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
5. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
6. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.5 below.
2. To demonstrate compliance with the monthly and annual HAP limitations for methyl ethyl ketone (MEK), the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of MEK by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of MEK, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of MEK will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of MEK will be determined using the EPA Screening Ranges Approach, as described in Section 2.3.2 (Page 2-18) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and the quantity of pumps, valves, and flanges in MEK service. Since physical screening will not be conducted for components in MEK service, each component will be assumed to exhibit a screening value of "less than 10,000 ppmv," as defined in the Protocol. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of MEK. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.
3. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
4. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (2), and (3), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
5. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A

- 1,3-butadiene Method 18 40 CFR Part 60, Appendix A
- Styrene Method 18 40 CFR Part 60, Appendix A
- Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

- 1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
- 2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.

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

Facility ID: 166700007 Emissions Unit ID: P108 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>
Pilot plant adhesive base	OAC rule 3745-31-05 See F.2 below.	See A.2.a.iii, A.2.a.iv, and A.2.d below.
	OAC rule 3745-21-07(G) See F.2 below.	See A.2.e below.
	OAC rule 3745-35-07	See A.2.a.i, A.2.a.ii, and A.2.c below.

2. Additional Terms and Conditions

- (a) The permittee shall vent the emissions of organic compounds from P004, P101, P103, P105, P106, P107, P108, and P013 to a thermal oxidizer control system which meets the following requirements:
 - i. Emissions of organic compounds from the thermal oxidizer shall not exceed 2.15 tons per year, based upon a rolling, 12-month summation of the organic compound emissions.
 - ii. To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly organic compound (OC) emissions from the thermal oxidizer shall not exceed 0.179 ton per month.
 - iii. Hourly emissions from the thermal oxidizer shall not exceed the following limits:

- (a) organic compounds, 5.31 pounds per hour;
- (b) nitrogen oxides, 2.50 pounds per hour;
- (c) butadiene, 1.41 pounds per hour; and
- (d) styrene, 1.81 pounds per hour.

iv. The thermal oxidizer shall achieve a 98 percent control efficiency for the carbon that is being incinerated to carbon dioxide. Emissions of styrene from the facility shall not exceed 5.0 tons per year, based upon a rolling, 12-month summation of the styrene emissions. The emissions of hazardous air pollutants (HAPs) from this facility, as identified in Section 112 (b) of Title III of the Clean Air Act, shall not exceed 10 TPY for any single HAP and 25 TPY for any combination of HAPs, based upon rolling, 12-month summations.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of any single HAP for this facility shall not exceed 0.83 ton per month, except styrene which shall not exceed 0.42 ton per month.

To ensure federal enforceability during the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, monthly emissions of the combination of all HAPs for this facility shall not exceed 2.08 tons per month.

The permittee shall employ and maintain continuous steam stripping equipment to remove organic compounds from the wastewater exiting the condensate pretreatment tanks. The organic compound emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The thermal oxidizer shall be operated whenever organic compounds may be vented to it.
2. The average temperature of the exhaust gases from the thermal oxidizer, for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The wastewater "bottoms" stream from the continuous steam stripping equipment shall be piped directly to the county-owned sewer system and shall be discharged below-grade.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (OC) emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13, and shall be installed by not later than March 5, 1997.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

Prior to the installation of the continuous OC monitoring system, the permittee shall submit information detailing the proposed location of the sampling site, in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 8, for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed OC detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 8.

Within 60 days of the effective date of this permit (March 3, 1997), the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous OC monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03 (l) and 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8.

Within 180 days of the effective date of this permit (March 3, 1997), the permittee shall develop a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene, butadiene, and MEK, appropriate response factors for the OC monitor shall be used. The response factor (RF) is defined as the ratio of the known concentration of the target compound (styrene, butadiene, or MEK) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The response factor is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the

monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

3. The permittee shall collect and record the following information for each day for the control equipment:
 - a. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
4. The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to, parts per million OC on an instantaneous (one minute) basis, emissions of OC in units of the applicable standard in the appropriate averaging period (i.e., hourly; rolling, 3-hour average; monthly; and 12-month rolling summation), hourly emissions of butadiene, hourly emissions of styrene, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
5. The permittee shall maintain monthly records of the total facility emissions of each individual HAP. Beginning after the first 12 months of operation following the March 3, 1997 issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of each individual HAP.
6. The permittee shall maintain monthly records of the total facility emissions of all of the HAPs. Beginning after the first 12 months of operation following the March 3, 1997, issuance date of this permit, the permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions of all of the HAPs.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
2. The permittee shall submit deviation (excursion) reports documenting the date, time, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all instances of OC values in excess of the hourly, monthly and rolling, 12-month emission limitations, butadiene values in excess of the hourly limitation, and styrene values in excess of the hourly limitation.

The permittee shall submit quarterly reports which include a log of the downtime for the capture (collection) system, control equipment, temperature monitoring device, and emissions monitoring equipment, when the associated emissions unit was in operation (date, time, duration and reason), along with any corrective action(s) taken. The total operating time for the emissions unit and the total operating time of the monitors while the emissions unit was on line shall also be included in the quarterly report.
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for each individual HAP and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for each individual HAP.
4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the monthly limitation for the total emissions of all of the HAPs and, beginning after the first 12 calendar months of operation following the March 3, 1997 issuance date of this permit, all exceedances of the rolling, 12-month emission limitation for the total emissions of all of the HAPs.
5. The quarterly deviation (excursion) reports shall be submitted in accordance with paragraph (3) of the General Terms and Conditions.
6. The permittee shall submit annual reports which identify the following:
 - a. the total actual emissions of organic compounds from the thermal oxidizer;
 - b. the total actual emissions of each individual HAP from the facility; and
 - c. the total actual emissions of all of the HAPs from the facility.

The reports shall be submitted by January 31 of each year, and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the hourly, monthly, and annual emission limitations for organic compounds and the hourly emission limitations for 1,3-butadiene and styrene shall be determined by means of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F requirements. Compliance with the hourly emission limitations for organic compounds, 1,3-butadiene, and styrene shall also be determined in accordance with the emission tests described in E.5 below.
2. To demonstrate compliance with the monthly and annual HAP limitations for methyl ethyl ketone (MEK), the hourly average concentration of organic compounds from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of MEK by employing an appropriate response factor (see the procedures in C.2). The resulting concentration of MEK, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of MEK will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of MEK will be determined using the EPA Screening Ranges Approach, as described in Section 2.3.2 (Page 2-18) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and the quantity of pumps, valves, and flanges in MEK service. Since physical screening will not be conducted for components in MEK service, each component will be assumed to exhibit a screening value of "less than 10,000 ppmv," as defined in the Protocol. The thermal oxidizer emissions and

fugitive emissions will be summed to obtain the total facility emissions of MEK. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and GenCorp, Inc.

3. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene, MEK, and styrene, the monthly and annual potential to emit for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the Akron RAQMD on August 28, 1996 and as amended in April, 1998 (or the latest update to that document).
4. To demonstrate compliance with the monthly and annual limitations for all of the HAPs combined, the mass emissions of each HAP, as described above in (2), and (3), shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or MEK or styrene, whichever mass quantity is greatest.
5. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 150 days of the effective date of this permit (March 3, 1997) and every three years thereafter (by July 31 of each test year).

The emission testing shall be conducted to demonstrate compliance with the 98 percent control efficiency and the allowable mass emission rates for organic compounds, 1,3-butadiene, styrene, and nitrogen oxides. The control efficiency shall be determined in accordance with the test methods and procedures specified in Method 25A, with the results expressed as carbon.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

POLLUTANT TEST METHOD LOCATION

Organic compounds Method 25A 40 CFR Part 60, Appendix A
1,3-butadiene Method 18 40 CFR Part 60, Appendix A
Styrene Method 18 40 CFR Part 60, Appendix A
Nitrogen oxides Method 7E 40 CFR Part 60, Appendix A

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 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).

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable, pursuant to OAC rule 3745-35-07: A, B, C, D, and E.
2. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 16-1502, as issued on December 6, 1995: A.1, A.2, B, C, D, and E.