

**AIR EMISSION PERMIT NO. 01900031- 001
IS ISSUED TO**

MCLAUGHLIN GORMLEY KING COMPANY

4001 Peavey Road
Chaska, Carver County, MN 55318

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	April 15, 1995

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Part 70

Issue Date: April 17, 2003

Expiration: April 17, 2008
All Title I Conditions do not expire.

Ann Foss
Majors Facilities Section Manager
Majors and Remediation Division

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition.

Subject to the limitations in Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

McLaughlin Gormley King Company-Chaska owns and operates an insecticide manufacturing and formulating facility at 4001 Peavey Road, Chaska, Carver County, Minnesota. The stationary source is divided into Phase 1, 2 and 3. Phase 1 is the organic chemical manufacturing process with supporting warehouse, tank farm and utilities. Phase 2 is the formulating process with supporting warehouse and tank farm. Phase 3 is the pyrethrum oleoresin refining plant.

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: Total Facility

What to do	Why to do it
A. OPERATIONAL REQUIREMENTS	hdr
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Operation and Maintenance Plan: Implement at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation. Retain a copy of the O&M plan at the facility.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
B. MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
E. RECORDKEEPING	hdr
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
F. REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Report of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, report the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
<p>Waste Credit: If the Permittee elects to obtain credit for VOC and HAP shipped in waste materials, the Permittee will either use item 1 or 2 to determine the VOC or HAP content for each credited shipment.</p> <p>1) The Permittee shall analyze a composite sample of each waste shipment to determine the weight content of VOC or HAP, excluding water.</p> <p>2) The Permittee shall use the supplier data (e.g. MSDS) for raw materials to determine the VOC content or HAP content of raw materials. If the waste is from several materials, the content of mixed waste will be the lowest VOC or HAP content of any of the materials.</p>	Minn. R. 7007.0800, subp. 4 and 5
D. AIR DISPERSION MODELING REQUIREMENTS (SEE TABLE B)	hdr
E. RISK ASSESSMENT REQUIREMENTS (SEE TABLE B)	hdr
<p>Implementation of a Total Facility Air Emissions Toxics Review: The Permittee shall follow the procedure in Appendix D of this permit on the basic elements of the air emissions toxics review.</p> <p>This a state only requirement and is not enforceable by the Administrator or citizens under the Clean Air Act.</p>	Minn. R. 7007.0800, subp. 2; Minn. Stat. 116.07, subd. 4a(a)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: GP 001 Dry Chemical Process**Associated Items:** CE 044 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 063 Large Dry Chemical Mix Tank

EU 064 Small Dry Chemical Mix Tank

EU 065 Dry Chemical Room Ventilation

SV 034

SV 035

SV 036

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735 (limit applies to each unit)	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (limit applies to each unit)	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: GP 002 Process and Utility Boilers**Associated Items:** CE 033 Other (Conservent)

EU 093 Process Boiler

EU 094 Process Boiler

EU 110 Utility Boiler

SV 056

SV 057

SV 069

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input using 3-hour Rolling Average (limit applies to each unit)	Minn. R. 7011.0515, subp. 1; Minn. R. 7011.0550
Sulfur Dioxide: less than or equal to 1.6 lbs/million Btu heat input using 3-hour Rolling Average (limit applies to each unit)	Minn. R. 7011.0515, subp. 1; Minn. R. 7011.0550
Opacity: less than or equal to 20 percent opacity ; except for one six-minute period per hour of not more than 60 percent opacity. (limit applies to each unit)	Minn. R. 7011.0515, subp. 2
Fuel Restriction: Burn natural gas and propane fuel only in the units.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record and maintain records of each fuel combusted on a monthly basis by the 15th day of each month.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: GP 003 Condensers

Associated Items: CE 001 Tube and Shell Condenser
CE 002 Tube and Shell Condenser
CE 003 Tube and Shell Condenser
CE 008 Tube and Shell Condenser
CE 009 Tube and Shell Condenser
CE 012 Tube and Shell Condenser
CE 045 Other (conservent)
EU 001 264 Reactor
EU 008 Product Recovery Still
EU 089 MC Recovery Still
SV 001 Reactor [CE 001,002, 003]
SV 007 Distillation/Product Recovery [CE 008,009,012]
SV 008 Distillation/Product Recovery [CE 008,009,012]
SV 021 MC Recovery Still [CE 045]

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 90 percent control efficiency	Minn. R. 7007.0800, subp. 2
The Permittee shall operate and maintain the condensers at all times, when the unit (s) is in operation in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep record copies of the O&M Plan available on site for use by staff and MPCA staff.	Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall establish the condenser outlet gas temperature as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes.	Minn. R. 7007.0800, subps. 2, 4 and 5
Monitoring Equipment: The Permittee shall install, maintain and operate a temperature monitoring device on each condenser that will at least monitor the temperature every 15 minutes. The monitoring device shall be accurate to within +/- 2 percent of the temperature measured in degrees Celsius or +/- 2.5 degrees Celsius, whenever is greater.	Minn. R. 7007.0800, subp. 4
Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly, if in operation.	Minn. R. 7007.0800, subps. 4 and 5
Annual Calibration: The Permittee shall calibrate the temperature monitoring device at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subps. 4,5, and 14
Corrective Actions: The maximum allowable working pressures and temperatures are indicated on the nameplate of the condenser. These values shall not be exceeded. These values shall be included in the O & M plan. If these are exceeded or any of its components are found during the inspections to need repair, or vibratory disturbance, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the maximum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the condenser. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subps. 4,5, and 14
The Permittee shall use engineering methodology to determine and calculate the condenser outlet gas temperature that is needed to meet the required percent efficiency.	Minn. R. 7007.0800, subps. 4 and 5
Condenser: the design evaluation must consider the vent stream flow rate, relative humidity, and temperature, and must establish the design outlet VOC concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser must be measured and used to establish the VOC concentration.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: GP 004 NESHAP for Pesticide Active Ing. Production

Associated Items: CE 007 Tube and Shell Condenser

CE 010 Tube and Shell Condenser

EU 115 Methanol Still

EU 119 Wax Still

SV 072 Methanol Still [CE 010]

SV 073 Wax Still [CE 046]

TK 013 Methanol

What to do	Why to do it
The Permittee shall comply with the applicable provisions below based on 40 CFR Section 63, subpart MMM, Pesticide Active Ingredients Production by December 23, 2003, compliance date of the MACT or any alternative date that EPA approves.	Part 63 MACT Subpart MMM: Pesticide Active Ingredient Production 40 CFR Section 63.1360
A. ORGANIC HAP EMISSIONS	hdr
HAPs-Volatile: uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.	40 CFR Section 63.1362(b)(2)(ii)
B. REPORTING REQUIREMENTS	hdr
Compliance Extension Request: The Permittee shall submit a compliance extension request no later than 6/23/2003 or 120 days before compliance date. The compliance date of 40 CFR pt. 63, subp. MMM is December 23, 2003.	40 CFR Section 63.1364 (a)(2)(i)
The Notification of Compliance Status report shall include the following information; (1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP emissions from the affected source. (2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, or calculations used to demonstrate compliance. For performance tests, results should include descriptions of sampling and analysis procedures and quality assurance procedures. (3) Descriptions of monitoring devices, monitoring frequencies, and the values of monitored parameters established during the initial compliance determinations, including data and calculations to support the levels established. (4) Operating scenarios; (5) Descriptions of absolute or hypothetical peak-case operating and/or testing conditions for control devices	40 CFR Section 63.1368(f)(1) through (7)
CONTINUED (6) Identification of emission points subject to overlapping requirements described in 40 CFR Section 63.1360(h) and the authority under which the owner or operator will comply, and identification of emission sources discharging to devices described by 40 CFR Section 63.1362(l) (7) Anticipated periods of planned routine maintenance during which the owner or operator would not be in compliance with the provisions in 40 CFR Section 63.1362(c)(1) through (4). (8) Percentage of total production from a PAI process unit that is anticipated to be produced for use as a PAI in the 3 years after either June 23, 1999 or startup, whichever is later.	CONTINUED 40 CFR Section 63.1368(f)(1) through (7)
Content of Periodic Report: The owner or operator shall include the following information in the periodic report: (i) Each Periodic report must include the information in 40 CFR Section 63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. (ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring systems downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in paragraphs (g)(2)(ii)(A) through (D) of this section.	40 CFR Section 63.1386(g)(1) and (2)
Content of SSM report: The report shall include the information specified in 40 CFR Section 63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. Reports are only required if a SSM occurred during the reporting period. Any time an owner or operator takes an action that is not consistent with the procedures specified in the affected source's SSM plan, the owner or operator shall submit an immediate SSM report as specified in 40 CFR Section 63.10(d)(5)(ii) of subpart A of this part.	40 CFR Section 63.1368(i)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

<p>Notification of Process Change: (1) Except as specified in paragraph (h)(2) of this section, whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the owner or operator shall submit a report quarterly. The report may be submitted as part of the next Periodic report required under paragraph (g) of this section. The report shall include:</p> <p>(i) A brief description of the process change; (ii) A description of any modifications to standard procedures or quality assurance procedures; (iii) Revisions to any of the information reported in the original Notification of Compliance Status report under paragraph (f) of this section; and (iv) Information required by the Notification of Compliance Status report under paragraph (f) of this section of changes involving the addition of processes or equipment.</p>	40 CFR Section 63.1368(h)(1)
<p>The owner or operator must submit a report 60 days before the scheduled implementation date of either of the following:</p> <p>(i) Any change in the activity covered by the Precompliance report. (ii) A change in the status of a control device from small to large.</p>	40 CFR Section 63.1368(h)(2)
C. MONITORING REQUIREMENTS FOR THE CONDENSERS	hdr
The Permittee shall operate and maintain the condensers at all times, when the unit(s) is in operation accordance with the Operation and Maintenance (O&M) Plan. The Permittee shall keep record copies of the O & M Plan available on site for use by staff and MPCA staff.	40 CFR Section 63.1366(b)(1)(iii)
The Permittee shall establish the maximum condenser outlet gas temperature as a site-specific operating parameter which must be measured and recorded as least once every 15 minutes during the period in which the condenser is controlling HAPs from the emission stream.	40 CFR Section 63.1366(b)(1)(iii)
Monitoring Equipment: The Permittee shall install, maintain and operate a temperature monitoring device on each condenser that will at least monitor the temperature every 15 minutes. The monitoring device shall be accurate to within +/- 2 percent of the temperature measured in degrees Celsius or +/- 2.5 degrees Celsius, whenever is greater.	40 CFR Section 63.1366(b)(1)(iii)
Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly, if in operation.	40 CFR Section 63.1366(b)(1)(iii)
Annual Calibration: The Permittee shall calibrate the temperature monitoring device at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	40 CFR Section 63.1366(b)(1)(iii)
E. RECORDKEEPING REQUIREMENTS	hdr
Data Retention Records: The Permittee shall keep copies of all records and reports required by subp. MMM for at least 5 years, as specified in 40 CFR Section 63.10(b) (1) of subpart A of this part.	40 CFR Section 63.1367(a)(1)
Records of Applicability Determination: The owner or operator of a stationary source that is not subject to this subpart shall keep a record of the applicability determination, as specified in 40 CFR Section 63.10(b)(3) of subpart A of this part.	40 CFR Section 63.1367(a)(2)
Startup, Shutdown and Malfunction Plan (SSM): The Permittee shall develop and implement a written SSM plan as specified in 40 CFR Section 63.7. This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of SSM and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with subp. MMM. The Permittee shall keep the current and superseded versions of the SSM plan. The Permittee shall keep the SSM records specified as follows:	40 CFR Section 63.1367(a)(3)
<p>1. The Permittee shall record the occurrence and duration of each malfunction of air pollution control equipment used to comply with subp. MMM;</p> <p>2. The Permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subp. MMM; and</p>	
<p>CONTINUED</p> <p>3. For each SSM, the Permittee shall record all information necessary to demonstrate that the procedures specified in the facility's SSM plan were followed, as specified in 40 CFR 63.6(e)(3)(iii); alternatively, the Permittee shall record any actions taken that are not consistent with the SSM plan, as specified in 40 CFR 63.6(e)(3)(iv).</p> <p>Reports related to the SSM plan shall be submitted as specified in 40 CFR 63.1368(i).</p>	40 CFR Section 63.1367(a)(3)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

<p>Records of equipment operation: Each measurement of a control device operating parameter monitored in accordance with 40 CFR Section 63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of 40 CFR Section 63.1362(d)</p> <p>For processes subject to 40 CFR Section 63.1362(g), records of consumption, production, and the rolling average values of the HAP and VOC factors.</p> <p>For processes in compliance with 0.15 Mg/yr emission limit of Section 40 CFR 63.1362(b)(2)(i) or (b)(4)(i), records of the rolling annual calculations of uncontrolled emissions.</p>	40 CFR Section 63.1367(b)(1) through(4)
<p>Records of equipment leak detection and repair: The owner or operator of an affected source subject to the equipment leak standards in 40 CFR Section 63.1363 shall implement the recordkeeping requirements specified in 40 CFR Section 63.1363(g). All records shall be retained for a period of 5 years, in accordance with the requirements of 40 CFR Section 63.10(b)(1) of subpart A of this part.</p>	40 CFR Section 63.1367(c)
D. PERFORMANCE TESTING REQUIREMENTS	hdr
<p>Initial Compliance: For the condenser, the design evaluation must consider the vent stream flow rate, relative humidity, and temperature, and must establish the design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser must be measured and used to establish the outlet organic HAP concentration.</p>	40 CFR Section 63.1365 (1)(iii)
<p>The owner or operator shall calculate the condenser outlet gas temperature that is needed to meet the required percent reduction.</p>	40 CFR Section 63.1365(a)(12)
<p>The owner or operator shall determine controlled emissions using exhaust gas temperature measurements and calculations for each batch emission episode according to the engineering methodology in 40 CFR 63.1365(c)(3)(iii)(A) through (G). Individual HAP partial pressures shall be calculated as specified in 40 CFR 63.1365 9c)(2)(i).</p>	40 CFR Section 63.1365(c)(3)(iii)
E. GENERAL EQUIPMENT LEAK REQUIREMENTS	hdr
<p>(a) General equipment leak requirements. (1) The provisions of this section apply to "equipment" as defined in 40 CFR Section 63.1361 and any closed-vent systems and control devices required by this subpart.</p>	NESHAP subp. MMM Equipment Leak
<p>(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: (i) 40 CFR part 60. (ii) 40 CFR part 61.</p>	40 CFR Section 63.1363(a)(2), Consistency with other regulations.
<p>(7) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed, within 15 calendar days of the end of each monitoring period for that component.</p>	40 CFR Section 63.1363(a)(7), Equipment Identification
<p>(5) Lines and equipment not containing process fluids are not subject to the provisions of this section. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process. (6) The provisions of this section do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of this subpart MMM. (8) Equipment that is in vacuum service is excluded from the requirements of this section. (9) Equipment that is in organic HAP service, but is in such service less than 300 hours per calendar year, is excluded from the requirements of this section if it is identified as required in paragraph (g)(9) of this section.</p>	40 CFR Section 63.1363(a)(5) through (9), Equipment Leak Exemption

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<p>(10) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in Sec. 63.180(b) or (c) of subpart H of this part, the following requirements apply:</p> <p>(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</p> <p>(ii) The identification on a valve or connector in light liquid or gas/vapor service may be removed after it has been monitored as specified in paragraph (e)(7)(iii) of this section and Sec. 63.174(e) of subpart H of this part, and no leak has been detected during the follow-up monitoring.</p> <p>(iii) The identification on equipment, except on a valve or connector in light liquid or gas/vapor service, may be removed after it has been repaired.</p>	40 CFR Section 63.1363 (a)(10)(i) through (iii), Detection of Equipment Leak
<p>(b) References. The owner or operator shall comply with the provisions of subpart H of this part as specified in paragraphs (b)(1) through (3) of this section. When the term "process unit" is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes.</p>	40 CFR Section 63.1363 (b) Leak Detection/repair program (LDAR)
<p>(ii) Section 63.172, Closed-vent systems and control devices, shall apply for closed-vent systems used to comply with this section, and for control devices used to comply with this section only, except:</p> <p>(A) Section 63.172(k) and (l) shall not apply. The owner or operator shall instead comply with paragraph (f) of this section.</p> <p>(B) Owners or operators may, instead of complying with the provisions of Section 63.172(f), design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating.</p>	40 CFR Section 63.1363(b)(3)(ii), Enclosed Equipment
<p>(iv) 40 CFR Section 63.178 of subpart H of this part, Alternative means of emission limitation: Batch processes, shall apply except that 40 CFR Section 63.178(b) of subpart H of this part, requirements for pressure testing, shall apply to all processes, not just batch processes;</p>	40 CFR Section 63.1363(b)(3)(iv), Pressure Testing
<p>Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service.) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service.</p>	40 CFR Section 63.1363(c), for pumps and agitators in light liquid service and agitators in gas/vapor service
<p>(2)(i) Monitoring. Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in 40 CFR Section 63.180(b) of subpart H of this part, except as provided in 40 CFR Section 63.177 of subpart H of this part, paragraph (f) of this section, and paragraphs (c)(5) through (c)(9) of this section.</p> <p>(ii) Leak definition. The instrument reading, as determined by the method as specified in 40 CFR Section 63.180(b) of subpart H of this part, that defines a leak is:</p> <p>(A) For agitators, an instrument reading of 10,000 parts per million or greater.</p> <p>(B) For pumps, an instrument reading of 2,000 parts per million or greater.</p> <p>(iii) Visual inspections. Each pump and agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump or agitator seal. If there are indications of liquids dripping from the seal, a leak is detected.</p>	40 CFR Section 63.1363 (c)(2)(i) Monitoring of pumps and agitators
<p>(3) Repair provisions.</p> <p>(i) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (b)(3)(i) of this section.</p> <p>(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:</p> <p>(A) Tightening of packing gland nuts.</p> <p>(B) Ensuring that the seal flush is operating at design pressure and temperature.</p>	40 CFR Section 63.1363(c)(3) Repair of Leaks
<p>(4) Calculation of percent leakers.</p> <p>(i) The owner or operator shall decide no later than the end of the first monitoring period what groups of processes will be developed. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.</p> <p>(ii) If, calculated on a 1 year rolling average, the greater of either 10 percent or three of the pumps in a group of processes leak, the owner or operator shall monitor each pump once per month.</p> <p>(iii) The number of pumps in a group of processes shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process within 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.</p>	40 CFR Section 63.1363(c)(4), Calculations of percent leakers

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<p>(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart:</p> $\%PL = [(PI - Ps) / (Pt - Ps)] \times 100$ <p>where %PL = percent leaking pumps PI = number of pumps found leaking as determined through quarterly monitoring as required in paragraphs (c)(2)(i) and (ii) of this section. Pt = total pumps in organic HAP service, including those meeting the criteria in paragraphs (c)(5) and (6) of this section Ps = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period</p>	<p>CONTINUED 40 CFR Section 63.1363(c)(4), Calculations of percent leakers</p>
<p>(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (c)(1) through (c)(4)(iii) of this section, provided the following requirements are met:</p> <p>(i) Each dual mechanical seal system is:</p> <p>(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or</p> <p>(B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of paragraph (b)(3)(ii) of this section; or</p> <p>(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(ii) The barrier fluid is not in light liquid service.</p> <p>(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(iv) Each pump/agitator is checked by visual inspection each calendar week for indications of liquids dripping from the pump/agitator seal.</p> <p>(A) If there are indications of liquids dripping from the pump/agitator seal at the time of the weekly inspection, the pump/agitator shall be monitored as specified in Sec. 63.180(b) of subpart H of this part to determine if there is a leak of organic HAP in the barrier fluid.</p> <p>(B) If an instrument reading of 2,000 parts per million or greater is measured for pumps, or 10,000 parts per million or greater is measured for agitators, a leak is detected.</p> <p>(v) Each sensor as described in paragraph (c)(5)(iii) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.</p>	<p>40 CFR 63.1363 (c)(5), For pumps or agitators</p>
<p>(vi)(A) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system, or both.</p> <p>(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in paragraph (c)(5)(vi)(A) of this section, or if, based on the criteria established in paragraph (c)(5)(vi)(A) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.</p> <p>(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (b)(3)(i) of this section.</p> <p>(D) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of paragraphs (c)(1) through (4) of this section, except for the requirements of paragraph (c)(2)(iii) of this section and, for pumps, paragraph (c)(4)(iv) of this section.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(7) Any pump/agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of paragraph (b)(3)(ii) of this section is exempt from the requirements of paragraphs (c)(2) through (5) of this section.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(8) Any pump/agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, and the daily requirements of paragraph (c)(5)(v) of this section, provided that each pump/agitator is visually inspected as often as practicable and at least monthly.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(9) If more than 90 percent of the pumps in a group of processes meet the criteria in either paragraph (c)(5) or (6) of this section, the process is exempt from the requirements of paragraph (c)(4) of this section.</p>	<p>40 CFR 63.1363 (c)(5), Exemptions for pumps or agitators</p>
<p>(d) Standards: open-ended valves or lines.</p> <p>(1)(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR Section 63.177 of subpart H of this part and paragraphs (d)(4) through (6) of this section.</p>	<p>40 CFR Section 63.1363 (d)(1)(i), open-ended valves or lines</p>

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(ii) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. The cap, blind flange, plug, or second valve shall be in place within 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair.	40 CFR Section 63.1363 (d)(1)(ii), Monitoring for open-ended valves or lines
(2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.	40 CFR Section 63.1363 (d)(2), Monitoring for open-ended valves or lines
(3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (d)(1) of this section at all other times.	40 CFR Section 63.1363 (d)(3), Monitoring for open-ended valves or lines
(4) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (d)(1) through (3) of this section.	40 CFR Section 63.1363 (d)(4), Monitoring for open-ended valves or lines
(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of paragraphs (d)(1) through (3) of this section.	40 CFR Section 63.1363 (d)(5), Monitoring for open-ended valves or lines
(6) Open-ended valves or lines containing materials which could cause an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (d)(1) through (3) of this section are exempt from the requirements of paragraphs (d)(1) through (3) of this section.	40 CFR Section 63.1363 (d)(6), Monitoring for open-ended valves or lines
(e) Standards: valves in gas/vapor service and in light liquid service. (1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. (2) For existing and new affected sources, all valves subject to this section shall be monitored, except as provided in paragraph (f) of this section and in 40 CFR Section 63.177 of subpart H of this part, by no later than 1 year after the compliance date.	40 CFR Section 63.1363(e)(1)-(2), Valves in gas/vapor and in light liquid service
(3) Monitoring. The owner or operator of a source subject to this section shall monitor all valves, except as provided in paragraph (f) of this section and in 40 CFR Section 63.177 of subpart H of this part, at the intervals specified in paragraph (e)(4) of this section and shall comply with all other provisions of this section, except as provided in paragraph (b)(3)(i) of this section and 40 CFR Sections 63.178 and 63.179 of subpart H of this part. (i) The valves shall be monitored to detect leaks by the method specified in 40 CFR Section 63.180(b) of subpart H of this part. (ii) An instrument reading of 500 parts per million or greater defines a leak.	40 CFR Section 63.1363(e)(3)(i) through (ii), Monitoring valves in gas/vapor and in light liquid service
(4) Subsequent monitoring frequencies. After conducting the initial survey required in paragraph (e)(2) of this section, the owner or operator shall monitor valves for leaks at the intervals specified below: (i) For a group of processes with 2 percent or greater leaking valves, calculated according to paragraph (e)(6) of this section, the owner or operator shall monitor each valve once per month, except as specified in paragraph (e)(9) of this section. (ii) For a group of processes with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (e)(4)(iii) through (v) of this section. (iii) For a group of processes with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters. (iv) For a group of processes with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.	40 CFR Section 63.1363(e)(4)(i) through (v), Subsequent monitoring frequencies for valves in gas/vapor and in light liquid service
(v) For a group of processes with less than 0.25 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 years.	CONTINUED 40 CFR Section 63.1363(e)(4)(i) through (v), Subsequent monitoring frequencies for valves in gas/vapor and in light liquid service
(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the owner or operator may choose to subdivide the valves in the applicable group of processes and apply the provisions of paragraph (e)(4) of this section to each subgroup. If the owner or operator elects to subdivide the valves in the applicable group of processes, then the provisions of paragraphs (e)(5)(i) through (viii) of this section apply. (i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to paragraphs (e)(3)(i) and (ii) of this section and as calculated according to paragraphs (e)(6)(ii) and (iii) of this section.	40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service
(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (e)(5)(ii) (A) through (C) of this section (A) The owner or operator shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained.	CONTINUED 40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service

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(B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group.	CONTINUED 40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service
(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Non repairable valves may not be reassigned to a less frequently monitored subgroup.	CONTINUED 40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service
(iii) The owner or operator shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 percent leaking valves and so indicate the performance in the next Periodic report. If the overall performance of total valves in the applicable group of processes is 2 percent leaking valves or greater, the owner or operator shall revert to the program required in paragraphs (e)(2) through (4) of this section. The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation 4 of this subpart:	CONTINUED 40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service
The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation 4 of this subpart: $\%VLo = \text{Summation of } i=1 \text{ to } n (\%VLi \times Vi) / \text{Summation of } i=1 \text{ to } n Vi$ where: %VLo = overall performance of total valves in the applicable group of processes %VLi = percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (e)(6)(ii) and (iii) of this section Vi = number of valves in subgroup i n = number of subgroups	CONTINUED 40 CFR Section 63.1363(e)(5)(i) through (viii), Calculation of percent leakers for valves in gas/vapor and in light liquid service
(iv) Records. In addition to records required by paragraph 40 CFR 63.1363(g), the owner or operator shall maintain records specified in paragraphs (e)(5)(iv)(A) through (D) of this section. (A) Which valves are assigned to each subgroup, (B) Monitoring results and calculations made for each subgroup for each monitoring period, (C) Which valves are reassigned and when they were reassigned, and (D) The results of the semiannual overall performance calculation required in paragraph (e)(5)(iii) of this section.	40 CFR Section 63.1363(e)(5)(iv)(A) through (D), Records for valves in gas/vapor and in light liquid service
(v) The owner or operator shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating processes and the valves assigned to each subgroup.	40 CFR Section 63.1363(e)(5)(v), Notification for valves in gas/vapor and in light liquid service
(vi) Semiannual reports. In addition to the information required by paragraph 40 CFR 63.1363(h)(3), the owner or operator shall submit in the Periodic reports the information specified in paragraphs (e)(5)(vi)(A) and (B) of this section. (A) Valve reassignments occurring during the reporting period, and (B) Results of the semiannual overall performance calculation required by paragraph (e)(5)(iii) of this section.	40 CFR Section 63.1363(e)(5)(vi), Semiannual reports for valves in gas/vapor and in light liquid service
(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of paragraph (e)(6)(iii) of this section shall be used. (viii) Except for the overall performance calculations required by paragraphs (e)(5)(i) and (iii) of this section, each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section.	40 CFR Section 63.1363(e)(5)(vii) and (viii), Monitoring Frequency for subgroup
(6)(i) The owner or operator shall decide no later than the implementation date of this subpart or upon revision of an operating permit how to group the processes. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis. (ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: $\%VL = [VL/VT] \times 100$ Where: %VL = percent leaking valves VL = number of valves found leaking excluding nonrepairables as provided in paragraph (e)(6)(iv)(A) of this section VT = total valves monitored, in a monitoring period excluding valves monitored as required by paragraph (e)(7)(iii) of this section	40 CFR Section 63.1363(e)(6)(i)-(ii), Percent leaking values for each group processes or subgroup

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(iii) When determining monitoring frequency for each group of processes or subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each group of processes or subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.	40 CFR Section 63.1363(e)(6)(iii), Monitoring frequency for each group processes or subgroup
(iv) (A) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(6)(iv)(B) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process may be excluded from calculation of percent leaking valves for subsequent monitoring periods. (B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.	40 CFR Section 63.1363(e)(6)(iv)(A)-(B), Nonrepairable values
(7) Repair provisions. (i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section. (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. (iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-month period.	40 CFR Section 63.1363(e)(7)(i) through (iii); Repair provisions
(8) First attempts at repair include, but are not limited to, the following practices where practicable: (i) Tightening of bonnet bolts, (ii) Replacement of bonnet bolts, (iii) Tightening of packing gland nuts, and (iv) Injection of lubricant into lubricated packing.	40 CFR Section 63.1363(e)(8)(i) through (iv), First attempts at repair
(9) Any equipment located at a plant site with fewer than 250 valves in organic HAP service in the affected source is exempt from the requirements for monthly monitoring specified in paragraph (e)(4)(i) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraphs (e)(4)(iii) or (iv) of this section.	40 CFR Section 63.1363(e)(9), Exemption of values
(f) Unsafe to monitor, difficult to monitor, and inaccessible equipment. (1) Equipment that is designated as unsafe to monitor, difficult to monitor, or inaccessible is exempt from the requirements as specified in paragraphs (f)(1) (i) through (iv) of this section provided the owner or operator meets the requirements specified in paragraph (f) (2), (3), or (4) of this section, as applicable. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. (i) For pumps and agitators, paragraphs (c) (2), (3), and (4) of this section do not apply. (ii) For valves, paragraphs (e)(2) through (7) of this section do not apply. (iii) For closed-vent systems, Sec. 63.172(f)(1), (f)(2), and (g) of subpart H of this part do not apply. (iv) For connectors, Sec. 63.174(b) through (e) of subpart H of this part do not apply.	40 CFR Section 63.1363(f), Unsafe to monitor, difficult to monitor, and inaccessible equipment
(2) Equipment that is unsafe to monitor. (i) Equipment may be designated as unsafe to monitor if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements identified in paragraphs (f)(1)(i) through (iv) of this section. (ii) The owner or operator of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.	40 CFR 63.1363(f)(2), Equipment that is unsafe to monitor

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<p>(3) Equipment that is difficult to monitor.</p> <p>(i) Equipment may be designated as difficult to monitor if the owner or operator determines that the equipment cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible at anytime in a safe manner;</p> <p>(ii) At an existing source, any equipment within a group of processes that meets the criteria of paragraph (f)(3)(i) of this section may be designated as difficult to monitor. At a new affected source, an owner or operator may designate no more than 3 percent of each type of equipment as difficult to monitor.</p> <p>(iii) The owner or operator of equipment designated as difficult to monitor must follow a written plan that requires monitoring of the equipment at least once per calendar year.</p>	40 CFR 63.1363(f)(3), Equipment that is unsafe to monitor
<p>(4) Inaccessible equipment and ceramic or ceramic-lined connectors.</p> <p>(i) A connector, agitator, or valve may be designated as inaccessible if it is:</p> <p>(A) Buried;</p> <p>(B) Insulated in a manner that prevents access to the equipment by a monitor probe;</p> <p>(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe;</p> <p>(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or</p> <p>(E) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.</p>	40 CFR 63.1363(f)(4)(i) through (iii), Inaccessible Equipment
<p>(ii) At an existing source, any connector, agitator, or valve that meets the criteria of paragraph (f)(4)(i) of this section may be designated as inaccessible. At a new affected source, an owner or operator may designate no more than 3 percent of each type of equipment as inaccessible.</p>	CONTINUED 40 CFR 63.1363(f)(4)(i) through (iii), Inaccessible Equipment
<p>(iii) If any inaccessible equipment or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section.</p>	CONTINUED 40 CFR 63.1363(f)(4)(i) through (iii), Inaccessible Equipment
<p>(g) Recordkeeping requirements.</p> <p>(1) An owner or operator of more than one group of processes subject to the provisions of this section may comply with the recordkeeping requirements for the groups of processes in one recordkeeping system if the system identifies with each record the program being implemented (e.g., quarterly monitoring) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.</p>	40 CFR 63.1363(g) (1), Recordkeeping
<p>(2) General recordkeeping. Except as provided in paragraph (g)(5) of this section, the following information pertaining to all equipment subject to the requirements in this section shall be recorded:</p>	40 CFR 63.1363(g) (2), General Recordkeeping
<p>(ii) (A) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of paragraph (c)(7) of this section or sections 63.164(h) or 63.165(c) of subpart H of this part.</p> <p>(B) A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of Sec. 63.164(i) of subpart H of this part.</p>	40 CFR 63.1363(g) (2)(ii)(A)-(B), General Recordkeeping
<p>(iii)(A) A list of identification numbers for pressure relief devices subject to the provisions in Sec. 63.165(a) of subpart H of this part.</p> <p>(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of Sec. 63.165(d) of subpart H of this part.</p>	40 CFR 63.1363(g) (2)(iii)(A)-(B), General Recordkeeping
<p>(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified.</p>	40 CFR 63.1363(g) (2)(iv) General Recordkeeping
<p>(v) The following information shall be recorded for each dual mechanical seal system:</p> <p>(A) Design criteria required by paragraph (c)(5)(vi)(A) of this section and Section 63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and</p> <p>(B) Any changes to these criteria and the reasons for the changes.</p>	40 CFR 63.1363(g) (2)(v)(A)-(B), General Recordkeeping
<p>(vi) A list of equipment designated as unsafe to monitor, difficult to monitor, or inaccessible under paragraphs (f) or (b)(3)(i)(B) of this section and a copy of the plan for monitoring or inspecting this equipment.</p>	40 CFR 63.1363(g) (2)(vi) General Recordkeeping

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(viii) For batch processes that the owner or operator elects to monitor as provided under Sec. 63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in Sec. 63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored.	40 CFR 63.1363(g) (2)(viii) General Recordkeeping
(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (g)(4) of this section for leaking equipment identified in this inspection, except as provided in paragraph (g)(5) of this section. These records shall be retained for 5 years.	40 CFR 63.1363(g)(3), Records of visual inspections
(4) Monitoring records. When each leak is detected as specified in paragraphs (c) and (e) of this section and Sections 63.164, 63.169, 63.172, and 63.174 of subpart H of this part, the owner or operator shall record the information specified in paragraphs (g)(4)(i) through (ix) of this section. All records shall be retained for 5 years, in accordance with the requirements of Sec. 63.10(b)(1) of subpart A of this part. (i) The instrument and the equipment identification number and the operator name, initials, or identification number.	40 CFR 63.1363(g)(4)(i) through (ix) Monitoring records
(ii) The date the leak was detected and the date of first attempt to repair the leak. (iii) The date of successful repair of the leak. (iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.	CONTINUED 40 CFR 63.1363(g)(4)(i) through (ix) Monitoring records
(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup, shutdown and malfunction plan, required by Sec. 63.1367(a), for the source or may be part of a separate document that is maintained at the plant site. Reasons for delay of repair may be documented by citing the relevant sections of the written procedure. (B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.	CONTINUED 40 CFR 63.1363(g)(4)(i) through (ix) Monitoring records
(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. (vii) (A) If the alternative in Sec. 63.174(c)(1)(ii) of subpart H of this part is not in use for the monitoring period, identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in Sec. 63.174(b) of subpart H of this part, as described in Sec. 63.174(c)(1) of subpart H of this part.	CONTINUED 40 CFR 63.1363(g)(4)(i) through (ix) Monitoring records
(B) The date and results of follow-up monitoring as required in Section 63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. (viii) The date and results of the monitoring required in Section 63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in Section 63.178(c)(3)(ii) and (iii) of subpart H of this part. If no leaking equipment is found in this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required. (ix) Copies of the periodic reports as specified in paragraph (h)(3) of this section, if records are not maintained on a computerized data base capable of generating summary reports from the records.	CONTINUED 40 CFR 63.1363(g)(4)(i) through (ix) Monitoring records
(5) Records of pressure tests. The owner or operator who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of paragraphs (g)(2), (3), (4), and (6) of this section. Instead, the owner or operator shall maintain records of the following information:	40 CFR 63.1363(g)(5)(i) through (iv) Records of pressure tests
(i) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in the process equipment train. (ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in Section 63.178(c)(3)(iii) of subpart H of this part.	CONTINUED 40 CFR 63.1363(g)(5)(i) through (iv) Records of pressure tests

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(iii) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this section is not required. Equipment in a process subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. (iv) The dates of each pressure test required in Section 63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. (v) Records of any visible, audible, or olfactory evidence of fluid loss.	CONTINUED 40 CFR 63.1363(g)(5)(i) through (iv) Records of pressure tests
(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: (A) The date of each pressure test and the date of each leak repair attempt. (B) Repair methods applied in each attempt to repair the leak. (C) The reason for the delay of repair. (D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. (E) The date of successful repair.	CONTINUED 40 CFR 63.1363(g)(5)(i) through (iv) Records of pressure tests
(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in Section 63.164(i) of subpart H of this part and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in 40 CFR Section 63.165(a) and (b) of subpart H of this part. The results shall include: (i) The background level measured during each compliance test. (ii) The maximum instrument reading measured at each piece of equipment during each compliance test.	40 CFR 63.1363(g)(6)(i) through (ii) Records of compressor and pressure relief valve compliance tests
(7) Records for closed-vent systems. The owner or operator shall maintain records of the information specified in paragraphs (g)(7)(i) through (iii) of this section for closed-vent systems and control devices subject to the provisions of paragraph (b)(3)(ii) of this section. The records specified in paragraph (g)(7)(i) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(7)(ii) and (iii) of this section shall be retained for 5 years.	40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(i) The design specifications and performance demonstrations specified in paragraphs (g)(7)(i)(A) through (D) of this section. (A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. (B) The dates and descriptions of any changes in the design specifications. (C) The flare design (i.e., steam assisted, air assisted, or nonassisted) and the results of the compliance demonstration required by Section 63.11(b) of subpart A of this part.	CONTINUED 40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(D) A description of the parameter or parameters monitored, as required in paragraph (b)(3)(ii) of this section, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.	CONTINUED 40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(ii) Records of operation of closed-vent systems and control devices. (A) Dates and durations when the closed-vent systems and control devices required in paragraph (c) of this section and 40 CFR Sections 63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.	CONTINUED 40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(B) Dates and durations during which the monitoring system or monitoring device is inoperative. (C) Dates and durations of startups and shutdowns of control devices required in paragraph (c) of this section and 40 CFR Sections 63.164 through 63.166 of subpart H of this part.	CONTINUED 40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(iii) Records of inspections of closed-vent systems subject to the provisions of 40 CFR Section 63.172 of subpart H of this part. (A) For each inspection conducted in accordance with the provisions of 40 CFR Section 63.172(f)(1) or (2) of subpart H of this part during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. (B) For each inspection conducted in accordance with the provisions of 40 CFR Section 63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in paragraph (g)(4) of this section shall be recorded.	CONTINUED 40 CFR 63.1363(g)(7)(i) through (iii) Records for closed-vent systems
(8) Records for components in heavy liquid service. Information, data, and analysis used to determine that a piece of equipment or process is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid or gas/vapor service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.	40 CFR 63.1363(g)(8), Records for components in heavy liquid service
(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section.	40 CFR 63.1363(g)(9), Records of exempt components

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(10) Records of alternative means of compliance determination. Owners and operators choosing to comply with the requirements of Section 63.179 of subpart H of this part shall maintain the following records: (i) Identification of the process(es) and the organic HAP they handle. (ii) A schematic of the process, enclosure, and closed-vent system. (iii) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.	40 CFR 63.1363(g)(10)(i) through (iii), Records of alternative means of compliance determination
(2) Notification of compliance status report. Each owner or operator of a source subject to this section shall submit the information specified in paragraphs (h)(2)(i) through (iii) of this section in the Notification of Compliance Status report described in Section 63.1368(f). Section 63.9(j) of subpart A of this part shall not apply to the Notification of Compliance Status report.	40 CFR 63.1363(h)(2), Notification of compliance status report
(i) The notification shall provide the information listed in paragraphs (h)(2)(i)(A) through (C) of this section for each group of processes subject to the requirements of paragraphs (b) through (g) of this section. (A) Identification of the group of processes. (B) Approximate number of each equipment type (e.g., valves, pumps) in organic HAP service, excluding equipment in vacuum service. (C) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").	40 CFR 63.1363(h)(2)(i)(A) through (C), Notification for each group of processes
(ii) The notification shall provide the information listed in paragraphs (h)(2)(ii)(A) and (B) of this section for each process subject to the requirements of paragraph (b)(3)(iv) of this section and Section 63.178(b) of subpart H of this part. (A) Products or product codes subject to the provisions of this section, and (B) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this section.	40 CFR 63.1363(h)(2)(ii)(A) and (B), Notification for each process
(iii) The notification shall provide the information listed in paragraphs (h)(2)(iii)(A) and (B) of this section for each process subject to the requirements in Section 63.179 of subpart H of this part. (A) Process identification. (B) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of paragraph (b)(3)(ii) of this section.	40 CFR 63.1363(h)(2)(iii)(A) and (B), Notification for each process
(3) Periodic reports. The owner or operator of a source subject to this section shall submit Periodic reports. (ii) For equipment complying with the provisions of paragraphs (b) through (g) of this section, the Periodic report shall contain the summary information listed in paragraphs (h)(3)(ii)(A) through (L) of this section for each monitoring period during the 6-month period. (A) The number of valves for which leaks were detected as described in paragraph (e)(2) of this section, the percent leakers, and the total number of valves monitored; (B) The number of valves for which leaks were not repaired as required in paragraph (e)(7) of this section, identifying the number of those that are determined nonreparable;	40 CFR 63.1363 (h)(3)(ii) (A) through (L) Periodic Report for Equipment
(C) The number of pumps and agitators for which leaks were detected as described in paragraph (c)(2) of this section, the percent leakers, and the total number of pumps and agitators monitored; (D) The number of pumps and agitators for which leaks were not repaired as required in paragraph (c)(3) of this section; (E) The number of compressors for which leaks were detected as described in Section 63.164(f) of subpart H of this part; (F) The number of compressors for which leaks were not repaired as required in Section 63.164(g) of subpart H of this part;	CONTINUED 40 CFR 63.1363 (h)(3)(ii) (A) through (L) Periodic Report for Equipment
(G) The number of connectors for which leaks were detected as described in Section 63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; (H) The number of connectors for which leaks were not repaired as required in Section 63.174(d) of subpart H of this part, identifying the number of those that are determined nonreparable; (I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible.	CONTINUED 40 CFR 63.1363 (h)(3)(ii) (A) through (L) Periodic Report for Equipment
(J) The results of all monitoring to show compliance with Sections 63.164(i), 63.165(a), and 63.172(f) of subpart H of this part conducted within the semiannual reporting period. (K) If applicable, the initiation of a monthly monitoring program under either paragraph (c)(4)(ii) or paragraph (e)(4)(i)(A) of this section. (L) If applicable, notification of a change in connector monitoring alternatives as described in Section 63.174(c)(1) of subpart H of this part.	CONTINUED 40 CFR 63.1363(h)(3)(ii) (A) through (L) Periodic Report for Equipment

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(iii) For owners or operators electing to meet the requirements of Section 63.178(b) of subpart H of this part, the Periodic report shall include the information listed in paragraphs (h)(3)(iii) (A) through (E) of this section for each process. (A) Product process equipment train identification; (B) The number of pressure tests conducted; (C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; (D) The facts that explain any delay of repairs; and (E) The results of all monitoring to determine compliance with Section 63.172(f) of subpart H of this part.	40 CFR Section 63.1363 (h)(iii)(A) through (E), Periodic Report
(iv) Any change in the information submitted under paragraph (h)(2) of this section shall be provided in the next Periodic report.	40 CFR Section 63.1363 (h)(iv), Periodic Report
F. PROCEDURES TO CALCULATE UNCONTROLLED EMISSIONS	hdr
The owner or operator referred to from paragraphs (c)(1)(i) through (v) of this section shall calculate uncontrolled emissions according to the procedures described in paragraph (c)(2)(i) or (ii) of this section, as appropriate.	40 CFR Section 63.1365(c)(2) Uncontrolled Emissions
(i) Emission estimation procedures. The owner or operator shall determine uncontrolled HAP emissions using emission measurements and/or calculations for each batch emission episode according to the engineering evaluation methodology in paragraphs (c)(2)(i)(A) through (H) of this section.	40 CFR Section 63.1365(c)(2)(i) Emission estimation procedures
(A) Individual HAP partial pressures in multicomponent systems shall be determined in accordance with the methods specified in paragraphs (c)(2)(i)(A)(1) through (3) of this section. Chemical property data may be obtained from standard references. (1) If the components are miscible in one another, use Raoult's law to calculate the partial pressures; (2) If the solution is a dilute aqueous mixture, use Henry's law constants to calculate partial pressures; (3) If Raoult's law or Henry's law are not appropriate or available, use any of the methods specified in paragraphs (c)(2)(i)(A)(3)(i) through (iii) of this section. (i) Use experimentally obtained activity coefficients; (ii) Use models such as the group-contribution models to predict activity coefficients;	40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures
(iii) Assume the components of the system behave independently and use the summation of all vapor pressures from the HAP as the total HAP partial pressure; (B) Charging or filling. Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart: $E = (v)/(R)(T) \times \text{Summation } (P_i)(MW_i)]$ Where: E = mass of HAP emitted P _i = partial pressure of the individual HAP V = volume of gas displaced from the vessel R = ideal gas law constant T = temperature of the vessel vapor space; absolute MW _i = molecular weight of the individual HAP	CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures
(C) Purging. Emissions from purging shall be calculated using Equation 10 of this subpart, except that for purge flow rates greater than 100 scfm, the mole fraction of HAP will be assumed to be 25 percent of the saturated value. $E = \text{Summation from } i=1 \text{ to } n [P_i MW_i \times (V)(t)/(R)(T) \times PT/PT - \text{Summation from } j=1 \text{ to } m (P_j)]$ Where: E = mass of HAP emitted V = purge flow rate at the temperature and pressure of the vessel vapor space R = ideal gas law constant T = temperature of the vessel vapor space; absolute P _i = partial pressure of the individual HAP P _j = partial pressure of individual condensable VOC compounds (including HAP) PT = pressure of the vessel vapor space MW _i = molecular weight of the individual HAP t = time of purge n = number of HAP compounds in the emission stream m = number of condensable VOC compounds (including HAP) in the emission stream	CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 10

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<p>(D) Heating. Emissions caused by heating the contents of a vessel to a temperature less than the boiling point shall be calculated using the procedures in either paragraph (c)(2)(i)(D)(1), (2), or (4) of this section, as appropriate. If the contents of a vessel are heated to the boiling point, emissions while boiling are assumed to be zero if the owner or operator is complying with the provisions in paragraph (d)(2)(i)(C)(3) of this section.</p> <p>(1) If the final temperature to which the vessel contents are heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using Equations 11 through 14 of this subpart.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures</p>
<p>(i) The mass of HAP emitted per episode shall be calculated using Equation 11 of this subpart:</p> $E = [\text{Summation of } i = 1 \text{ to } n (P_i)T_i/Pa_1 + (\text{Summation of } i = 1 \text{ to } n (P_i)T_2/Pa_2)]/2 \times (\Delta n) \times (MW_{hap})$ <p>Where: E = mass of HAP vapor displaced from the vessel being heated (P_i)T_n = partial pressure of each HAP in the vessel headspace at initial (n = 1) and final (n = 2) temperatures Pa₁ = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart Pa₂ = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart Δn = number of moles of noncondensable gas displaced, as calculated using Equation 12 of this subpart MW_{hap} = The average molecular weight of HAP present in the vessel, as calculated using Equation 14 of this subpart: n = number of HAP compounds in the displaced vapor</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 11</p>
<p>(ii) The moles of noncondensable gas displaced shall be calculated using Equation 12 of this subpart:</p> $\Delta n = V/R[(Pa_1/T_1) - (Pa_2/T_2)]$ <p>Where: Δn = number of moles of noncondensable gas displaced V = volume of free space in the vessel R = ideal gas law constant Pa₁ = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart Pa₂ = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart T₁ = initial temperature of vessel contents, absolute T₂ = final temperature of vessel contents, absolute</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 12</p>
<p>(iii) The initial and final pressure of the noncondensable gas in the vessel shall be calculated according to Equation 13 of this subpart:</p> $P_{an} = P_a (\text{atm}) - \text{Summation of } j = 1 \text{ to } m (P_j)T_n$ <p>Where: P_{an} = partial pressure of noncondensable gas in the vessel headspace at initial (n = 1) and final (n = 2) temperatures P_{atm} = atmospheric pressure (P_j)T_n = partial pressure of each condensable volatile organic compound (including HAP) in the vessel headspace at the initial temperature (n = 1) and final (n = 2) temperature</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 13</p>
<p>(iv) The average molecular weight of HAP in the displaced gas shall be calculated using Equation 14 of this subpart:</p> $MW_{hap} = \text{Summation of } i = 1 \text{ to } n [((P_i)T_1 + (P_i)T_2)MW_i] / [\text{Summation of } i = 1 \text{ to } n ((P_i)T_1 + (P_i)T_2)]$ <p>Where: MW_{hap} = average molecular weight of HAP in the displaced gas (P_i)T_n = partial pressure of each HAP in the vessel headspace at the initial (T₁) and final (T₂) temperatures MW_i = molecular weight of each HAP n = number of HAP compounds in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 14</p>
<p>(2) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (c)(2)(i)(D)(2)(i) and (ii) of this section.</p> <p>(i) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 11 of this subpart, where T₂ is the temperature 50 K below the boiling point.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures</p>

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<p>(ii) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emission for each increment shall be calculated using Equation 11 of this subpart. If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature of the heatup, even if the last increment is less than 5 K. If the final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures</p>
<p>(3) While boiling, the vessel must be operated with a properly operated process condenser. An initial demonstration that a process condenser is properly operated is required for vessels that operate process condensers without secondary condensers that are air pollution control devices. The owner or operator must either measure the condenser exhaust gas temperature and show it is less than the boiling point of the substance(s) in the vessel, or perform a material balance around the vessel and condenser to show that at least 99 percent of the material vaporized while boiling is condensed. Uncontrolled emissions are assumed to be zero under these conditions. The initial demonstration shall be conducted for all appropriate operating scenarios and documented in the Notification of Compliance Status report as specified in Section 63.1368(f).</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures</p>
<p>(4)(i) As an alternative to the procedures described in paragraphs (c)(2)(i)(D)(1) and (2) of this section, emissions caused by heating a vessel to any temperature less than the boiling point may be calculated using Equation 15 of this subpart.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 15</p>
<p>$E = MW_{hap} \times [Navg \times \ln[(PT - \text{Summation of } j = 1 \text{ to } m (P_{j,1}) / PT - \text{Summation of } j = 1 \text{ to } m (P_{j,2})] - (n_{HAP,2} - n_{HAP,1})]$</p> <p>Where: E = mass of HAP vapor displaced from the vessel being heated Navg = average gas space molar volume during the heating process, as calculated using Equation 16 of this subpart PT= total pressure in the vessel Pi,1 = partial pressure of the individual HAP compounds at T1 Pi,2 = partial pressure of the individual HAP compounds at T2 MWhap = average molecular weight of the HAP compounds, as calculated using Equation 14 of this subpart nHAP,1 = number of moles of total HAP in the vessel headspace at T1 nHAP,2 = number of moles of total HAP in the vessel headspace at T2 m = number of condensable VOC compounds (including HAP) in the emission stream.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 15</p>
<p>(ii) The average gas space molar volume during the heating process is calculated using Equation 16 of this subpart.</p> <p>$Navg = VPt/2R (1/T1 + 1/T2)$</p> <p>Where: Navg = average gas space molar volume during the heating process V = volume of free space in vessel Pt = total pressure in the vessel R = ideal gas law constant T1 = initial temperature of the vessel contents, absolute T2 = final temperature of the vessel contents, absolute</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 16</p>
<p>(iii) The difference in the number of moles of total HAP in the vessel headspace between the initial and final temperatures is calculated using Equation 17 of this subpart.</p> <p>$(n_{HAP,2} - n_{HAP,1}) = V/(R)(T2)[\text{Summation of } i = 1 \text{ to } n [(P_{i,2} - V/(R)(T1))] \text{ Summation of } i = 1 \text{ to } n (P_{i,1})]$</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 17</p>
<p>Where: nHAP,2 = number of moles of total HAP in the vessel headspace at T2 nHAP,1 = number of moles of total HAP in the vessel headspace at T1 V = volume of free space in vessel R = ideal gas law constant T1 = initial temperature of the vessel contents, absolute T2 = final temperature of the vessel contents, absolute Pi,1 = partial pressure of the individual HAP compounds at T1 Pi,2 = partial pressure of the individual HAP compounds at T2 n = number of HAP compounds in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 17</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>(E) Depressurization. Emissions from depressurization shall be calculated using the procedures in paragraphs (c)(2)(i)(E)(1) through (5) of this section. Alternatively, the owner or operator may elect to calculate emissions from depressurization using the procedures in paragraph (c)(2)(i)(E)(6) of this section.</p> <p>(1) The moles of HAP vapor initially in the vessel are calculated using Equation 18 of this subpart:</p> $n_{HAP} = V/RT \times \text{Summation of } i=1 \text{ to } n (P_i)$ <p>Where: n_{HAP}=moles of HAP vapor in the vessel P_i=partial pressure of each HAP in the vessel vapor space V=free volume in the vessel being depressurized R=ideal gas law constant T=absolute temperature in vessel n=number of HAP compounds in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 18</p>
<p>(2) The initial and final moles of noncondensable gas present in the vessel are calculated using Equations 19 and 20 of this subpart:</p> $n_1 = VP_{nc1}/RT \quad (\text{Eq. 19})$ $n_2 = VP_{nc2}/RT \quad (\text{Eq. 20})$ <p>Where: n_1=initial number of moles of noncondensable gas in the vessel n_2=final number of moles of noncondensable gas in the vessel V=free volume in the vessel being depressurized P_{nc1}=initial partial pressure of the noncondensable gas, as calculated using Equation 21 of this subpart P_{nc2}=final partial pressure of the noncondensable gas, as calculated using Equation 22 of this subpart R=ideal gas law constant T=temperature, absolute</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equations 19 and 20</p>
<p>(3) The initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 21 and 22 of this subpart.</p> $P_{nc1} = P_1 - \text{Summation of } j=1 \text{ to } m (P_j^*)(X_j) \quad (\text{Eq. 21})$ $P_{nc2} = P_2 - \text{Summation of } j=1 \text{ to } m (P_j^*)(X_j) \quad (\text{Eq. 22})$ <p>Where: P_{nc1}=initial partial pressure of the noncondensable gas P_{nc2}=final partial pressure of the noncondensable gas P_1=initial vessel pressure P_2=final vessel pressure P_j^*=vapor pressure of each condensable VOC (including HAP) in the emission stream X_j=mole fraction of each condensable VOC (including HAP) in the emission stream m=number of condensable VOC compounds (including HAP) in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equations 21 and 22</p>
<p>(4) The moles of HAP emitted during the depressurization are calculated by taking an approximation of the average ratio of moles of HAP to moles of noncondensable and multiplying by the total moles of noncondensables released during the depressurization, using Equation 23 of this subpart:</p> $n_{HAP,e} = (n_{HAP,1}/n_1 + n_{HAP,2}/n_2) [n_1 - n_2]$ <p>Where: $n_{HAP,e}$=moles of HAP emitted $n_{HAP,1}$=moles of HAP vapor in vessel at the initial pressure, as calculated using Equation 18 of this subpart $n_{HAP,2}$=moles of HAP vapor in vessel at the final pressure, as calculated using Equation 18 of this subpart n_1=initial number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart n_2=final number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 23</p>
<p>(5) Use Equation 24 of this subpart to calculate the mass of HAP emitted:</p> $E = n_{HAP,e} * M_{WHAP}$ <p>Where: E=mass of HAP emitted $n_{HAP,e}$=moles of HAP emitted, as calculated using Equation 23 of this subpart M_{WHAP}=average molecular weight of the HAP as calculated using Equation 14 of this subpart</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 24</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>(6) As an alternative to the procedures in paragraphs (c)(2)(i)(E)(1) through (5) of this section, emissions from depressurization may be calculated using Equation 25 of this subpart:</p> $E = \frac{V}{(R)(T)} \times \ln \left[\frac{(P1 - \text{Summation of } j=1 \text{ to } m (Pj))}{(P2 - \text{Summation of } j=1 \text{ to } m (Pj))} \right] \times \text{Summation of } i=1 \text{ to } n (Pi)(MWi)$ <p>Where: V=free volume in vessel being depressurized R=ideal gas law constant T=temperature of the vessel, absolute P1=initial pressure in the vessel P2=final pressure in the vessel Pi=partial pressure of the individual HAP compounds Pj=partial pressure of individual condensable VOC compounds (including HAP) MWi=molecular weight of the individual HAP compounds n=number of HAP compounds in the emission stream m=number of condensable VOC compounds (including HAP) in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 25</p>
<p>(F) Vacuum systems. Calculate emissions from vacuum systems using Equation 26 of this subpart:</p> $E = [(MWs)(La)(t)/(MWnc)][\text{Summation of } i=1 \text{ to } n (Pi)/PT - \text{Summation of } j=1 \text{ to } m (Pj)]$ <p>Where: E=mass of HAP emitted PT=absolute pressure of receiving vessel or ejector outlet conditions, if there is no receiver Pi=partial pressure of individual HAP at the receiver temperature or the ejector outlet conditions Pj=partial pressure of individual condensable VOC compounds (including HAP) at the receiver temperature or the ejector outlet conditions La=total air leak rate in the system, mass/time MWnc = molecular weight of noncondensable gas t=time of vacuum operation MW<INF>HAP</INF>=average molecular weight of HAP in the emission MWHAP=average molecular weight of HAP in the emission stream, as calculated using Equation 14 of this subpart, with HAP partial pressures calculated at the temperature of the receiver or ejector outlet, as appropriate n=number of HAP components in the emission stream m=number of condensable VOC compounds (including HAP) in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 26</p>
<p>(G) Gas evolution. Emissions from gas evolution shall be calculated using Equation 10 of this subpart with V calculated using Equation 27 of this subpart:</p> $V = [(Wg)(R)(T)/(PT)(MWg)]$ <p>Where: V=volumetric flow rate of gas evolution Wg=mass flow rate of gas evolution R=ideal gas law constant T=temperature at the exit, absolute PT=vessel pressure MWg=molecular weight of the evolved gas</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 27</p>
<p>(H) Air drying. Use Equation 28 of this subpart to calculate emissions from air drying:</p> $E = B \times [PS1/(100-PS1) - PS2/(100-PS2)]$ <p>Where: E=mass of HAP emitted B=mass of dry solids PS1=HAP in material entering dryer, weight percent PS2=HAP in material exiting dryer, weight percent.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(i)(A) through (H) Emission estimation procedures Equation 28</p>
<p>(ii) Engineering assessments. The owner or operator shall conduct an engineering assessment to determine uncontrolled HAP emissions for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum systems, gas evolution, or air drying. For a given emission episode caused by any of these seven types of activities, the owner or operator also may request approval to determine uncontrolled HAP emissions based on an engineering assessment. All data, assumptions, and procedures used in the engineering assessment shall be documented in the Precompliance plan in accordance with Sec. 63.1367(b). An engineering assessment includes, but is not limited to, the information and procedures described in paragraphs (c)(2)(ii)(A) through (D) of this section:</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(2)(ii)(A) through (D) Engineering assessments</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Permit Number: 01900031 - 001

(A) Test results, provided the tests are representative of current operating practices at the process unit. If test data show a greater than 20 percent discrepancy between the test value and the estimated value, the owner or operator may estimate emissions based on the test data, and the results of the engineering assessment shall be included in the Notification of Compliance Status report.	CONTINUED 40 CFR Section 63.1365(c)(2)(ii)(A) through (D) Engineering assessments
(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions. (C) Maximum flow rate, HAP emission rate, concentration, or other relevant parameter specified or implied within a permit limit applicable to the process vent. (D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:	CONTINUED 40 CFR Section 63.1365(c)(2)(ii)(A) through (D) Engineering assessments
(1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations; (2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities; and (3) Estimation of HAP concentrations based on saturation conditions. (4) Controlled emissions. Except for condensers, the owner or operator shall determine controlled emissions using the procedures in either paragraph (c)(3)(i) or (ii) of this section, as applicable. For condensers, controlled emissions shall be calculated using the emission estimation equations described in paragraph (c)(3)(iii) of this section.	CONTINUED 40 CFR Section 63.1365(c)(2)(ii)(A) through (D) Engineering assessments
(iii) Condensers. The owner or operator using a condenser as a control device shall determine controlled emissions using exhaust gas temperature measurements and calculations for each batch emission episode according to the engineering methodology in paragraphs (c)(3)(iii)(A) through (G) of this section. Individual HAP partial pressures shall be calculated as specified in paragraph (c)(2)(i) of this section.	40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions
(A) Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver. (B) Emissions from purging shall be calculated using Equation 10 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver.	CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions
(C) Emissions from heating shall be calculated using Equation 29 of this subpart. In Equation 29 of this subpart, Delta n is equal to the number of moles of noncondensable displaced from the vessel, as calculated using Equation 12 of this subpart. In Equation 29 of this subpart, the HAP average molecular weight shall be calculated using Equation 14 with the HAP partial pressures determined at the temperature of the receiver. $E = (\Delta n) \times \left[\left(\sum_{i=1}^n (P_i) / PT - \sum_{j=1}^m (P_j) \right) \right] \times (MWHAP)$	CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equation 29
Where: E=mass of HAP emitted Delta n =moles of noncondensable gas displaced PT=pressure in the receiver Pi=partial pressure of the individual HAP at the receiver temperature Pj=partial pressure of the individual condensable VOC (including HAP) at the receiver temperature n=number of HAP compounds in the emission stream MWHAP=the average molecular weight of HAP in vapor exiting the receiver, as calculated using Equation 14 of this subpart m=number of condensable VOC (including HAP) in the emission stream	CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equation 29
(D)(1) Emissions from depressurization shall be calculated using Equation 30 of this subpart. $E = (V_{nc1} - V_{nc2}) \times \left[\sum_{i=1}^n (P_i) / PT - \sum_{j=1}^m (P_j) \right] \times \left[PT / RT \right] \times (MWHAP)$	CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equation 30

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: McLaughlin Gormley King Co - Chaska

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<p>Where: E=mass of HAP vapor emitted Vnc1=initial volume of noncondensable in the vessel, corrected to the final pressure, as calculated using Equation 31 of this subpart Vnc2=final volume of noncondensable in the vessel, as calculated using Equation 32 of this subpart Pi=partial pressure of each individual HAP at the receiver temperature Pj=partial pressure of each condensable VOC (including HAP) at the receiver temperature PT=receiver pressure T=temperature of the receiver, absolute R=ideal gas law constant MWHAP=the average molecular weight of HAP calculated using Equation 14 of this subpart with partial pressures determined at the receiver temperature n=number of HAP compounds in the emission stream m=number of condensable VOC (including HAP) in the emission stream.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equation 30</p>
<p>(2) The initial and final volumes of noncondensable gas present in the vessel, adjusted to the pressure of the receiver, are calculated using Equations 31 and 32 of this subpart.</p> <p>$V_{nc1} = (VP_{nc1}/PT)$ (Eq. 31)</p> <p>$V_{nc2} = (VP_{nc2}/PT)$ (Eq. 32)</p> <p>Where: Vnc1=initial volume of noncondensable gas in the vessel Vnc2=final volume of noncondensable gas in the vessel V=free volume in the vessel being depressurized Pnc1=initial partial pressure of the noncondensable gas, as calculated using Equation 33 of this subpart Pnc2=final partial pressure of the noncondensable gas, as calculated using Equation 34 of this subpart PT=pressure of the receiver</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equations 31 and 32</p>
<p>(3) Initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 33 and 34 of this subpart</p> <p>$P_{nc1} = P_1 - \text{Summation of } j=1 \text{ to } m (P_j)$ (Eq. 33)</p> <p>$P_{nc2} = P_2 - \text{Summation of } j=1 \text{ to } m (P_j)$ (Eq. 34)</p> <p>Where: Pnc1=initial partial pressure of the noncondensable gas in the vessel Pnc2=final partial pressure of the noncondensable gas in the vessel P1=initial vessel pressure P2=final vessel pressure Pj=partial pressure of each condensable VOC (including HAP) in the vessel m=number of condensable VOC (including HAP) in the emission stream</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions Equations 33 and 34</p>
<p>(E) Emissions from vacuum systems shall be calculated using Equation 26 of this subpart. (F) Emissions from gas evolution shall be calculated using Equation 8 with V calculated using Equation 27 of this subpart, T set equal to the receiver temperature, and the HAP partial pressures determined at the receiver temperature. The term for time, t, in Equation 10 of this subpart is not needed for the purposes of this calculation. (G) Emissions from air drying shall be calculated using Equation 9 of this subpart with V equal to the air flow rate and Pi determined at the receiver temperature.</p>	<p>CONTINUED 40 CFR Section 63.1365(c)(3)(ii)(A) through (G) Using Condensers to control emissions</p>
<p>G. EXEMPTION</p>	<p>hdr</p>
<p>Storage Vessels: Storage vessels are exempt based the definition of storage vessel under 40 CFR Section 63.1361</p>	<p>40 CFR Section 63.1361</p>
<p>Wastewater streams: The wastewater stream meets the following conditions in 40 CFR Section 63.1360(d)(4)</p>	<p>40 CFR Section 63.1360(d)(4) 40 CFR Section 63.1361</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: SV 003 Crude Hold Tank**Associated Items:** EU 006 Hold Tank

EU 007 Crude Hold Tank

GP 005 MGK-264 Process

What to do	Why to do it
A. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, and Maleic Anhydride. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: SV 005 Drumming Room**Associated Items:** GP 005 MGK-264 Process

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
B. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, and Maleic Anhydride. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: SV 006 Equalization Tank**Associated Items:** EU 009 Reactor Dump Tank

GP 005 MGK-264 Process

What to do	Why to do it
A. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, and Maleic Anhydride. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: SV 007 Distillation/Product Recovery [CE 008,009,012]**Associated Items:** EU 008 Product Recovery Still

GP 003 Condensers

GP 005 MGK-264 Process

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
B. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, Maleic Anhydride, Nadic Anhydride, 2-ethylhexamine, and all other VOC's. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: SV 008 Distillation/Product Recovery [CE 008,009,012]**Associated Items:** EU 008 Product Recovery Still

GP 003 Condensers

GP 005 MGK-264 Process

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
C. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, Maleic Anhydride, Nadic Anhydride, 2-ethylhexamine, and all other VOC's. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 001 264 Reactor**Associated Items:** CE 001 Tube and Shell Condenser

CE 002 Tube and Shell Condenser

CE 003 Tube and Shell Condenser

GP 003 Condensers

SV 001 Reactor [CE 001,002, 003]

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
B. OTHER REQUIREMENTS	hdr
Process Throughput: less than or equal to 30 Other per month. "Other" is defined as Batches	Minn. R. 7007.0800, subp. 2
Process Throughput: less than or equal to 150 Other using 12-month Rolling Sum . "Other" is defined as Batches/Year.	Minn. R. 7007.0800, subp. 2
C. RECORDKEEPING	hdr
Recordkeeping: The Permittee shall record on a daily basis the number of batches completed per day.	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping: By the 15th of each month, the Permittee shall record the number of batches made the previous month.	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping: By the 15th day of each month, the Permittee shall record the number of batches made in the previous 12 months (12-month Rolling Sum) for the preceding month.	Minn. R. 7007.0800, subps. 4 and 5
D. PERFORMANCE TEST REQUIREMENTS	hdr
Initial Performance Test: due 30 days after Permit Issuance OR November 15, 2002 OR when the process runs next, whichever is later for Dicyclopentadiene, Cyclopentadiene, Maleic Anhydride, Nadic Anhydride, 2-ethylhexamine, and all other VOC's. (As described in Appendix C)	Minn. R. 7017.2020, subp. 1
Performance Test Plan: The Permittee shall comply with the approved Test Plan in accordance with Appendix C of this permit.	Minn. R. 7007.0800, subp. 2
Performance Test for a Batch Formulation Change: A Performance test is due if the Permittee make any changes to the batch formulation process. The Permittee shall following the procedures in Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2.	Minn. R. 7007.0800, subp. 6

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 008 Product Recovery Still**Associated Items:** CE 008 Tube and Shell Condenser

CE 009 Tube and Shell Condenser

CE 012 Tube and Shell Condenser

GP 003 Condensers

SV 007 Distillation/Product Recovery [CE 008,009,012]

SV 008 Distillation/Product Recovery [CE 008,009,012]

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 112 Crude Still**Associated Items:** CE 007 Tube and Shell Condenser

SV 070 Crude Still [CE 007]

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
B. ORGANIC HAP EMISSIONS	hdr
HAPs - Volatile: less than or equal to 330 lbs/year using 12-month Rolling Average	40 CFR Section 63.1362(b)(2)(ii)
C. EXEMPTION	hdr
Equipment intended to operate in organic HAP service for less than 300 hours during the calendar year is exempt from 40 CFR pt 63, subp. MMM.	40 CFR Section 63.1360(d)(viii); 40 CFR Section 63.1361
Storage Vessels: Storage vessels are exempt based the definition of storage vessel under 40 CFR Section 63.1361	40 CFR Section 63.1361
Wastewater streams: The wastewater stream meets the following conditions in 40 CFR Section 63.132(a)(3) and 63.1360(d)(4)	40 CFR Section 63.132(a)(3); 40 CFR Section 63.1360(d)(4) 40 CFR Section 63.1361
D. RECORDKEEPING REQUIREMENTS	hdr
Initial Compliance with emisison limit cutoffs: The owner or operator shall demonstrate that the uncontrolled organic HAP emissions from the sum of all process vents within a process are less than or equal to 0.15 Mg/yr or 330 lbs/yr. Uncontrolled HAP emissions shall be determined using the procedures described in 40 CFR Section 63.1365(c)(2)	40 CFR Section 63.1365(c)(1)(i)
Records of Applicability Determination: The owner or operator shall keep a record of the applicability determination at the stationary source that the crude still is not subject to the subpart.	40 CFR Section 63.1367(a)(2)
The Permittee shall record and keep on site a list of all the equipment and hours of operating in a year.	40 CFR Section 63.1360(d)
Comply with applicable provisions as specified in of Part 63, Subpart MMM, Pesticide Active Ingredient Production by December 23, 2003	Part 63 MACT Subpart MMM: Pesticide Active Ingredient Production 40 CFR Section 63.1360

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 114 OMS Still**Associated Items:** CE 043 Other(Conservent)

SV 071

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 115 Methanol Still**Associated Items:** CE 010 Tube and Shell Condenser

GP 004 NESHAP for Pesticide Active Ing. Production

SV 072 Methanol Still [CE 010]

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production, subpart MMM	hdr
Comply with applicable provisions as specified in of Part 63, Subpart MMM, Pesticide Active Ingredient Production by December 23, 2003.	Part 63 MACT Subpart MMM: Pesticide Active Ingredient Production 40 CFR Section 63.1360

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: EU 119 Wax Still**Associated Items:** CE 046 Tube and Shell Condenser
GP 004 NESHAP for Pesticide Active Ing. Production
SV 073 Wax Still [CE 046]

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot using 3-hour Rolling Average unless required to reduce emissions to less than or equal to either the amount allowed by Minn. R. 7011.0730, or concentration allowed by Minn. R. 7011.0735	Minn. R. 7011.0751, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0751, subp. 2(A)
National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production, subpart MMM	hdr
Comply with applicable provisions as specified in of Part 63, Subpart MMM, Pesticide Active Ingredient Production by December 23, 2003.	Part 63 MACT Subpart MMM: Pesticide Active Ingredient Production 40 CFR Section 63.1360

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

Subject Item: CE 044 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 063 Large Dry Chemical Mix Tank

EU 064 Small Dry Chemical Mix Tank

EU 065 Dry Chemical Room Ventilation

GP 001 Dry Chemical Process

What to do	Why to do it
The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. However, the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory. Therefore, in order for the PM/PM10 emissions to be considered controlled for the purposes of emissions inventory, the fabric filter must comply with the requirements of this permit during the time credit for control is taken.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (F).
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Minn. R. 7007.0800, subps 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Minn. R. 7007.0800, subps 2 and 14
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 3.0 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Minn. R. 7007.0800, subps. 2 and 14
MONITORING AND RECORDKEEPING	hdr
Recordkeeping of Pressure Drop. If in operation, the Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Minn. R. 7007.0800, subps. 2 and 14
Recordkeeping: The Permittee shall record the pressure drop once every 24 hours, when in operation.	Minn. R. 7007.0800, subps. 2 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subps. 4, 5 and 14
Alternative Pressure Drop Range: If the Permittee wishes to propose an alternative pressure drop range to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative range. Upon written approval by MPCA, the alternative range shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5, and 14

TABLE B: SUBMITTALS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska
Permit Number: 01900031 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Compliance Plan	due before 12/23/2001 (precompliance plan in reference to 40 CFR Section 63.1368(e))	GP004
Computer Dispersion Modeling Protocol	<p>due 30 days after Performance Test Results for all identified pollutant of concern. This protocol will describe the proposed modeling methodology and input data, in accordance with all the requirements of 40 CFR pt. 51, App. W. The protocol will be based on projected operating conditions under the Permittee's current permit term.</p> <p>This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	Total Facility
Computer Dispersion Modeling Results	<p>due 45 days after Report (To be submitted after the MPCA has reviewed and approved the modeling protocol.) (Report means final scope of work)</p> <p>This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	Total Facility
Initial Compliance Status Report	due 150 days after 12/23/2003 (The Permittee shall submit the Notification of Compliance Status in reference to 40 CFR Section 63.1368(f))	GP004
Notification of compliance status	due before 12/23/2003 to comply with the PAI rule. The compliance date was extended from August 22, 2002, to December 23, 2003, a 16-month extension that was published in the Federal Register Vol 67, No. 106, dated Monday, June 3, 2002.	GP004
Notification	due before 10/23/1999 (Initial Notification Report of Relevancy in reference to 40 CFR Section 63.1368(b); 40 CFR Section 63.9(b)(2))	GP004
Performance Test Notification (written)	due 60 days before Performance Test. The results of the performance test must be included in the Initial Notification of Compliance Status Report.	GP004
Report	due 240 days after Initial Compliance Status Report (Report means Periodic Report as reference to 63.1386(g))	GP004
Report	due 240 days after Initial Compliance Status Report (Report means for startup, shutdown and malfunction report for 40 CFR 63, subp. MMM, Pesticide Active Ingredient Production.)	GP004
Report	<p>due 30 days after Performance Test Results have been submitted. (Report is the scope of work document for the Air Toxics Review (ATR) for the total facility)</p> <p>This is a state-only requirement and, pursuant to Minn. R. 7007.1750, it is not enforceable by the EPA administrator or citizens under the Clean Air Act.</p>	Total Facility
Report	<p>due 60 days after Submittal of the final scope of work is approved. (Report means Final ATR Document)</p> <p>This is a state-only requirement and, pursuant to Minn. R. 7007.1750, it is not enforceable by the EPA administrator or citizens under the Clean Air Act.</p>	Total Facility

TABLE B: RECURRENT SUBMITTALS

04/17/03

Facility Name: McLaughlin Gormley King Co - Chaska

Permit Number: 01900031 - 001

What to send	When to send	Portion of Facility Affected
Report	due before end of each half-year starting 01/23/2005 (Periodic Report due every 6 months in reference to 40 CFR Section 63.1386(g)). (Report means periodic report for compliance status based on 40 CFR 63, subp. MMM, Pesticide Active Ingredient Production.)	GP004
Report	due before end of each half-year starting 01/23/2005 (Startup, Shutdown, Malfunction Report due every 6 months in reference to 40 CFR Section 63.1368(j)). The reports are only required if a startup, shutdown, or malfunction occurred during the reporting period in reference to 40 CFR Section 63.1386(j).	GP004
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B**Facility Name:** McLaughlin Gormley King Company**Permit Number:** 01900031-001**Insignificant Activities and Applicable Requirements**

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
subpart 3(I)	<p>Individual emission units at a stationary source each of which have a potential to emit the following pollutants in amount less than: 4,000 pounds per year of CO; or 2,000 pounds per year of NO_x, SO₂, PM, PM₁₀, VOCs, and Ozone</p> <ul style="list-style-type: none">• Reactor Cold Trap Receiver• Drumming Stations (5)• Vacuum Pumps (3)• Holding Tanks (8)• Reactor Dump Tank• Blend Tanks (14)• Receiver Tanks (4)• Day Tanks (3)• Head Tanks (9)• Tote Bins (10)• Floor Scales (5)• Floor Scale Blowers (4)• MGK 264 Tank• PY 175 Tank• PBO Tank• F05192 Tank• Sponto H-44C• DEET Tank• Filling Station and Blower (3)• MC Recovery Still• Tank Fill Arms (2)• Process Area, Warehouse and Storage Room Ventilation (10)	Minn. R. 7011.0110
subpart 3(J)	<p>Fugitive dust emissions from paved entrance roads and parking lots:</p> <ul style="list-style-type: none">• Fugitive emissions from entrance and parking lot.	Minn. R. 7011.0150

APPENDIX C

Facility Name: McLaughlin Gormley King Company
Permit Number: 01900031-001

MGK TEST PLAN

PART I. GENERAL INFORMATION

Test Plan Date: Test Date: 2002

Name and Address of Emission Facility: McLaughlin Gormley King Company
4001 Peavey Road
Chaska, Minnesota 55318

Permit Contact Person: Steve J. Zoubek

Air Emission Permit No.: 01900031-001

Independent testing Company: Pace Analytical
1700 Elm St., Suite 200
Minneapolis, MN 55414
Contact: Don Stock

Reason for Test: Permit required Performance Testing

Source Points Information:	SV 001:	Reactor
	Stack Diameter:	0.08 m (3 inches)
	Stack Height:	15.5 m (51 feet)
	Stack Temperature:	(measure during test)
	Stack Air Flow Rate:	(measure during test)
	SV 003:	Crude Hold Tank
	Stack Diameter:	0.05 m (2 inches)
	Stack Height:	15.5 m (51 feet)
	Stack Temperature:	(measure during test)
	Stack Air Flow Rate:	(measure during test)
	SV 005:	Drumming Room
	Stack Diameter:	0.41 m (16 inches)
	Stack Height:	15.5 m (51 feet)
	Stack Temperature:	(measure during test)
	Stack Air Flow Rate:	(measure during test)
	SV 007/008:	Product Recovery Stills (Distillation)
	Stack Diameter:	0.08 m (3 inches)

Stack Height: 15.5 m (51 feet)
Stack Temperature: (measure during test)
Stack Air Flow Rate: (measure during test))

SV 070: Equalization Tank
Stack Diameter: 0.05 m (2 inches)
Stack Height: 15.5 m (51 feet)
Stack Temperature: (measure during test))
Stack Air Flow Rate: (measure during test)

PART II. TESTING REQUIREMENTS

General:

1. Stack emissions testing shall be conducted using US EPA approved test methods.
2. Stack emissions testing shall be conducted during normal operating conditions.

SV 001 Reactor:

1. Stack emissions testing will be performed downstream of the reactor at stack SV 001. The following specific chemicals will be analyzed: dicyclopentadiene, cyclopentadiene, maleic anhydride, nadic anhydride, 2-ethylhexylamine and total VOC emission rate.
2. Three representative samples will be collected during the reactor batch process. One stack test sample will be taken approximately between 6:00 a.m. and 7:00 a.m. when vacuum is being pulled and the DCP is being heated. One sample will be collected when the amine is added and vacuum is again pulled on the system. One additional stack test sample will be taken during the remaining reaction batch process.

SV 003 Crude Hold Tank

One stack emission test downstream of the crude hold tank at stack SV 003 will be taken during the time when transfer is made from the reactor to the tank. . The following compounds will be analyzed: dicyclopentadiene, cyclopentadiene, maleic anhydride.

SV 005 Drumming Room

One stack emission test downstream of the wet scrubber at stack SV 005 will be taken during the time when material is transferred into drums. The following compounds will be analyzed: dicyclopentadiene, cyclopentadiene, maleic anhydride.

SV 007/008 Distillation Still

1. Stack emission testing will be performed downstream of the distillation control equipment at stack SV 007/008. The following specific compounds will be analyzed: dicyclopentadiene, cyclopentadiene, maleic anhydride, nadic anydride and 2-ethylhexylamine and then all other VOCs.

2. Three representative stack test samples will be taken approximately between 6:00 a.m. and 11:00 a.m., (the time period in which the above listed compounds vaporize).

SV 070 Equalization Tank

1. One stack emission test will be taken downstream of the Equalization Tank at SV 070 while the tank is being filled. The following compounds will be analyzed: dicyclopentadiene, cyclopentadiene, maleic anhydride.

PART III. OPERATING CONDITIONS

MGK-264 is processed under uniform operating conditions. MGK will retain records for the date, time, duration and location of each sample.

The test report will include one condenser operating condition during sampling events.

PART IV. TEST METHODS

For each stack test:

- A. Location of sampling ports and points. Per permit and test method requirements.
- B. Velocity and volumetric flow rate: Velocity measurements to be taken concurrently, before, and/or after each test sample.
- C. Gas composition. One integrated flue gas sample will be collected with each test run for carbon dioxide and oxygen analysis.
- D. Moisture in the flue gases. Three determinations, one measurement concurrently with each test for pollutant.
- E. Air Toxics. Use methods as described in the tables below to analyze for: dicyclopentadiene, cyclopentadiene, maleic anhydride, nadic anhydride, and 2-ethylhexylamine and all other VOC's.

Test Source: Process Reactor Line (SV 001)				
Parameter	Test Method	Procedure	Number of Runs	Length of Runs
Traverse Points	EPA Method 1 40 CFR 60, Appendix A	Linear Measurement	1	N/A
Volumetric Airflow	EPA Method 2 40 CFR 60, Appendix A	Pilot Tube	3	N/A
Moisture Content	Alternative EPA	Wet bulb/Dry bulb	3	N/A

	Method 4 40 CFR 60, Appendix A	Temperatures		
Volatile Gas Constituents	EPA Method 18 40 CFR 60, Appendix A	GC/MS	3	1 hour
Air Toxics	EPA Method 320 40 CFR 63, Appendix A and EPA Method 18 40 CFR 60, Appendix A	Gas Chromatography and Gas-phase Fourier Transform Infrared Spectroscopy	3	1 hour

Test Source: Crude Hold Tank (SV 003)				
Parameter	Test Method	Procedure	Number of Runs	Length of Runs
Traverse Points	EPA Method 1 40 CFR 60, Appendix A	Linear Measurement	1	N/A
Volumetric Airflow	EPA Method 2 40 CFR 60, Appendix A	Pilot Tube	3	N/A
Moisture Content	Alternative EPA Method 4 40 CFR 60, Appendix A	Wet bulb/Dry bulb Temperatures	3	N/A
Air Toxics	EPA Method 18 40 CFR 60, Appendix A	GC/MS	3	TBD, for the duration of the transfer

Test Source: Drumming Room(SV 005)				
Parameter	Test Method	Procedure	Number of Runs	Length of Runs
Traverse Points	EPA Method 1 40 CFR 60, Appendix A	Linear Measurement	1	N/A
Volumetric Airflow	EPA Method 2 40 CFR 60, Appendix A	Pilot Tube	3	N/A
Moisture Content	Alternative EPA Method 4 40 CFR 60, Appendix A	Wet bulb/Dry bulb Temperatures	3	N/A
Air Toxics	EPA Method 18 40 CFR 60, Appendix A	GC/MS	3	TBD, for the duration of the transfer

Test Source: Distillation Still (SV 007/008)				
Parameter	Test Method	Procedure	Number of Runs	Length of Runs
Traverse Points	EPA Method 1 40 CFR 60, Appendix A	Linear Measurement	1	N/A
Volumetric Airflow	EPA Method 2 40 CFR 60, Appendix A	Pilot Tube	3	N/A
Moisture Content	Alternative EPA Method 4 40 CFR 60, Appendix A	Wet bulb/Dry bulb Temperatures	3	N/A
Volatile Gas Constituents	EPA Method 18 40 CFR 60, Appendix A	GC/MS	3	1 hour
Air Toxics	EPA Method 320 40 CFR 63, Appendix A and EPA Method 18 40 CFR 60, Appendix A	Gas-phase Fourier Transform Infrared Spectroscopy and Gas Chromatography	3	1 hour

Test Source: Equalization Tank				
Parameter	Test Method	Procedure	Number of Runs	Length of Runs
Traverse Points	EPA Method 1 40 CFR 60, Appendix A	Linear Measurement	1	N/A
Volumetric Airflow	EPA Method 2 40 CFR 60, Appendix A	Pilot Tube	3	N/A
Moisture Content	Alternative EPA Method 4 40 CFR 60, Appendix A	Wet bulb/Dry bulb Temperatures	3	N/A
Air Toxics	EPA Method 18 40 CFR 60, Appendix A	GC/MS	3	TBD, for the duration of the transfer

PART V. OTHER

1. Description and date of last maintenance work done before the test:
No major rehabilitation or cleaning before the test other than normal maintenance operation done on a routine basis will be conducted before testing.
2. One complete test report (one hard copy) shall be submitted within 45 days after the date of the test. A copy of the microfiche report shall be submitted within 105 days after the date of the test.
3. Test Plans, Hard Copy Reports, and Microfiche Copy submittals will be addressed to:
Minnesota Pollution Control Agency
Air Quality Performance Test Coordinator,
520 Lafayette Road,
St. Paul, Minnesota 55155-4194

Microfiche copying services are available by contacting the State Department of Administration - Micrographics Services Unit at (612)779-5200. The complete permit number (use an AQD number if no permit exists), complete facility name, and the exact date of testing must be provided for identification purposes.

APPENDIX D

Facility Name: McLaughlin Gormley King Company
Permit Number: 01900031-001

Implementation of Total Facility Air Toxics Review (ATR)

The Permittee shall follow the March 2000 ATR guide. The basic elements of the ATR shall include at a minimum the following:

1. Identification of Chemicals of Potential Concern per March 2000 ATR guide;
2. Toxicity Assessment.
3. Quantified Chemicals of Concern;
4. Air Dispersion Modeling. The Permittee shall submit the protocol showing how the following averaging periods will be produced for the identified chemicals of concern;
 - a) Air Toxics Pollutants: 1-hour, 3-month, and annual concentrations and
 - b) Criteria Pollutants: 1-hour, 8-hour, 24-hour and annual concentrations, as applicable to demonstrate compliance with Minnesota Ambient Air Quality Standards.
5. Exposure Assessment;
6. Qualitative Analysis; and
7. Risk Characterization.

The ATR guide describes the expected content of an ATR's scope of work. It is strongly encouraged that the Permittee consult directly with the MPCA to develop the list of Chemicals of Concern (COC) in item 3 above from the first list of chemicals, the Chemicals of Potential Concern (COPC) in item 1 above. The MPCA will provide direction for dispersion modeling based on the units identified as emitting COCs.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 01900031-001

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 2879)
McLaughlin Gormley King Company 8810 Tenth Avenue North Minneapolis, Minnesota 55427 Phone Number: (952) 448-1750	McLaughlin Gormley King Company 4001 Peavey Road, Chaska, Minnesota 55318 Carver County

1.2. Description of the Permit Action

This Part 70 Permit is an Air Emission Operating Permit required by Title V of the federal Clean Air Act Amendments of 1990, codified in 40 CFR pt. 70. "Part 70" is a section in the Code of Federal Regulations for the Protection of the Environment. Previously, the facility operated under an installation and operation permit, and two amendments.

The permit application for issuance of McLaughlin Gormley King Company (MGK)-Chaska's Part 70 Total Facility Operating Permit was postmarked April 15, 1995 and received by the Minnesota Pollution Control Agency on April 17, 1995, in accordance with its deadline.

MGK-Chaska submitted information in its permit application that was claimed to be confidential in written correspondence. The MPCA staff determined that some information would be kept confidential. On January 3, 2002, the MPCA's Commissioner made the final determination that the process flow diagrams will be kept confidential. There is a confidential and non-confidential version of the permit application but one version of the permit. Nothing in the permit will be considered confidential information.

1.3. Stationary Source Description

McLaughlin Gormley King Company-Chaska owns and operates an insecticide manufacturing and formulating facility at 4001 Peavey Road, Chaska, Carver County, Minnesota. The stationary source is divided into three Phases. Phase 1 is the manufacturing process with supporting warehouse, tank farm and utilities, which produces an organic chemical. Phase 2 is the formulating process with supporting warehouse and tank farm. Phase 3 is the pyrethrum oleoresin refining plant

The main source of emissions from the stationary source are Hazardous Air Pollutants (HAP). The existing facility is a major emission source for Title V. The facility is a true minor for all criteria pollutants. The facility is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Pesticide Active Ingredient Production. The facility will comply with the applicable provisions as specified in Part 63, subpart MMM, Pesticide Active Ingredient Production by December 23, 2003 or any other alternative date that EPA approves.

MGK-Chaska submitted information, which was requested to be confidential. The confidential information was based on “process or methods of production unique” to MGK- Chaska. The information also reflects technology, which MGK-Chaska has licensed, and which is unique to the company. Based on the information received by MGK, the MPCA staff will keep the process flow diagrams and the description of some of the emission units as listed in the permit application confidential.

1.4. Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

Permit Number and Issuance Date	Action Authorized
01900031-002, AQD 2046-97-I/O-1, June 6, 1997	The installation and operation permit for a Pyrethrum Oleoresin Refinery Process Plant
01900031-003, Major Amendment to 01900031-002	Modification to the Oleoresin Refinery Process Plant’s permit which included changes to the description, recordkeeping, and compliance demonstration for the plant

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM10 Tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions*	3.20	3.20	0.0	13.7	2.4	17.63	0.0	30.0	38.05
Total Facility Actual Emissions	0.09	0.09	0.0	0.66	0.2	5.5	0.0	10.0	10.0

*These are the limited potential emissions from column 3 in GI-07 from Delta. They differ from those in the permit application sent by the company in that they have been verified and corrected as needed by MPCA staff. These are the potential emissions that appear in the public notice.

Table 2. Facility (TF) and Permit Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
Prevention of Significant Deterioration (PSD)			PM, PM ₁₀ , NO _x , SO ₂ , CO, VOC/Ozone
Non attainment Area Review (NAAR)	N/A	N/A	N/A
Part 70 Permit Program	HAP	N/A	PM ₁₀ , NO _x , SO ₂ , CO, VOC/Ozone

* Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or Operational Limit

Table 3: Regulatory Overview of Facility

* Level	Applicable Regulations	**Comments:
Total Facility	Minn. R. chs. 7002, 7007, 7011, 7019, 7 and 7030,	This section of Table A contains requirements that apply to all facilities in Minnesota. Reporting requirements are contained in Table B of the permit.
EU 001, 008, 112, 114 and 115	Minn. R. 7011.0700-7011.0735	Standards of Performance for Industrial Equipment. This standard includes limits for particulate matter and opacity.
EU 093, 094, 110	Minn. R. 7011.0510-7011.0545	Standards of Performance for Indirect Heating Equipment. This rule specifies limits for particulate matter, sulfur dioxide and opacity.
EU 112, 115 and 119	40 CFR 63, subp. MMM	National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient (PAI) Production. The standard regulates HAP emissions from facilities that are major sources and produce PAI's for use in insecticide, herbicide or fungicide products.
CE 001-003, 008-009, 012	Minn. R. 7011.0800, subp. 2	The Permittee will operate and maintain each piece of listed pollution control equipment according to the manufacturer's specifications, and will comply with the requirements specified in the permit. The control equipment is an integral part of the process.

* Level—EU = emission unit, GP = group, TF= total facility, SV= stack/vent, CE= control equipment

3. Technical Information

3.1. Potential to Emit Calculations (See attached)

3.2 Potential to Emit (PTE)

MGK-Chaska calculated emissions for each process operating at 8760 hours per year and arrived at the following summary in tons per year for the stationary source:

Criteria Pollutants	Unrestricted PTE (tons per year)	Permitted PTE (tons per year)	Hazardous Air Pollutants	Unrestricted PTE (tons per year)	Permitted PTE (tons per year)
PM	3.20	3.20	Baygon	0.26	0.26
PM ₁₀	3.20	3.20	Hexane	1.75	1.75
SO ₂	0.0	0.0	Methanol	6.0	6.0
NO _x	13.7	13.7	Methylene Chloride	30.0	30.0
CO	2.40	2.40	Maleic Anhydride	0.04	0.04
VOC	17.71	17.63	Total HAPs	38.05	38.05
Lead	0.0	0.0			

3.3 Periodic Monitoring

Section 70.6(a)(3) of the Title V regulations specified the standard monitoring and related record keeping and reporting requirements that each Title V permit must contain. One important element of the monitoring, record keeping, and reporting requirement of Title V is that each permit must contain periodic monitoring sufficient to yield reliable data from a relevant time period that is representative of the facility's compliance with the permit.

Under Minn. R. 7007.0800, subp. 4, the MPCA will require the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements. To achieve this objective, the MPCA staff considered all the relevant factors approved by EPA periodic monitoring requirements for permitted sources.

In evaluating the monitoring included in the permit, the MPCA considered the following:

1. The likelihood of violating the applicable requirements;
2. Whether add-on controls the applicable requirements;
3. The variability of emissions over time;
4. The type of monitoring, process, maintenance, or control equipment data already available;
5. The technical and economic considered associated with the range of possible monitoring methods; and
6. The type of monitoring found on similar emission units.

Table 4: Emission Subject to Periodic Monitoring

SV/EU/GP/CE	Emission Limit (Basis)	Additional Monitoring	Discussion
Total Facility (TF)	Computer Dispersion Modeling (Minn. R. 7007.0800) Risk Assessment (Minn. R. 7007.0800)	Air Dispersion Modeling Air Toxics Review Analysis	This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.
Process and Utility Boilers. (EU 093, 094, 110, CE 033, and GP 002)	a. PM: ≤ 0.4 lb/MMbtu with a 3-hour basis (Minn. R. 7011.0515) b. $SO_2 \leq 1.6$ lbs/MMBtu on a 3-hour basis (based on Minn. R. 7011.0515) c. Opacity ≤ 20 % except for one six-minute period per hour of not more than 60% opacity. (Minn. R. 7011.0515)	Recordkeeping: Record and maintain records of the amount of fuel combusted in the unit on a monthly basis.	Since the boilers will be fired with natural gas and propane, there will be no significant PM emissions, therefore, no additional periodic monitoring is required.
Reactor, Product Recovery Still and Crude Still (EU 001, 008, 112, CE 001, 002, 003, 008, 009, 012, and 007)	a. PM/PM10: variable depending on the airflow. (Minn. R. 7011.0715) b. Opacity ≤ 20 % (Minn. R. 7011.0715) c. VOC: Shall operate and maintain the condensers.	O and M plan and Inspections.	a. The engineering calculations showed that the PM emissions would be less than what is allowed under Minn. R. 7011.0715. Non-compliance is unlikely therefore, no additional periodic monitoring will be required. b. No visible emissions are expected from these units. c. The condensers are used to remove high percentage of VOCs. This allows the recovery of the solvent. Monitoring and operating according to manufacturer's specifications will be adequate to have a reasonable assurance of compliance (daily and periodic

			inspections).
Reactor Still (EU 001)	<p>Process Throughput: less than 30 batches per month;</p> <p>Process Throughput: less than 150 batches per year based on a 12-month rolling sum (Minn. R. 7007.0800, subp. 2)</p>	<p>Recordkeeping: Maintain records of batches per month and batches per 12-month rolling sum.</p> <p>Performance Test: November 15 or 30 days after permit issuance or when the process runs next, whichever is later.</p>	<p>The performance test will be done to measure dicyclopentadine, cyclopentadine, maleic anhydride, nadic anhydride, 2-ethylhexylamine, and then all other VOC's associated with the MGK-264 process.</p> <p>The Permittee cannot make a change to the batch formulation without performing a performance test.</p>
Py Still. (EU 117)	<p>a. PM/PM10; variable depending on the airflow. (Minn. R. 7011.0715)</p> <p>b. Opacity \leq 20% (Minn. R. 7011.0715)</p>	None	No PM or visible emissions are expected for these units, therefore, no periodic monitoring is warranted.
Methanol Still and Wax Still (EU 115 and 119)	<p>a. Organic HAP: reduce inlet emissions of total organic HAPs by 90 percent or greater (40 CFR pt. 63, subp MMM)</p> <p>b. PM/PM10; variable depending on the airflow. (Minn. R. 7011.0715)</p> <p>c. Opacity \leq 20% (Minn. R. 7011.0715)</p>	O & M Plan and inspections for the condensers on a daily basis.	<p>a. The intention of the standard is to reduce HAP emissions from existing and new facilities that manufacture pesticide active ingredient. By complying with the monitoring and operating procedures of the rule, MGK will reduce HAP emissions. The specifications in the rule will be adequate to have a reasonable assurance of compliance (daily and periodic inspections)</p> <p>b. & c. No PM/PM10 or visible emissions are expected from these units; therefore, no periodic monitoring is warranted.</p>

Crude Still (EU 115)	<p>a. Organic HAP \leq 330 lbs per year based on a 12-month rolling average. (40 CFR 63.1362(b)(2))</p> <p>b. PM/PM10; variable depending on the airflow. (Minn. R. 7011.0715)</p> <p>c. Opacity \leq 20% (Minn. R. 7011.0715)</p>	Recordkeeping per 40 CFR pt. 63, subp. MMM	The Permittee must keep records of the applicability determination for this process. The still is exempt from the provisions of 40 CFR pt. 63, subp. MMM
Fabric Filter (CE 044 and GP 001)	Minn. Stat 116.07, subp 4a, Equipment used under Minn. R. 7019.3020 (F)	Recordkeeping, O & M inspections, if the company plans on taking credit or use for emission inventory.	The fabric filter is not necessary in order for the process to meet applicable emission limits. If used for emission inventory purposes, the monitoring based on Minnesota Performance Standard for Control is adequate to have reasonable assurance of compliance

3.3 National Emission Standards for Hazardous Air Pollutants: Pesticide Active Ingredient Production (PAI)

The National Emission Standards for Hazardous Air Pollutants: PAI rule was promulgated on June 23, 1999. MGK is an existing major source that will comply with the rule. On June 3, 2002, the federal Register published the direct final to extend the existing source compliance date for PAI MACT from August 22, 2002, to December 23, 2003. Therefore MGK must comply with the PAI MACT by December 23, 2003. The maximum achievable control technology (MACT) standards mandated by the Clean Air Act (CAA) will ensure that all major sources of air toxic emissions achieve the level of control already being achieved by the better controlled and lower emitting sources.

MGK has three emission units at its facility that will be subject to the PAI process vent provisions. They are methanol, wax and crude still. The other part of the facility is the formulating process; The formulation of pesticide products is not considered part of a PAI process unit. MGK will have to reduce uncontrolled organic HAP emissions from the collection emissions from all vents by 90 percent or greater by weight.

MGK will use condensers as control equipment to reduce HAP emissions. As indicated by the rule, condensers are exempt from performance testing. MGK will comply with the monitoring

and recordkeeping requirements in the rule. The storage tanks for the PAI processes at MGK will be exempt based on the capacity of the tanks. Also, MGK will operate the crude still equipment in organic HAP service less than 300 hours during the calendar year; therefore, they meet the exemption provisions of the rule. The methanol and wax stills are subject to the equipment leaks provisions of the rule. Wastewater streams at MGK are exempt because they meet the exemption provisions of the rule.

The following table is a summary of the reports that MGK must submit to EPA and the MPCA to comply with the reporting requirements of PAI MACT:

Reports	Due Date	Information Specified in the Report
Precompliance Plan	December 23, 2001 (Done) 40 CFR Section 63.1368 (e)	<ol style="list-style-type: none"> 1. Requests for approval to use alternative monitoring parameters or request to set monitoring parameters according to 40 CFR 63.1366(b)(4) 2. Descriptions of the daily or per batch demonstrations to verify that control devices subject to 40 CFR 63.1366 (b)(1)(i) which are the condensers operating as designed. 3. Data and rational used to support the parametric monitoring level(s) that are set according to 40 CFR 63.1366(b)(3)(ii)(B) (Establish the limit against which your monitored values for a control device operating parameter is compared during the initial compliance demonstration. The limit should be associated with the most challenging or worst case conditions for the control device, and meeting it will demonstrate ongoing compliance at all times.) 4. For owners and operators complying with the requirements of 40 CFR 63.1362 (i), the pollution prevention demonstration summary. (pg. 33599-33600 in the final rule) 5. Data and rationale used to support an engineering assessment to calculate uncontrolled emissions for process vents. (Calculate the uncontrolled emissions according to the procedures described in (emission estimation procedures OR engineering assessments)
Initial Notification	October 23, 1999 (Done) 40 CFR Section 63.9(b)(2)(i) through (v)	<p>The Permittee must submit the following to the EPA and MPCA:</p> <ol style="list-style-type: none"> 1. The name and address of the owner or

		<p>operator;</p> <ol style="list-style-type: none"> 2. The address of the affected source; 3. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; 4. A brief description of the nature, size, design, and method of operation of the source, including its operating design capacity and identification of each point of emission for each HAP, or if a definitive identification is not yet possible, a preliminary identification of each point of emission for each HAP; and 5. A statement of whether the affected source is a major source or an area source.
Initial Notification of Compliance Status	Due 150 days after compliance date. The compliance date for this subpart was extended from August 22, 2002 to December 23, 2003.	<p>The Permittee must submit the following:</p> <ol style="list-style-type: none"> 1. The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP emissions for the source; 2. The results of emission profiles, performance tests, engineering analysis, design evaluations, or calculations used to demonstrate compliance; 3. Descriptions of monitoring devices, monitoring frequencies, and the values of monitored parameters established during the initial compliance determinations including data and calculations to support the levels established; 4. Operating scenarios; 5. Descriptions of absolute or hypothetical peak-case operating and/or testing conditions for control devices; 6. Identification of emission points subject to overlapping requirements; 7. Anticipated periods of planned routine maintenance during which the owner or operator would not be in compliance; and 8. Percentage of total production from a PAI process unit that is anticipated to be produced for use as a PAI in the 3 years after either June 23, 1999, or startup, whichever is later.
Periodic Reports	Due 240 days after Initial Notification of Compliance Status and	The report must be submitted if the total duration of excess emissions, parameter exceedances, or excursions for the reporting

	every 6 months thereafter	period 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring systems downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period. The report must also include the equipment leaks summary.
Reports of startup, shutdown, and malfunction	Due 240 days after Initial Notification of Compliance Status and every 6 months thereafter (only required if a startup shutdown or malfunction occurred during the reporting period.	The report shall include the information specified in 40 CFR Section 63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. Reports are only required if a SSM occurred during the reporting period. Any time an owner or operator takes an action that is not consistent with the procedures specified in the source's SSM plan, the owner or operator shall submit an immediate SSM report.
Notification of process change	Quarterly Report: Whenever the process change is made or any of the information submitted in the Notification of Compliance Status report changes must be submitted on a quarterly report	The report must include the following: (1) A brief description of the process change; (2) A description of any modifications to standard procedures or quality assurance procedures; (3) Revisions to any of the information reported in the original Notification of Compliance Status report; (4) Information required by the Notification of Compliance Status for changes involving the addition of processes or equipment.
Reports of equipment leaks	Report must be submitted with the Notification of compliance status report	Each group of processes subject to the requirements must include the following: (1) Identification of the group of processes; (2) Approximate number of each equipment type (e.g. valves, pumps) in organic HAP service, excluding equipment in vacuum service); (3) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals");

3.4 Insignificant Emission Units (IEU)

The IEU are in Appendix B of the permit. These IEU are subject to the state general applicable requirements. It is our belief that IEU's listed in Appendix B of the permit associated with inconsequential environmental impacts and present little potential for violations of general applicable requirements, therefore, no periodic monitoring will be required.

3.5 WORK PLAN FOR McLAUGHLIN GORMLEY KING

The goal of the work plan is to estimate the risk of air emissions from McLaughlin Gormley King's facility. The work plan includes air emissions testing requirements while MGK produces MGK-264. The work plan also includes a schedule for completing Air Toxics Review (ATR) for the total facility and air dispersion modeling. MGK's Title V Operating Permit will incorporate the emissions testing requirements and a schedule for completing the air dispersion modeling and the ATR as an offset based on comments received during the first public informational meeting dated April 18, 2002. See Appendix C of the permit, which includes an approved stack test plan for MGK.

The MPCA is requiring that the Air Toxics Review evaluate MGK's total facility, not only the MGK-264 process. The ATR itself has a series of elements to be completed which are the following:

- Identify chemicals of concern, their sources and estimate their emission rates;
- Conduct air dispersion modeling;
- Identify inhalation health benchmark toxicity values and other health information about the chemicals to assess potential health risks; and
- Write a report that describes the assessment process, characterizes potential health risks, including increased risk of cancer or other health effects, and describes uncertainties associates with these estimates.

The MPCA staff will review the results of the performance test to ensure that the appropriate quality assurance/quality control steps were taken, and to determine what the operating conditions of the process tested.

MGK will use the performance test results and other current data to generate emission rates for the ATR.

The ATR results are used to determine if further controls at MGK are necessary at the stacks. If computer air dispersion modeling results show that health benchmarks are exceeded, the MPCA will direct MGK to propose means of changing the facility. These changes can include raising stacks; adding pollution control equipment; changing methods of operating processes; or a combination of these methods. The exact change necessary depends on which chemical and piece of process equipment is identified as causing a problem.

After the permit is issued, if there are changes the facility has to make, the MPCA will do a mandatory reopening and amend the permit under Minn. R. 7007.1600, to incorporate any new changes.

4. Conclusion

Based on the information provided by the McLaughlin Gormley King Company-Chaska the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 01900031-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on the Permit Team:

Policy and Planning: Anne Jackson. P.E. at (651) 296-7949

Staff Engineer: Amrill S. Okonkwo, at (651) 296-7009

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Attachments:

- A. Form GI-07 (Facility Emission Summary)
- B. Form CD-01 (Compliance Form)
- C. Emission Calculations
- E. MGK's agreement letter
- F. Response to Comments Document

Amrill Okonkwo, April 15, 2003

FORM GI-07 (FACILITY EMISSION SUMMARY)
Paper Copy Only

FORM CD-01 (COMPLIANCE FORM)
Paper Copy Only

EMISSION CALCULATIONS
Paper Copy Only

LETTER OF AGREEMENT FROM MGK
Paper Copy Only