

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

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SEP 22 2006

CERTIFIED MAIL, 70041160000081716862
RETURN RECEIPT REQUESTED

Mr. William K. Alexander, Site Leader
The Dow Chemical Company – Riverside Plant
500 Dow Industrial Drive
Pevely, MO 63070

Re: The Dow Chemical Company – Riverside Plant, 099-0014
Permit Number: **OP2006-069**

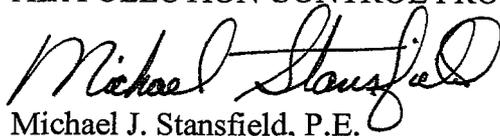
Dear Mr. Alexander:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation, in accordance with the rules and regulations cited in this document, is necessary for continued compliance. It is very important you read and understand the requirements contained in your permit.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program at (573) 751-4817, or you may write to the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your time and attention.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS: bgk

Enclosures

c: Ms. Tamara Freeman, US EPA Region VII
Mr. Tom Sims, St. Louis Regional Office
PAMS File: 2005-09-028



PART 70 PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

Operating Permit Number: OP2006-069

Expiration Date: SEP 21 2011

Installation ID: 099-0014

Project Number: 2005-09-028

Installation Name and Address

The Dow Chemical Company – Riverside Plant
500 Dow Industrial Drive
Pevely, MO 63070
Jefferson County

Parent Company's Name and Address

The Dow Chemical Company
Willard H. Dow Center 2030 Building
Midland, MI 48674

Installation Description:

The installation manufactures polystyrene and extruded polystyrene foam products.

SEP 22 2006

Effective Date

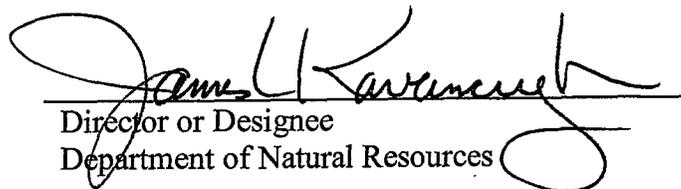

Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

The installation manufactures polystyrene and extruded polystyrene foam products. The reported actual emissions for the past five years for the installation are listed below:

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2005	0.16	0.01	1.37	1.36	1.15	0.00	Reported as VOC
2004	0.11	0.01	1.43	1.72	1.20	0.00	
2003	1.44	0.01	3.17	1.84	2.06	0.00	
2002	1.50	0.01	3.44	1.52	2.18	0.00	
2001	1.37	0.01	3.38	86.85	2.08	0.00	

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emits air pollutants and which is identified as having unit-specific emission limitations.

Emission Unit #	Description of Emission Unit
-----------------	------------------------------

Polystyrene Polymerization Plant

EU0010	West Styrene Storage Tank
EU0020	Ethylbenzene Storage Tank
EU0030	Styrene/Ethylbenzene Main Recycle Tank
EU0040	East Styrene Storage Tank
EU0050	Styrene/Ethylbenzene Tank Car/Tank Truck Load-out
EU0060	Reactor/Devolitizer Vacuum Pump
EU0070	Dowtherm Polymerizing Heater/VOC Vapor Afterburner
EU0080	Polystyrene Forming Die
EU0090	Polystyrene Cutter/Screening w/Sock
EU0100	Two Polystyrene Classifying Cyclones

Extruded Polystyrene Plant

EU0110	Extruded Polystyrene Scrap Baghouse-M/L Line
EU0120	Extruded Polystyrene Scrap Baghouse-48" Line
EU0130	Central Vacuum System
EU0140	Emergency Fire Water Pump, 258 Horsepower (hp) Diesel Engine

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment which does not have unit specific limitations at the time of permit issuance.

Reference #	Description of Emission Unit
EP-01	Three M/L line Extruded Polystyrene Additive Feeders
EP-03	Three 48" line Extruded Polystyrene Additive Feeders
EP-06	Polystyrene Feed Hopper – M/L Line
EP-07	Polystyrene Feed Hopper – 48" Line
EP-13	Polystyrene Feed Hopper-M/L Line w/Sock
EP-16	Polystyrene Feed Hopper-48" Line w/Sock
EP-19	Polystyrene Storage Silos
EP-20	Reclaimed Polystyrene Storage Silo
EP-27C	Boiler No. 1 East, 3.35 MMBtu/hr, pipeline natural gas, Johnston Co. 1997
EP-27D	Boiler No. 2 West, 3.35 MMBtu/hr, pipeline natural gas, Johnston Co. 1997
EP-29	Polymerization Reactor
EP-33	Polystyrene for extrusion Storage Silo w/Sock
EP-34	Polystyrene Fines Removal w/Sock
EP-36	Polystyrene Storage Hoppers
EP-37	Polystyrene Hopper Car and Truck Load-out, enclosed
EP-45	R-142B Storage Tank
EP-46	2,400 Gallon Propane Storage Tank, forklift fuel
EP-47	Equipment Painting
EP-58	14 Space Heaters, 21.78 MMBtu/hr total, pipeline natural gas, direct fired, 1995

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

None

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

Permit Condition PW001

10 CSR 10-6.220

Restriction of Emission of Visible Air Contaminants

Emission Limitation:

- 1) No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any new source any visible emissions with an opacity greater than 20%.
- 2) Exception:
 - a) Existing sources in the St. Louis metropolitan area that are not incinerators and emit less than twenty-five (25) lbs/hr of particulate matter shall be limited to 40% opacity.
 - b) A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 40%.

Monitoring:

- 1) The permittee shall conduct opacity readings on this emission unit using the procedures contained in USEPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The following monitoring schedule must be maintained:
 - a) Monthly observations shall be conducted for a minimum of eight consecutive months after permit issuance. Should no violation of this regulation be observed during this period then
 - b) Observations must be made once every two (2) months for a period of eight months. If a violation is noted, monitoring reverts to monthly. Should no violation of this regulation be observed during this period then
 - c) Observations must be made semi-annually (i.e., once per reporting period). Observation shall be conducted during the January-June reporting period and during the July-December reporting period. If a violation is noted, monitoring reverts to monthly.
- 3) If the source reverts to monthly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:

- 1) The permittee shall maintain records of all observation results (see Attachment A-1 or A-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions.

- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment A-3)
- 4) Attachments A-1, A-2 and A-3 contain logs including these recordkeeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with **this requirement**.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

Permit Condition PW002

10 CSR 10-6.065

Operating Permits

Voluntary Permit Condition, 10 CSR 10-6.065(6)(C)2.A

Emission Limitation:

- 1) The permittee shall not emit 95 tons or more of VOC emissions per consecutive 12-month period; and
- 2) The permittee shall emit less than 24.5 tons of any combination of HAPs per consecutive 12-month period.

Monitoring/Recordkeeping:

- 1) The permittee shall determine the VOCs and HAPs emissions on a monthly and on a consecutive 12-month basis.
- 2) The permittee shall retain on-site the records of the monthly and the consecutive 12-month VOC and total HAPs emissions and calculation data for the installation. Example forms are attached as Attachments B-1 and B-2. The permittee may use these forms, or forms of its own, so long as the forms used will accurately demonstrate compliance with the VOC and HAPs emission limitation (less than 95 tons per consecutive 12-month period of VOCs and 24.5 tons per consecutive 12-month period of any combination of HAPs).

Reporting:

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of the emission limit demonstrated by the appropriate recordkeeping forms.

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

3) EU0010 through EU0080 Polystyrene Polymerization and Forming			
Emission Unit	Description	Installation Year	2004 EIQ Reference #
EU0010	West Styrene Storage Tank	1974	EP-08
EU0020	Ethylbenzene Storage Tank	1972	EP-11
EU0030	Styrene/Ethylbenzene Recycle Tank	1984	EP-55
EU0040	East Styrene Storage Tank	1974	EP-12
EU0050	Styrene/Ethylbenzene Tank Truck and Tank Car Load-out	1984	EP-60
EU0060	Reactor/Devolitizer Vacuum Pump	1975	EP-30
EU0070	Dowtherm Heater/Vacuum Vapor Afterburner	1992	EP-18
EU0080	Polystyrene Forming Die	1975	EP-31

Permit Condition EU0010-001 through EU0080-001
10 CSR 10-5.410 Control of Emissions From Manufacture of Polystyrene Resin

Emission Limitation:

- 1) The permittee shall limit the volatile organic compound (VOC) emissions to a daily average of 0.24 pounds of VOC per 2000 pounds (lbs.) of resin produced by the installation.
- 2) The emissions limitation shall be achieved through the use of a condensation device that recycles styrene monomer through the resin manufacturing process or by the use of a control device approved by the director that will provide an equivalent emissions reduction.

Monitoring:

- 1) Compliance with emission limit shall be determined by the Test Method 25 of 40 CFR Part 60, Appendix A.
- 2) The emission control equipment shall be maintained according to good air pollution control practices at all times, including startup, shutdown and malfunction.

Recordkeeping:

- 1) The permittee shall retain all records of source tests, emission factors and throughputs used in calculating the VOC emissions from the polystyrene resin plant.
- 2) Records shall be retained of all inspections and maintenance performed on control devices.
- 3) These records shall be made available immediately for inspection to the Department of Natural Resources personnel upon request and shall be retained for 60-consecutive months.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of the emission limitation(s).
- 2) Report any deviations from monitoring other than the recordkeeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

Permit Condition EU0010-002 through EU0080-002

10 CSR 10-6.065

Operating Permits

Voluntary Permit Condition, 10 CSR 10-6.065(6)(C)2.A

Emission Limitation:

- 1) The permittee shall not emit 9.5 tons or more of styrene emissions per consecutive 12-month period from the polystyrene resin production plant.
- 2) The permittee shall not emit 9.5 tons or more of ethylbenzene emissions per consecutive 12-month period from the polystyrene resin production plant.

Monitoring:

- 1) The styrene and ethylbenzene emissions from the polystyrene production plant emission units listed above shall be determined on a monthly and on a consecutive 12-month basis.
- 2) The permittee shall comply with the monitoring requirements of 40 CFR part 63, Subpart JJJ, Permit Conditions (EU0060 and EU0070)-003 through (EU0060 and EU0070)-012.

Recordkeeping:

- 1) The permittee shall retain all records of source tests, emission factors and throughputs used in calculating the styrene and ethylbenzene emissions from the polystyrene resin production plant.
- 2) Attachments C-1 and C-2, or similar forms can be used for recording the monthly and the consecutive 12-month emissions.
- 3) Records shall be retained of all inspections and maintenance performed on control devices.
- 4) These records shall be made available immediately for inspection to the Department of Natural Resources personnel upon request and shall be retained for 60-consecutive months

Reporting:

- 1) The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of the emission limitation(s).
- 2) Report any deviations from monitoring other than the recordkeeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit

Permit Condition EU0030-003

40 CFR Part 63, Subpart JJJ

**National Emission Standards for Organic Hazardous Air Pollutant Emissions: Group IV
Polymers and Resins**

Emission Limitation:

For each Group 2 storage vessel that is not part of an emissions average as described in 40 CFR 63.1332 of Subpart JJJ, the owner or operator shall comply with the recordkeeping requirement in §63.123(a) of Subpart G and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123 of

Subpart G.

[40 CFR 63.1314(a) and 40 CFR 63.119(a) & (a)(3)]

Recordkeeping:

For each Group 2 storage vessel, the permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 2 status and is in operation. [40 CFR 63.123(a)]

Permit Condition EU0060-003 and EU0070-003

40 CFR Part 63, Subpart JJJ

**National Emission Standards for Organic Hazardous Air Pollutant Emissions: Group IV
Polymers and Resins**

Emission Limitation:

- 1) The existing affected emission units shall be in compliance with 40 CFR Part 63, Subpart JJJ by June 19, 2001. [§63.1311(c)]
- 2) The permittee may request an extension allowing an existing affected source up to 1 additional year to comply with Section 112(d) standards. A request for an extension shall be submitted to the permitting authority as part of the operating permit application or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than 120 days prior to June 19, 2001. [§63.1311(e)]
 - a) A request for an extension of compliance shall include the data described in §63.6(i)(6)(i)(A), (B), and (D). [§63.1311(e)(1)]
 - b) The requirements in §63.6(i)(8) through §63.6(i)(14) shall govern the review and approval of requests for extensions of compliance. [§63.1311(e)(2)]
 - c) The permittee may submit a compliance extension request after the date specified in §63.1311(e), provided that the need for the compliance extension arose after that date and the need arose due to circumstances beyond reasonable control of the permittee. This request shall include, in addition to the information specified in §63.1311(e)(1), a statement of the reasons additional time is needed and the date when the permittee first learned of the circumstances necessitating a request for compliance extension. [§63.1311(e)(3)]
- 3) The permittee of this affected source producing polystyrene resin using a continuous process has elected to reduce the HAP emissions from a continuous process vent in a combustion device to achieve a concentration of not more than 20 parts per million by volume (ppmv) on a dry basis. Compliance can be based on either organic HAP or TOC minus methane and ethane. The concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions. [§63.1316(c)(1)(iii)(A)]

Monitoring:

- 1) Each owner or operator of a process vent that uses a process heater of less than 44 megawatts design heat input capacity to comply with the requirements of §63.1316(c)(1)(iii)(A) shall install a temperature monitoring device in the firebox equipped with a continuous recorder. [§63.1315 & §63.114(a)(3)]
- 2) All monitoring equipment shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications or other written procedures. [§63.1315 & §63.114(a)]

- 3) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall,
 - a) Install, set or adjust, maintain and operate a flow indicator that takes a reading at least every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line. [§63.1315 & 63.114(d)(1)]
 - i) The permittee has a liquid knock out pot installed in the vacuum line. A sensor in the pot detects abnormal liquid levels and will open a valve to vent the liquid to the atmosphere. The high level liquid sensor and the by-pass valve opening and closing send signals to a computer that triggers alert alarms for the process heater malfunctioning and the vapor line venting to the atmosphere.
 - b) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to paragraph (c)(1) of the monitoring section of this permit condition. [§63.1315 & 63.114(d)]
- 4) The permittee shall establish a minimum temperature level that indicates proper operation of the process heater in controlling HAP emissions. [§63.1315 & §63.114(e)]

Testing Requirements:

- 1) The permittee shall conduct a performance test to show compliance with the organic HAP concentration limit of §63.1316(c)(1)(iii)(A). [§63.1317, §63.1315(a) & §63.116(c)]
- 2) To determine compliance with the concentration limit, Method 18 or Method 25A of 40 CFR Part 60, appendix A may be used. [§63.1315(a)(11)] The use of Method 25A shall conform with;
 - a) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions. [§63.1315(a)(11)(i)] and
 - b) The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale. [§63.1315(a)(11)(ii)]
- 3) To determine the parts per million by volume concentration, corrected to 3 percent oxygen, follow the procedures of §63.116(c)(3)(i), (ii) and (iii). [§63.1317, §63.1315(a)]
- 4) During initial compliance testing, the firebox temperature shall be continuously monitored during the three required 1-hour runs. The temperature monitoring level shall be established as the average of the minimum temperatures from the three test runs during which the HAP emission concentration is in compliance with §63.1316(c)(1)(iii)(A). [§63.1334(b)(2)]
- 5) Performance testing shall be conducted in accordance with the applicable requirements of §63.7(a)(1), (a)(3), (d), (e)(1), (e)(2), (e)(4), (g), (h), and paragraph (d) of this section, with the exceptions noted in paragraph (e)(1) through (e)(5) of this section. [§63.1333(a)]
 - a) Performance tests shall be conducted in accordance with §63.7(e)(1) and (e)(2) except that the tests shall be conducted at maximum representative operating conditions achievable during one of the time periods described in §63.1333(e)(1)(i), without causing any of the situations described in §63.1333(e)(1)(ii). [§63.1333(a)(1)]
 - i) The 6-month period that ends 2 months before the Notification of Compliance Status is due, according to §63.1335(e)(5); or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test. [§63.1333(a)(1)(i)]
 - ii) Causing damage to equipment; necessitating that the permittee make product that does not meet an existing specification for sale to a customer; or necessitating that the permittee make product in excess of demand. [§63.1333(a)(1)(ii)]
 - b) The requirements in §63.1335(e)(5) shall apply instead of the references in §63.7(g) to the Notification of Compliance Status requirements in §63.9(h). [§63.1333(a)(2)]

- c) Because the site-specific test plans in §63.7(c)(3) are not required, §63.7(h)(4)(ii) is not applicable. [§63.1333(a)(3)]
- d) The permittee shall notify the Administrator of the intention to conduct a performance test at least 30 days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present during the test. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the permittee shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement. [§63.1333(a)(4)]
- e) Performance tests shall be performed no later than 150 days after the compliance dates specified in this subpart (i.e., in time for the results to be included in the Notification of Compliance Status), rather than according to the time tables in §63.7(a)(2) of Subpart A of this part. [§63.1333(a)(5)]
- 6) Data shall be reduced in accordance with the EPA approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of Appendix A of this subpart. [§63.1333(d)]

Compliance Determinations:

- 1) *Parameter monitoring excursions.* Each of the following is a single excursion for the control device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in §63.1334(d). [§63.1334(f)(1)]
 - a) When the daily average value of the firebox temperature is below the minimum temperature value established during the performance test. [§63.1334(f)(1)(i)]
 - b) When the period of control is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in §63.1334(f)(1)(v), to constitute a valid hour of data for at least 75 percent of the operating hours. [§63.1334(f)(1)(ii)]
 - c) When the period of control is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data as defined in §63.1334(f)(1)(v). [§63.1334(f)(1)(iii)]
 - d) Monitoring data are insufficient to constitute a valid hour of data, as noted in (a)(2) and (a)(3) above, if measured values are unavailable for any of the 15-minute periods within the hour. [§63.1334(f)(1)(iv)]
 - e) The following are not to be considered periods of control device operation for paragraphs (a)(2) or (a)(3) noted above. [§63.1334(f)(1)(v)]
 - i) Monitoring system breakdowns, repairs, calibration checks, and zero and high-level adjustments.
 - ii) Start-ups
 - iii) Shutdowns
 - iv) Malfunctions; or
 - v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.
- 2) *Excused Excursions.* A number of excused excursions shall be allowed for each control device for each semi-annual period for affected sources required to submit Periodic Reports semi-annually or quarterly. The first semi-annual period is the 6-month period starting the date the Notification of Compliance Status is due. [§63.1334(g)]
 - a) For the first semi-annual period – six excused excursions.
 - b) For the second semi-annual period – five excused excursions.

- c) For the third semi-annual period – four excused excursions.
- d) For the fourth semi-annual period – three excused excursions.
- e) For the fifth semi-annual period – two excused excursions.
- f) For the sixth semi-annual period – one excused excursions.

Recordkeeping and Reporting:

- 1) *Data Retention.* Unless otherwise specified in this subpart, the permittee shall retain copies of all applicable records and reports for at least five years, as specified in §63.1335(a)(1) with the exception listed in §63.1335(a)(2). [§63.1335(a)]
 - a) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disc, magnetic tape, or microfiche. [§63.1335(a)(1)]
 - b) If an owner or operator submits copies of reports to the appropriate EPA Regional Office, the owner or operator is not required to maintain copies of those reports. If the EPA Regional Office has waived the requirement of §63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of those reports. [§63.1335(a)(2)]
- 2) *Requirements of Subpart A of Part 63.* The permittee shall comply with the applicable recordkeeping and reporting requirements in Subpart A as specified in Table 1 of Subpart JJJ. These requirements include, but are not limited to, the requirements specified in paragraph §63.1335(b)(1) and (b)(2) [§63.1335(b)]
 - a) *Start-up, shutdown, and malfunction plan.* The permittee shall develop and implement a written start-up, shutdown, and malfunction plan (SSMP) as specified in §63.6(e)(3). The plan shall describe in detail, procedures for operating and maintaining the affected source during periods of start-up, shutdown and malfunction and a program for corrective action for malfunctioning process and air pollution control equipment. For equipment leaks the SSMP is limited to control devices and may include written procedures that identify conditions that justify a delay of repair. A provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required may be included in the SSMP only if the permittee has demonstrated to the Administrator, through the Precompliance Report or a supplement to the Precompliance Report, that the monitoring system would be damaged or destroyed if it were not shut down during the start-up, shutdown, or malfunction. The plan shall be kept on site and the following records shall be maintained [§63.1335(b)(1)]
 - i) *Records of start-up, shutdown, or malfunction.* The permittee shall keep the records specified in §63.1335(b)(1)(i)(A) through §63.1335(b)(1)(i)(C). [§63.1335(b)(1)(i)]
 - (1) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, control device, recovery device or the firebox temperature monitoring system during which excess emissions occur. [§63.1335(b)(1)(i)(A)]
 - (2) For each start-up, shutdown, or malfunction during which excess emissions occur, records reflecting whether the procedures specified in the affected source's SSMP were followed, and documentation of actions taken that are not consistent with the plan. For example, if a SSMP includes procedures for routing a control device to a backup control device, records shall be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the SSMP for the event. "Excess emissions," as defined in §63.1310(j)(4), means

emissions greater than those allowed by the emissions limitation which would apply during operational periods other than start-up, shutdown, and malfunction.

[§63.1335(b)(1)(i)(B)]

(3) Records specified in §63.1335(b)(1)(i)(A) through §63.1335(b)(1)(i)(B) are not required if they pertain solely to group 2 emission points that are not included in an emission average. [§63.1335(b)(1)(i)(C)]

ii) *Reports of start-up, shutdown, or malfunction.* For the purposes of Subpart JJJ, the semiannual start-up, shutdown, or malfunction reports shall be submitted on the same schedule as the Periodic Reports required under §63.1335 e)(6), instead of being submitted on the schedule of §63.10(d)(5)(I), but the same information is required. [§63.1335(b)(ii)]

b) *Application for approval of construction or reconstruction.* For new affected sources, the permittee shall comply with the provisions in §63.5 regarding construction and reconstruction, excluding §63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii). [§63.1335(b)(2)]

3) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as follows;

a) The monitoring system shall measure data values at least once every 15 minutes.

[§63.1335(d)(1)]

b) The permittee shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

[§63.1335(d)(2)]

c) Daily average values of each continuously monitored parameter shall be calculated for each operating day as follows, except as specified in §63.1335(d)(6) and (d)(7). [§63.1335(d)(3)]

i) The daily average value shall be calculated as the average of all parameter values recorded during the operating day, except as specified in §63.1335(d)(7). The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous. [§63.1335(d)(3)(i)]

ii) The operating day shall be the period the permittee specifies in the operating permit or the Notification of Compliance Status for purposes of determining daily average values of monitored parameters. [§63.1335(d)(3)(ii)]

d) If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the permittee may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day. [§63.1335(d)(6)]

e) Monitoring data recorded during periods identified in §63.1335(d)(7)(i) through (d)(7)(v) shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device or recovery device operation when monitors are not operating. [§63.1335(d)(7)]

i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments; [§63.1335(d)(7)(i)]

ii) Start-ups; [§63.1335(d)(7)(ii)]

iii) Shutdowns; [§63.1335(d)(7)(iii)]

iv) Malfunctions; [§63.1335(d)(7)(iv)]

v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies. [§63.1335(d)(7)(v)]

- f) For continuous monitoring systems used to comply with subpart JJJ, the permittee shall retain the records documenting the completion of calibration checks, and records documenting the maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or that are specified in other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. [§63.1335(d)(8)]
- g) The permittee of an affected source granted a waiver under §63.10(f) shall maintain the information, if any, specified by the Administrator as a condition of the waiver of recordkeeping and recording requirements. [§63.1335(d)(9)]
- 4) *Reporting and notification.* In addition to the reports and notifications required by CFR Part 63, Subpart A, as specified in Table 1 of subpart JJJ, the permittee of an affected source shall prepare and submit the reports listed in §63.1335(e)(3) through (e)(8), as applicable. All required reports of subpart JJJ, and the schedule for their submittal, are listed in Table 9 of subpart JJJ. [§63.1335(e)]
 - a) The permittee shall not be in violation of the reporting requirements for failing to submit information required to be included in a specified report if the permittee meets the requirements in §63.1335(e)(1)(i) through (e)(1)(iii). Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping or reporting. [§63.1335(e)(1)]
 - i) The information was not known in time for inclusion in the specified report; [§63.1335(e)(1)(i)]
 - ii) The permittee has been diligent in obtaining the information; and [§63.1335(e)(1)(ii)]
 - iii) The permittee submits a report according to the provisions of the following paragraphs: [§63.1335(e)(1)(iii)]
 - (1) If this subpart expressly provides for supplements to the report in which the information is required, the permittee shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained unless otherwise specified. [§63.1335(e)(1)(iii)(A)]
 - (2) If this subpart does not expressly provide for supplements, but the permittee must submit a request for revision of an operating permit pursuant to part 70 or part 71, due to circumstances to which the information pertains, the permittee shall submit the information with the request for revision to the operating permit. [§63.1335(e)(1)(iii)(B)]
 - (3) In any case not addressed by §63.1335(e)(1)(iii)(A) or (B), the permittee shall submit the information with the first Periodic Report, which has a submission deadline at least 60 days after the information is obtained. [§63.1335(e)(1)(iii)(C)]
 - b) All reports required under subpart JJJ and H of 40 CFR Part 63 shall be sent to the Air Pollution Control Program and a copy sent to Administrator, U.S. EPA, Region VII, ARTD-EPA, 901 North 5th Street, Kansas City, KS 66101. If acceptable to both the Administrator and the permittee, the reports may be submitted on electronic media. [§63.1335(e)(2)]
 - c) *Precompliance Report.* Owners or operators requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; wishing to establish parameter monitoring levels according to the procedures contained in §63.1334(c) or (d); or requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the SSMP, when the monitoring equipment would be damaged if it did not cease to collect monitoring data, as permitted under §63.1310(j)(3), shall submit a

Precompliance Report according to the schedule described in 63.1335(e)(3)(ii) through (e)(3)(viii), as appropriate. [§63.1335(e)(3)]

- i) *Submittal Dates.* The Precompliance Report shall be submitted no later than December 19, 2000. If a Precompliance Report was submitted prior to June 19, 2000 and no changes need to be made to that Precompliance Report, the permittee shall re-submit the earlier report or submit notification that the earlier report is still valid. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. [§63.1335(e)(3)(i)]
 - ii) A request for an extension for compliance, as specified in §63.1311(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in §63.6(i)(6)(I)(A), (B), and (D), as required in §63.1311(e)(1). [§63.1335(e)(3)(ii)]
- d) *Emissions Averaging Plan* [§63.1311(e)(4)]. The permittee does not use an emission averaging plan.
- e) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted. For equipment leaks subject to §63.1331, the permittee shall submit the information required in §63.182(c) in the Notification of Compliance Status within 150 days after the first applicable compliance date for equipment leaks in the affected source, and an update shall be provided in the first Periodic Report that is due at least 150 days after each subsequent applicable compliance date for equipment leaks in the affected source. For all other emission points the Notification of Compliance Status shall contain the information listed in §63.1335(e)(5)(i) through (e)(5)(xi), as applicable, and shall be submitted no later than 150 days after the compliance dates specified in Subpart JJJ. [§63.1335(e)(5)]
- f) *Periodic Reports.* For existing and new affected sources, the permittee shall submit Periodic Reports as specified in §63.1335(e)(6)(i) through §63.1335(e)(6)(x). In addition, for equipment leaks subject to §63.1331, the permittee shall submit the information specified in §63.182(d) under the conditions listed in §63.182(d). [§63.1335(e)(6)]
- i) Except as specified in §63.1335(e)(6)(xi), a report containing the information in §63.1335(e)(6)(ii) or containing the information in §63.1335(e)(6)(iii) through (e)(6)(viii) shall be submitted semiannually no later than 60 days after the end of each 6-month period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance is due and shall cover the 6-month period beginning on the date the Notification of Compliance is due. [§63.1335(e)(6)(i)]
 - ii) If none of the compliance exceptions specified in §63.1335(e)(6)(iii) through (e)(6)(viii) occurred during the 6-month period, the Periodic Report required by §63.1335(e)(6)(i) shall be a statement that there were no compliance exceptions and no activities, as specified in the subject paragraphs, occurred during the 6-month period covered by that report. [§63.1335(e)(6)(ii)]
 - iii) For the permittee of an affected source complying with the provisions of §63.1314 through §63.1330 for any emission point, Periodic Reports shall include: [§63.1335(e)(6)(iii)]
 - (1) All information specified in §63.117, §63.118, and §63.1320 for continuous process vents, as applicable; [§63.1335(e)(6)(iii)(A)]
 - (2) The daily average values of monitored parameters for both excused excursions, as defined in §63.1334(g), and unexcused excursions, as defined in §63.1334(f). For excursions caused by lack of monitoring data, the start-time and duration of periods when monitoring data were not collected shall be specified; [§63.1335(e)(6)(iii)(B)]

- (3) The periods when monitoring data were not collected shall be specified; [§63.1335(e)(6)(iii)(C)]
- (4) The information in paragraphs §63.1335(e)(6)(iii)(D)(1) through (e)(6)(iii)(D)(4), as applicable; [§63.1335(e)(6)(iii)(D)]
 - (a) §63.1335(e)(6)(iii)(D)(1) Not applicable
 - (b) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. [§63.1335(e)(6)(iii)(D)(2)]
 - (c) Notification if one or more emission points or one or more TPPU is added to an affected source. The permittee shall submit the following information: [§63.1335(e)(6)(iii)(D)(2)]
 - (i) A description of the addition to the affected source; and [§63.1335(e)(6)(iii)(D)(2)(i)]
 - (ii) Notification of the group status of the additional point or all emission points in the TPPU. [§63.1335(e)(6)(iii)(D)(2)(ii)]
 - (iii) §63.1335(e)(6)(iii)(D)(2)(iii) not applicable.
- iv) §63.1335(e)(6)(iv) - Not applicable
- v) If any performance tests are reported in a Periodic Report, the following information shall be included: [§63.1335(e)(6)(v)]
 - (1) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in §63.1335(e)(5)(i)(B). [§63.1335(e)(6)(v)(A)]
 - (2) For additional tests performed for the same kind of emission point using the same method, results and any other information required shall be submitted, but a complete test report is not required. [§63.1335(e)(6)(v)(B)]
- vi) Notification of a change in the primary product of a TPPU, in accordance with the provisions in §63.1310(f). This includes a change in primary product from one thermoplastic product to either another thermoplastic product or to a non-thermoplastic product. [§63.1335(e)(6)(vi)]
- vii) The results for each change made to a predominant use determination made under §63.1310(g) for a storage vessel that is assigned to an affected source subject to Subpart JJJ after the change. [§63.1335(e)(6)(vii)]
- viii) The Periodic Report shall include the results for each change made to a predominant use determination made under §63.1310(h) for recovery operations equipment assigned to an affected source subject to Subpart JJJ after the change. [§63.1335(e)(6)(viii)]
- ix) A permittee complying with paragraph (h)(i) of this section shall notify the Administrator of the election to comply with §63.1335(h)(i) as part of the Periodic Report or as part of the Notification of Compliance Status as specified in paragraph §63.1335(h)(2)(i). [§63.1335(e)(6)(ix)]
- x) A permittee electing not to retain daily average values under paragraph (h)(2) of this section shall notify the Administrator as specified in paragraph §63.1335(h)(2)(i). [§63.1335(e)(6)(x)]
- xi) §63.1335(e)(6)(xi) - Not applicable.

- xii) The permittee of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in §63.1335(e)(6)(xii)(A) through (e)(6)(xii)(D). [§63.1335(e)(6)(xii)]
- (1) The permittee shall submit quarterly reports for a period of 1 year for an emission point or process section not included in an emissions average if: [§63.1335(e)(6)(xii)(A)]
 - (a) A control or recovery device for a particular emission point or process section has more excursions, as defined in §63.1334(f), than the number excused excursions allowed under §63.1334(g) for a semiannual reporting period; or [§63.1335(e)(6)(xii)(A)(1)]
 - (b) The Administrator requests that the permittee submit quarterly reports for the emission point or process section. [§63.1335(e)(6)(xii)(A)(2)]
 - (2) The quarterly reports shall include all information specified in §63.1335(e)(6)(iii) through (e)(6)(ix) of this section applicable to the emission point or process section for which quarterly reporting is required under §63.1335 e)(6)(xii)(A). Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section. [§63.1335(e)(6)(xii)(B)]
 - (3) Quarterly reports shall be submitted no later than 60 days after the end of each quarter. [§63.1335(e)(6)(xii)(C)]
 - (4) After quarterly reports have been submitted for an emission point for 1 year without more excursions occurring (during that year) than the number of excused excursions allowed under §63.1334(g), the permittee may return to semiannual reporting for the emission point or process section. [§63.1335(e)(6)(xii)(D)]
- g) *Other Reports* [§63.1335(e)(7)]. Not applicable.
- h) *Operating permit application*. A permittee who submits an operating permit application instead of a Precompliance Report shall include the information specified §63.1335(e)(3), as applicable. [§63.1335(e)(8)]
- 5) §63.1335(f) *Alternative monitoring parameters*. Not applicable.
 - 6) §63.1335(g) *Alternative continuous monitoring*. Not applicable.
 - 7) *Reduced recordkeeping program*. For any parameter with respect to any item of equipment, the permittee may implement the recordkeeping requirements specified in §63.1335(h)(1) or (h)(2) as alternatives to the continuous operating parameter monitoring and recordkeeping provisions that would otherwise apply under this subpart. The permittee shall retain for a period of 5 years each record required by §63.1335(h)(1) or (h)(2), except as otherwise provided in §63.1335(h)(1)(vi)(D). [§63.1335(h)]
 - a) The permittee may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of §63.1335(h)(1)(i) through (h)(1)(vi) are met. The permittee electing to comply with the requirements of this paragraph shall notify the Administrator in the Notification of Compliance Status as specified in paragraph §63.1335(e)(5)(xi), if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of §63.1335(h)(i) specified in §63.1335(e)(6)(ix). [§63.1335(h)(1)]
 - i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns, or malfunctions (e.g., a temperature reading of –200 °C on a boiler), and will alert the operator by alarm or other means. The permittee shall

- record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence. [§63.1335(h)(1)(i)]
- ii) The operating system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The permittee shall record the occurrence of any period meeting the criteria in §63.1335(h)(1)(ii)(A) through §63.1335(h)(1)(ii)(C). All instances in an operating day constitute a single occurrence. [§63.1335(h)(1)(ii)]
 - (1) The running average is below the minimum established limits; [§63.1335(h)(1)(ii)(a)]
 - (2) The running average is based on at least six 1-hour average values; and [§63.1335(h)(1)(ii)(B)]
 - (3) The running average reflects a period of operation other than a start-up, shutdown, or malfunction. [§63.1335(h)(1)(ii)(B)]
 - iii) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The permittee shall record the occurrence. All instances if the alarm or other alert in an operating day constitute a single occurrence. [§63.1335(h)(1)(iii)]
 - iv) The monitoring system will alert the permittee by an alarm or other means, if the running average parameter value calculated under paragraph §63.1335(h)(1)(ii) reaches a set point that is appropriately related to the established limit for the parameter that is being monitored. [§63.1335(h)(1)(iv)]
 - v) The permittee shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph §63.1335(h)(1) of this section at the times specified in §63.1335(h)(1)(v)(A) through §63.1335(h)(1)(v)(C). The permittee shall document that the required verifications occurred. [§63.1335(h)(1)(v)]
 - (1) Upon initial installation. [§63.1335(h)(1)(v)(A)]
 - (2) Annually after initial installation. [§63.1335(h)(1)(v)(B)]
 - (3) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section. [§63.1335(h)(1)(v)(C)]
 - vi) The permittee shall retain the records identified in §63.1335(h)(1)(vi)(A) through §63.1335(D). [§63.1335(h)(1)(vi)]
 - (1) Identification of each parameter, for each item of equipment, for which the permittee has elected to comply with the requirements of §63.1335(h). [§63.1335(h)(1)(vi)(A)]
 - (2) (B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of §63.1335(h)(1)(i) through (h)(1)(v). The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the permittee shall retain both the current and the most recent superseded description, as provided in §63.1335(a), except as provided in §63.1335(h)(1)(vi)(D). [§63.1335(h)(1)(vi)(B)]
 - (3) (C) A description and date of any change to the monitoring system that would reasonably be expected to impair its ability to comply with the requirements of §63.1335(h)(1). [§63.1335(h)(1)(vi)(C)]
 - (4) Any permittee subject to §63.1335(h)(1)(vi)(B) shall retain the current description of the monitoring system as long as the description is current. The current description shall, at

all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The permittee shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

[§63.1335(h)(1)(vi)(D)]

- b) If the permittee has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in §63.1335(h)(2)(iv), the permittee is no longer required to record the daily average value for any operating day when the daily average value is greater than the minimum established value. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator. [§63.1335(h)(2)]
- i) If the permittee elects not to retain the daily average values, the permittee shall notify the Administrator in the next Periodic Report as specified in §63.1335(e)(6)(x). The notification shall identify the parameter and unit of equipment. [§63.1335(h)(2)(i)]
- ii) If on any operating day after the permittee has ceased recording daily average values as provided in §63.1335(h)(2), there is an excursion as defined in §63.1335(h)(2)(iv), the permittee shall retain the records specified shall immediately resume retaining the daily average value for each operating day and shall notify the Administrator in the next Periodic Report. The permittee shall continue to retain the daily average until another period of 6 consecutive months has passed without an excursion as defined in §63.1335(h)(2)(iv). [§63.1335(h)(2)(ii)]
- iii) The permittee shall retain the records specified in §63.1335(h)(1)(i) through (h)(1)(iii), for the duration specified in §63.1335(h). For any calendar week, if compliance with §63.1335(h)(1)(i) through (h)(1)(iv) does not result in retention of a record of at least one occurrence or measured parameter value, the permittee shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction. [§63.1335(h)(2)(iii)]
- iv) For purposes of §63.1335(h), an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except; [§63.1335(h)(2)(iv)]
- (1) The daily average value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of §63.1335(h)(2), if the permittee follows the applicable provisions of the SSMP required by (b)(1) of this section. [§63.6(e)(3)] and [§63.1335(h)(2)(iv)(A)]
- (2) An excused excursion, as defined in Compliance Determination, §63.1335(b), and §63.1334(g) of Subpart JJJ. [§63.1335(h)(2)(iv)(B)]

Permit Condition EU0060-004 and EU0070-004

40 CFR Part 63, Subpart JJJ

**National Emission Standards for Organic Hazardous Air Pollutant Emissions: Group IV
Polymers and Resins**

40 CFR Part 63, Subpart H

**National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. –
General**

Emission Limitation:

- 1) The owner or operator of each affected source shall comply with the requirements of Part 63 Subpart H, National Emission standards for Organic Hazardous Air Pollutants for Equipment Leak, except with the differences noted in paragraphs (a)(1) through (a)(13) of §63.1331, by June 19, 2001, unless an extension has been granted. [§63.1311(d)]
- 2) Compliance with this subpart will be determined by review of the records required by §63.181 of this subpart and the reports required by §63.182 of this subpart, review of performance test results, and by inspections. [40 CFR 63.162(a)]
- 3) Each piece of equipment in a process unit to which this subpart applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. 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 unit boundaries by some form of weatherproof identification. [40 CFR 63.162(c)]
- 4) Equipment that is in vacuum service (at least 5 kilopascals below ambient pressure) is excluded from the requirements of this subpart.
- 5) Failure to take action within the specified time period to repair the leak after it has been detected is a violation of this subpart. [40 CFR 63.162(h)]

Monitoring:

- 1) When each leak is detected as specified in 40 CFR 63.163, 40 CFR 63.166 through 40 CFR 63.169, 40 CFR 63.171, 40 CFR 63.172 and 40 CFR 63.174 of Subpart H, the following requirements apply: [40 CFR 63.162(f)]
 - a) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [40 CFR 63.162(f)(1)]
 - b) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) of Subpart H, and no leak has been detected during the follow-up monitoring. If the owner or operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i) of Subpart H, the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. [40 CFR 63.162(f)(2)]
 - c) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 40 CFR 63.174(c)(1)(i), may be removed after it is repaired. [40 CFR 63.162(f)(3)]
- 2) The required tasks must be completed within the time periods allowed. [40 CFR 63.162(g)]

Recordkeeping:

- 1) The permittee has one process unit, the polystyrene resin manufacturing, subject to the provisions of this subpart and the recordkeeping system shall identify each record by this process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) 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: [40 CFR 63.181(a)]

- 2) Identify all equipment in organic HAP service in the polystyrene TPPU. Physical tagging of the equipment to indicate that it is in organic HAP service is not required. [40 CFR 63.181(b)(1)(iii)]
- 3) The permittee shall comply with the recordkeeping requirements stated in Permit Conditions (EU0060 and EU0070)-004 through (EU0060 and EU0070)-010

Reporting:

- 1) Semi-annual monitoring report summary as specified by 40 CFR 63.182(d)
- 2) The permittee shall comply with the reporting requirements stated in Permit Conditions (EU0060 and EU0070)-004 through (EU0060 and EU0070)-012

Permit Condition EU0060-005 and EU0070-005

40 CFR Part 63, Subpart JJJ

**National Emission Standards for Organic Hazardous Air Pollutant Emissions: Group IV
Polymers and Resins**

40 CFR Part 63, Subpart H

**National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. –
Standards: Pumps in Light Liquid Services §63.163**

Emission Limitation:

The Permittee shall comply with the requirements of Permit Condition (EU0060 and EU0070)-003 for each pump in light liquid service in the polystyrene TPPU. A pump in light liquid service is a pump in organic hazardous air pollutant service containing a liquid at operating conditions with one or more organic compounds with a concentration of 20 percent by weight or more of the total process stream and vapor pressure greater than 0.3 kilopascals at 20 °C determined by the methods described in 40 CFR 60.485(e)(1). A pump in organic hazardous air pollutant service is a pump that contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of §63.180(d) of subpart H.

[40 CFR 63.163, 63.161 Definitions, & 63.180(d)]

Monitoring:

- 1) Pumps without dual mechanical seal system:
 - a) Monitor each pump in a light liquid service monthly to detect leaks by Method 21 of 40 CFR part 60, Appendix A in accordance with the procedures established in §63.180(b) of subpart H. A leak is defined as an instrument reading of 5,000 parts per million or greater for pumps handling polymerizing monomers and 1,000 parts per million (ppm) or greater for all other pumps.
[40 CFR 63.163(b)(1), 63.180(b)(1), & 63.163(b)(2)(iii)(A) & (C)]
 - b) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. Liquid dripping from a pump bleed port in polystyrene resin service is not a detected leak.
[40 CFR 63.163(b)(3), 63.1331(a)(1)]
 - c) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after detection with a first attempt at repair made no later than 5 calendar days after detection, except for pumps to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected. A first attempt at repair includes, but is not limited to, tightening of packing gland nuts, ensuring that

the seal flush is operating at design pressure and temperature. [40 CFR 63.163(c)(1), (c)(2), & (c)(3)]

- d) Determine the total number of pumps (P_L) found leaking, the total number of pumps (P_T) in organic hazardous air pollutant (HAP) service, and the number of pumps (P_S) found leaking within a 1-month period from start-up after being repaired on a monthly basis. The total number of pumps (P_L) found leaking includes only the pumps subject to the monthly monitoring requirement. The total number of pumps in organic HAP service includes the pumps (P_T) equipped with a dual mechanical seal system. This data shall be used to calculate the percent leaking pumps (% P_L) on a monthly basis using the following equation: [40 CFR 63.163(d)(4) & (3)]

$$\% P_L = \frac{[P_L - P_S]}{[P_T - P_S]} \times 100$$

Where:

P_L = Number of pumps found leaking as determined through monthly monitoring as required in (1) above.

P_T = Total pumps in organic HAP service, including those meeting those equipped with a dual mechanical seal system that includes a barrier fluid system and those that are designed with no externally actuated shaft penetrating the pump housing.

P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period.

- e) Calculate a 6-month rolling average on a monthly basis using the percent leaking pumps (% P_L) determined from (4) above. If the greater of either 10 percent of the leaking pumps (on a 6-month rolling average basis) or three leaking pumps (during any month) are found leaking, implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176 of Subpart H. [40 CFR 63.163(d)(2)]
- 2) Pumps with a dual mechanical seal system:

Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.163(a) through (d), provided the following requirements are met:

[40 CFR 63.163(e)]

- a) One of the following observations are conducted for sensors that are used to detect failure of the seal system, the barrier fluid system, or both on the barrier fluid system: [40 CFR 63.163(e)(5)]
- i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or [40 CFR 63.163(e)(1)(i)]
 - ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172 of subpart H, Standards: Closed-vent systems and control devices.; or [40 CFR 63.163(e)(1)(ii)]
 - iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [40 CFR 63.163(e)(1)(iii)]
 - iv) The barrier fluid is not in light liquid service and each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [40 CFR 63.163(e)(2) & (3)]
- b) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. Liquid dripping is defined as a detected leak. If there are

- indications of liquids dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored by Method 21 in accordance with the procedures established in 40 CFR 63.180(b) of Subpart H to determine if there is a leak of organic HAP in the barrier fluid. A leak is detected if an instrument reading of 1,000 parts per million or greater is measured. [40 CFR 63.163(e)(4)]
- c) One of the following observations are conducted for sensors that are used to detect failure of the seal system, the barrier fluid system, or both on the barrier fluid system: [40 CFR 63.163(e)(5)]
 - i) Determine, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both. Conduct daily observations of the sensor for indications of liquid dripping from the pump seal. A leak is detected if the indications of liquids dripping from the pump seal exceed the criteria established. [40 CFR 63.163(e)(5), (e)(6)(I) & (e)(6)(ii)]
 - ii) Equip each sensor with an alarm unless the pump is located within the boundary of an unmanned plant site. [40 CFR 63.163(e)(5)]
 - d) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected with a first attempt at repair 5 calendar days after detection, except as provided in 40 CFR 63.171 of Subpart H. [40 CFR 63.163(e)(6)(iii) & (iv)]
 - e) If more than 90 percent of the pumps at a process unit meet the requirements of paragraph (b) or are designed with no externally actuated shaft penetrating the pump housing, the process unit is exempt from the requirements of paragraph (a).
- 3) Delay of repair of pumps for which leaks have been detected is allowed if:
- a) The repair is technically infeasible without a process unit shutdown [40CFR 63.171(a)]
 - b) The equipment is isolated from the process and is not in organic HAP service [40 CFR 63.171(b)]
 - c) If repair requires replacing the existing seal design with a new system that will provide better performance or:
 - i) A dual mechanical seal system that meets the requirements of monitoring section (b)
 - ii) A pump designed with no externally actuated shaft penetrating the pump housing, or
 - iii) A closed vent system capable of capturing and transporting any leakage from the seal to a process or to a fuel gas system or to a control device; and [40 CFR 63.171(d)(1)]
 - d) Repair of such equipment shall occur by the end of the next process unit shutdown, but no later than 6 months after the leak was detected. [40 CFR 63.171(d)(2)]

Recordkeeping:

- 1) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]
 - a) A list of identification numbers for pumps in light liquid service subject to the provisions of 40 CFR 63 Subpart H. [40 CFR 63.181(b)(1)(i)]
 - b) Identification of pumps designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. [40 CFR 63.181(b)(7)(i)]
 - c) A list of identification numbers for each pump that is designated as difficult to monitor, an explanation of why the pump is difficult to monitor, and the planned schedule for monitoring this equipment.
[40 CFR 63.181(b)(7)(ii)]

- d) Design criteria for dual mechanical seal system and any changes to the criteria of a dual mechanical seal system must be recorded. [40 CFR 63.181(b)(6)]
- 2) The permittee shall document that the weekly inspection was conducted on each pump in light liquid service including the date of the inspection, identification of the leaking pumps, and the records specified below for leaking equipment identified in this inspection. These records shall be retained for 2 years.
[40 CFR 63.181(c)]
- a) The instrument and the equipment identification number and the operator name, initials, or identification number. [40 CFR 63.181(d)(1)]
- b) The date the leak was detected and the date of first attempt to repair the leak. [40 CFR 63.181(d)(2)]
- c) The date of successful repair. [40 CFR 63.181(d)(3)]
- d) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
- e) Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
- i) 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/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. [40 CFR 63.181(d)(5)(i)]
- ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion. [40 CFR 63.181(d)(5)(ii)]
- f) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 63.181(d)(6)]
- g) Copies of the periodic reports as specified in 40 CFR 63.182(d), (d)(2)(iii), (d)(2)(iv), and (d)(2)(xiii) if records are not maintained on a computerized database capable of generating summary reports from the records. [40 CFR 63.181(d)(9)]
- 3) Documentation of weekly visual inspections conducted on each pump equipped with a dual mechanical seal system that includes a barrier fluid system. Such documentation is to include, but not limited to, the date of the inspection, identification of leaking pumps, and the records specified under 40 CFR 63.181(d) for leaking equipment identified in this inspection. Such records are to be retained for a minimum of 2 years upon the date of entry. [40 CFR 63.181(c) & 63.163(e)(4)]

Reporting:

- 1) The permittee shall submit semiannual reports that contains the following summary of monitoring information for each 6-month period: [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]
- a) The number of pumps for which leaks were detected, the percent leakers, and the total number of pumps monitored. [40 CFR 63.182(d)(2)(iii)]
- b) The number of pumps for which leaks were not repaired as required in paragraph (a)(3) of the monitoring section of this permit condition. [40 CFR 63.182(d)(2)(iv)]
- c) Any revisions to items reported in earlier Notification of Compliance Status or previous semi-annual reports if the method of compliance has changed since the previous reports. [40 CFR 63.182(d)(4)]
- d) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]

Permit Condition EU0060-006 and EU0070-006

Equipment Leaks from Sampling Connection Systems in the Polystyrene Resin TPPU

40 CFR Part 63, Subpart H

**National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. –
Sampling Connection Systems**

Emission Limitation:

- 1) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in § 63.162(b) of Subpart H. Gases displaced during filling of the sample container are not required to be collected or captured. [40 CFR 63.166(a)]
- 2) Each closed-purge, closed-loop, or closed-vent system shall: [40 CFR 63.166(b)]
 - a) Return the purged process fluid directly to the process line; or [40 CFR 63.166(b)(1)]
 - b) Collect and recycle the purged process fluid to a process; or [40 CFR 63.166(b)(2)]
 - c) The purged process fluid is either returned to the process or managed as hazardous waste. [40 CFR 63.166(b)(3) & (4)]

Recordkeeping:

Maintain a list of identification numbers for sampling connection system in a manner that can be readily accessed at the plant site for a minimum of 5 years. [40 CFR 63.181(a) & (b)]

Permit Condition EU0060-007 and EU0070-007

Equipment Leaks from Open-ended Valves or Lines in the Polystyrene Resin TPPU

40 CFR Part 63, Subpart H

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

- 1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. 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. 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. 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 remain closed at all other times. [40 CFR 63.167(a)(1), (a)(2), (b), & (c)]
- 2) Exception: Open ended valves or lines in an emergency shutdown system designed to open automatically in the event of a process upset; or if the open-ended valves or lines containing materials which would automatically polymerize or would present an explosion, serious over-pressure or other safety hazard if capped or equipped with a double block and bleed system are exempt from paragraph (a). [40 CFR 63.167(d) & (e)]

Recordkeeping:

Maintain a list of identification numbers for sampling connection system in a manner that can be readily accessed at the plant site for a minimum of 5 years. [45 CFR 63.181(a) & (b)]

Permit Condition EU0060-008 and EU0070-008

Equipment Leaks from Valves in Gas/Vapor Service and Light Liquid Service in the Polystyrene Resin TPPU

40 CFR Part 63, Subpart H

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

The provisions of 40 CFR 63.168 of Subpart H apply to valves that are either in gas service or in light liquid service in the polystyrene TPPU. A valve in gas/vapor service is a valve in organic hazardous air pollutant service containing a gas or vapor at operating conditions. A valve in light liquid service is a valve that is in organic hazardous air pollutant service and which contains a liquid at operating conditions with one or more organic compounds with a concentration of 20 percent by weight or more of the total process stream and vapor pressure greater than 0.3 kilopascals at 20 °C determined by the methods described in 40 CFR 60.485(e)(1). A valve in organic hazardous air pollutant is a valve that contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined by Method 18 in accordance with the provisions of §63.180(d) of subpart H. [40 CFR 63.168, 63.161 – Definitions, & 63.180(d)]

Monitoring:

- 1) The valves shall be monitored at the frequencies listed below to detect leaks by Method 21 in accordance with the procedures specified in 40 CFR 63.180(b) of Subpart H. For Phase III valves, a leak is defined as an instrument reading of 500 parts per million or greater. [40 CFR 63.168(b)(1), (b)(2)(iii), (d), & 63.180(b)(1)]
 - a) Monitor each valve once per month when the average of the two consecutive monitoring periods of percent leaking valves is greater than or equal to 2 percent, calculated according to paragraphs (e) and (f) of this monitoring section. [40 CFR 63.168(d)(1)(i)]
 - b) Monitor each valve once per quarter when the average of the two consecutive monitoring periods of percent leaking valves is between 1 and 2 percent, calculated according to paragraphs (e) and (f) of this monitoring section. [40 CFR 63.168(d)(2)]
 - c) Monitor each valve once every 2 quarters when the average of the two consecutive monitoring periods of percent leaking valves is between 0.5 and 1 percent, calculated according to paragraphs (e) and (f) of this monitoring section. [40 CFR 63.168(d)(3)]
 - d) Monitor each valve once every 4 quarters when the average of the two consecutive monitoring periods of percent leaking valves is less than 0.5 percent, calculated according to paragraphs (e) and (f) of this monitoring section. [40 CFR 63.168(d)(4)]
- 2) When a leak is detected, it shall be repaired as soon as practicable within 15 calendar days after detection with a first attempt at repair made no later than 5 calendar days after detection, except as provided in § 63.171 of Subpart H. A first attempt at repair includes, but is not limited to, tightening of bonnet bolts, replacement of bonnet bolts, tightening of packing gland nuts, and injection of lubricant into lubricating packing. [§63.168(f)(1), (f)(2), & (g)]
- 3) When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair to detect leaks by Method 21 in accordance with the procedures established in 40 CFR 180(b) of Subpart H. Periodic monitoring required by paragraph (a) of this monitoring section may be used to satisfy this requirement if the timing of the monitoring period for periodic monitoring coincides with this required time period. [40 CFR 63.168(f)(3), (f)(3)(i), (f)(3)(ii), 63.180(b)]
- 4) If a leak is detected by monitoring that is conducted pursuant to paragraph (c) of this monitoring section after being repaired, the permittee shall follow the procedures listed below to determine

whether that valve must be counted as a leaking valve for purposes of paragraph (e) of this monitoring section.

[40 CFR 63.168(f)(3)(iii)]

a) If the permittee elected to use periodic monitoring required by paragraph (a) to satisfy the requirements of paragraph (c) of this monitoring section, then the valve shall be counted as a leaking valve.

[40 CFR 63.168(f)(iii)(A)]

b) If the permittee elected to use other monitoring, prior to the periodic monitoring required by paragraph (a), to satisfy the requirements of paragraph (c) of this monitoring section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

[40 CFR 63.168(f)(iii)(B)]

5) Percent leaking valves at a process unit shall be determined by the following equation:

[40 CFR 63.168(e)(1)]

$$\%P_L = \left[\frac{V_L}{V_T + V_C} \right] \times 100$$

Where:

$\%P_L$ = Percent leaking valves as determined through periodic monitoring required in paragraph (a).

V_L = Number of valves found leaking excluding nonrepairables as provided in paragraph (g).

V_T = Total valves monitored, in a monitoring period excluding valves monitored as required by paragraph (c).

V_C = Optional credit for removed valves = 0.67 x net number (i.e., total removed - total added) of valves in organic HAP service removed from process unit after the date set forth in § 63.100(k) of subpart F for existing process units, and after the date of initial start-up for new sources. If credits are not taken, then $V_C = 0$.

- 6) For use in determining monitoring frequency, as specified in paragraph (a), the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs. [40 CFR 63.168(e)(2)]
- 7) Nonrepairable leaking valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable. Maintain records of the identification of these valves and the monitoring period that these valves were included in the percent leaking calculation.
[40 CFR 63.168(e)(3)(i)]
- 8) Nonrepairable leaking valves that exceed 1 percent of the total number of valves in organic HAP service and already accounted for the first time, as required by paragraph (g), shall be included in the calculation of percent leaking valves [40 CFR 63.168(e)(3)(ii)]
- 9) Any valve that is designated as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if: [40 CFR 63.168(h)]
- a) It is determined that the monitoring personnel would be exposed an immediate danger as a consequence of complying with paragraph (a); [40 CFR 63.168(h)(1)]
- b) Identification of valves designated as unsafe to monitor, difficult to monitor, or unsafe to inspect are recorded; and [40 CFR 63.181(b)(7)(i)]

- c) The permittee has a written plan that requires that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. [40 CFR 63.168(h)(2)]
- 10) (Any valves that are designated as difficult-to-monitor are exempt from the monitoring frequency given in paragraph (a), provided that the following requirements are met: [40 CFR 63.168(i)])
- a) Such valves are designated as difficult-to-monitor if it is determined that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner; and [40 CFR 63.168(i)(1)]
 - b) The identification of valves designated as difficult-to-monitor are recorded in a log readily available for inspection for a minimum of 5 years from the date of record; and [40 CFR 63.181(b)(7)(i)]
 - c) Maintain a written plan that requires monitoring of such valves at least once per calendar year. Leaks detected from these valves shall be included in the percent leaking calculation required by paragraph (e). [40 CFR 63.168(i)(3)]
- 11) Delay in repair for which leaks have been detected is allowed if:
- a) Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown. [40 CFR 63.171(a)]
 - b) Equipment is isolated from the process and does not remain in organic HAP service. [40 CFR 63.171(b)]
 - c) Emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. [40 CFR 63.171(c)(1)]
 - d) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.172 of Subpart H. [40 CFR 63.171(c)(2)]
- 12) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [40 CFR 63.171(e)]

Recordkeeping:

- 1) (a) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]
- a) A list of identification numbers for valves in gas/vapor and light liquid service subject to the provisions of 40 CFR 63 Subpart H. [40 CFR 63.181(b)(1)(i)]
 - b) The applicable schedule for monitoring valves using the method specified in 40 CFR 63.180(b) and that is based on the percent leaking valves calculation. [40 CFR 63.181(b)(1)(ii), 63.168(d)(1), & 63.168(i)(2)]
 - c) Identification of valves designed as unsafe to monitor, difficult to monitor or unsafe to inspect and the plan for monitoring or inspecting this equipment. [40 CFR 63.181(b)(7)(i)]
 - d) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment. [40 CFR 63.181(b)(7)(ii)]

- e) A list of valves removed from and added to the process unit if the net credits for removed valves is expected to be used in the calculation to determine the percent leaking valves. [40 CFR 63.181(b)(8)(i) & 63.168(e)(1)]
- f) When a leak is detected, the following information shall be recorded and kept for 2 years: [40 CFR 63.181(d)]
 - i) The instrument and the valve identification number and the operator name, initials, or identification number. [40 CFR 63.181(d)(1)]
 - ii) The date the leak was detected and the date of first attempt to repair the leak. [40 CFR 63.181(d)(2)]
 - iii) The date of successful repair of the leak. [40 CFR 63.181(d)(3)]
 - iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
 - (1) 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/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. [40 CFR 63.181(d)(5)(i)]
 - (2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion. [40 CFR 63.181(d)(5)(ii)]
 - vi) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 63.181(d)(6)]
 - vii) Copies of the periodic reports as specified in 40 CFR 63.182(d), (d)(2)(i), (d)(2)(ii), (d)(2)(xiii), and (d)(2)(xv) if records are not maintained on a computerized database capable of generating summary reports from the records. [40 CFR 63.181(d)(9)]

Reporting:

- 1) The permittee shall submit the following semi-annually including the monitoring results for valves in gas/vapor service and in light liquid service. [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]
 - a) The number of valves for which leaks were detected, the percent leakers, and the total number of valves monitored, the applicable monitoring frequency, and any revisions to items reported in the earlier Notification of Compliance Status Report or previous semi-annual reports if the method of compliance has changed since the previous reports. [40 CFR 63.182(d)(2)(i) & 63.182(d)(4);
 - b) The number of valves for which leaks were not repaired within 15 days after the date that the leak was detected with a first attempt at repair accomplished within 5 days after the date the leak was detected. Identify the number of those that are determined nonrepairable. [40 CFR 63.182(d)(2)(ii)]
 - c) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]
 - d) If applicable, the initiation of a monthly monitoring program under § 63.168(d)(1)(i) of this subpart, or a quality improvement program under either §§ 63.175 or 63.176 of this subpart. [40 CFR 63.182(d)(2)(xv)]

Permit Condition EU0060-009 and EU0070-009

Equipment Leaks from Instrument Systems in the Polystyrene TPPU

40 CFR Part 63, Subpart H

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

Instrument reading for leak detection: A leak is defined as an instrument reading of 500 parts per million or greater for instrumentation system. [40 CFR 63.169(b)]

Monitoring:

- 1) Instrumentation systems shall be monitored within 5 calendar days by Method 21 specified in § 63.180(b) of Subpart H if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraph (b) of this monitoring section, it is not necessary to monitor the system for leaks by Method 21 in accordance with § 63.180(b) Subpart H.
[40 CFR 63.169(a)]
- 2) Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected with a first attempt at repair made in 5 calendar days.
[40 CFR 63.169(c)(1), (c)(2), 63.163(c)(2), & 63.168(g)]
- 3) Delay of repair for a leaking instrumentation system is allowed if the repair is technically infeasible without a process unit shutdown, if the equipment is isolated from the process and is not in organic HAP service, or if it is determined that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and reused or destroyed. Repair of leaking components for which delay of repair applies shall be complete by the end of the next process unit shutdown. [40 CFR 63.171(a), (b), (c)(1), & (c)(2)]

Recordkeeping:

- 1) (a) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]
 - a) Identification of instrumentation systems subject to the provisions of 40 CFR 63 Subpart H. Individual components in an instrumentation system need not be identified. [40 CFR 63.181(b)(4)]
 - b) The permittee shall document inspections for potential leaks by visual, audible, olfactory or other detection methods were conducted on each instrumentation system including the date of inspection, identification of leaking components. These records shall be retained for 2 years. [40 CFR 63.181(c)]
 - c) When leak is detected, the following information shall be recorded and kept for 2 years: [40 CFR 63.181(d)]
 - i) The instrument and the equipment identification and the operator name, initials, or identification number. [40 CFR 63.181(d)(1)]

- ii) The date the leak was detected and the date of first attempt to repair the leak. [40 CFR 63.181(d)(2)]
 - iii) The date of successful repair of the leak. [40 CFR 63.181(d)(3)]
 - iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
 - (1) 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/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
[40 CFR 63.181(d)(5)(i)]
 - (2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.
[40 CFR 63.181(d)(5)(ii)]
 - (3) Dates of process unit shutdowns that occur while the equipment is unrepaired.
[40 CFR 63.181(d)(6)]
- 2) Copies of the periodic reports as specified in 40 CFR 63.182(d)(1), and (d)(2)(xiii) if records are not maintained on a computerized database capable of generating summary reports from the records.
[40 CFR 63.181(d)(9)]

Reporting:

- 1) The permittee shall submit semiannual reports that contains the following summary of monitoring information for each 6-month period: [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]
 - a) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]
 - b) Any revisions to items reported in earlier Notification of Compliance Status or previous semi-annual reports if the method of compliance has changed since the previous reports. [40 CFR 63.182(d)(4)]

Permit Condition EU0060-010 and EU0070-010

Equipment Leaks from Pressure Relief Devices in Liquid service in the Polystyrene TPPU
40 CFR Part 63, Subpart H
National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

Instrument reading for leak detection: A leak is defined as an instrument reading of 500 parts per million or greater for pressure relief devices in liquid service. [40 CFR 63.169(b)]

Monitoring:

- 1) Pressure relief devices shall be monitored within 5 calendar days by Method 21 specified in § 63.180(b) of Subpart H if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraph (b) of this monitoring section, it is not necessary to monitor the system for leaks by Method 21 in

accordance with § 63.180(b) Subpart H.

[40 CFR 63.169(a)]

- 2) Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected with a first attempt at repair made in 5 calendar days.
[40 CFR 63.169(c)(1), (c)(2), 63.163(c)(2), & 63.168(g)]
- 3) Delay of repair for leaking pressure relief device is allowed if the repair is technically infeasible without a process unit shutdown, if the equipment is isolated from the process and is not in organic HAP service, or if it is determined that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and reused or destroyed. Repair of leaking components for which delay of repair applies shall be complete by the end of the next process unit shutdown. [40 CFR 63.171(a), (b), (c)(1), & (c)(2)]

Recordkeeping:

- 1) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]
 - a) A list of identification numbers of each pressure relief device that is designated in light liquid service.
[40 CFR 63.181(b)(1)(i)]
 - b) The permittee shall document inspections for potential leaks by visual, audible, olfactory or other detection methods were conducted on each instrumentation system including the date of inspection, identification of leaking components. These records shall be retained for 2 years.
[40 CFR 63.181(c)]
 - c) When leak is detected, the following information shall be recorded and kept for 2 years:
[40 CFR 63.181(d)]
 - i) The instrument and the equipment identification and the operator name, initials, or identification number. [40 CFR 63.181(d)(1)]
 - ii) The date the leak was detected and the date of first attempt to repair the leak.
[40 CFR 63.181(d)(2)]
 - iii) The date of successful repair of the leak. [40 CFR 63.181(d)(3)]
 - iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
 - (1) 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/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
[40 CFR 63.181(d)(5)(i)]
 - (2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for

depletion.

[40 CFR 63.181(d)(5)(ii)]

- vi) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 63.181(d)(6)]
- d) Copies of the periodic reports as specified in 40 CFR 63.182(d)(1), and (d)(2)(xiii) if records are not maintained on a computerized database capable of generating summary reports from the records.
[40 CFR 63.181(d)(9)]

Reporting:

- 1) The permittee shall submit semiannual reports that contains the following summary of monitoring information for each 6-month period: [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]
 - a) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]
 - b) Any revisions to items reported in earlier Notification of Compliance Status or previous semi-annual reports if the method of compliance has changed since the previous reports. [40 CFR 63.182(d)(4)]

Permit Condition EU0060-011 and EU0070-011

Equipment Leaks from Closed Vent Systems and Control Devices in the Polystyrene Resin TPPU

40 CFR Part 63, Subpart H

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

A leak is defined as an instrument reading of 500 parts per million or greater or by visual inspection for a closed-vent system and control device. [40 CFR 63.172(h)]

Monitoring:

- 1) Owners or operators of closed-vent systems and control devices used to comply with the provisions of this subpart shall comply with the provisions of this section, except as provided in § 63.162(b) of this subpart.
[40 CFR 63.172(a)]
 - a) Recovery or recapture devices (condensers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compound emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. [40 CFR 63.172(b)].
 - b) Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compound emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 0C. [40 CFR 63.172(c)].
 - c) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. [40CFR 63.172(e)]
- 2) Owners or operators of each closed-vent system, except as provided in monitoring paragraphs (f) and (g), shall conduct an initial inspection to detect leaks by Method 21 in accordance with the procedures specified in § 63.180(b) of Subpart H. [40 CFR 63.172(f)and (g)] & 63.180(b)(1)]

- a) If the closed-vent system is constructed of hard-piping, the permittee shall conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [40CFR 63.172(f)(1)(ii)]
- b) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall conduct annual inspections to detect leaks by Method 21 in accordance with the procedures specified in § 63.180(b) of Subpart H. [40 CFR 63.172(f)(2)(ii) and & 63.180(b)(1)]
- 3) Leaks as indicated by an instrument reading greater than 500 parts per million above background or by visual inspection, shall be repaired as soon as practicable within 15 calendar days after detection with a first attempt at repair made no later than 5 calendar days after detection. [40 CFR 63.172(h)]
- 4) Delay of repair of a closed-vent system leak is allowed if the repair is technically infeasible without a process unit shutdown, if the equipment is isolated from the process and is not in organic HAP service, or if it is determined that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of leaking equipment for which delay of repair applies shall be complete by the end of the next process unit shutdown. [40 CFR 63.172(i)]
- 5) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall,
 - a) Install, set or adjust, maintain and operate a flow indicator that takes a reading at least every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line. [40 CFR 63.172(j)(1)]
 - b) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. [40 CFR 63.172(j)(2)]
 - c) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to paragraph (e) of this monitoring section. [40CFR 63.172(j)(3)]
- 6) Any parts of the closed-vent system that are designated as unsafe-to-inspect are exempt from the inspection requirements of paragraph (c) of this monitoring section if: [40 CFR 63.172(k)]
 - a) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a result of complying with paragraph (c) of this monitoring section; and [40 CFR 63.172(k)(1)]
 - b) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect periods, but not more frequently than annually. [40 CFR 63.172(k)(2)]
- 7) Any parts of the closed-vent system that are designated as difficult-to-inspect are exempt from the inspection requirements of paragraph (c) of this monitoring section if: [40 CFR 63.172(l)]
 - a) It is determined that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [40 CFR 63.172(l)(1)]
 - b) The permittee has a written plan that requires inspection of the equipment at least once every 5 years.
[40 CFR 63.172(l)(2)]
- 8) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device must be operating. [40 CFR 63.172(m)]

Recordkeeping:

- 1) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time

period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]

- a) A list of identification numbers of equipment that the permittee elects to equip with a closed-vent system and control device under the provisions of § 63.172. [40 CFR 63.181(b)(2)(i)]
- b) Physical tagging of the equipment to indicate it is in organic HAP service is not required. Equipment may be identified on a plant site plan, in log entries, or by other appropriate methods. [40 CFR 63.181(b)(1)(iii)]
- c) Identification of equipment designated as unsafe to monitor, difficult to monitor or unsafe to inspect and the plan for monitoring or inspecting this equipment. [40 CFR 63.181(b)(7)(i)]
- d) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment. [40 CFR 63.181(b)(7)(ii)]
- e) When each leak is detected as specified in § 63.172, the following information shall be recorded and kept for 2 years. [40 CFR 63.181(d)]
 - i) The instrument and the equipment identification number and the operator name, initials or identification number. [40 CFR 63.181(d)(1)]
 - ii) The date the leak was detected and the date of first attempt to repair the leak. [40 CFR 63.181(d)(2)]
 - iii) The date of successful repair of the leak. [40 CFR 63.181(d)(3)]
 - iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
 - (1) 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/malfunction plan, required by §63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. [40 CFR 63.181(d)(5)(i)]
 - (2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion. [40 CFR 63.181(d)(5)(ii)]
 - vi) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 63.181(d)(6)]
 - vii) Copies of the semi-annual reports, if records are not maintained on a computerized database capable of generating summary reports from the records. [40 CFR 63.181(d)(9)]
- f) Hourly records of whether the flow indicator specified under 40 CFR 63.172(j)(1) was operating and whether flow was detected at any time under the hour, as well as records of the times and duration of all periods when the vent stream is diverted from the control device or the monitor is not operating. [40 CFR 63.118(a)(3)]
- g) Records of inspections of closed-vent systems. [40 CFR 63.181(g)(3)].
 - i) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of this subpart 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. [40 CFR 63.181(g)(3)(i)]
- ii) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of this subpart during which leaks were detected, the information specified in recordkeeping paragraph (a)(5)(i) through (a)(5)(v) shall be recorded. [40 CFR 63.181(g)(3)(ii)]
 - h) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair. [40 CFR 63.181(h)(4)]
- 2) Maintain records of the design specifications and performance demonstrations for closed-vent systems and control devices for the life of the equipment in a manner that can be readily accessed at the plant site.
[40 CFR 63.181(g) and (g)(1)]
- a) Detailed schematics, design specifications of the control device, and piping and instrumentation systems. [40CFR 63.181(g)(1)(i)]
 - b) The dates and descriptions of any change in the design specifications. [40 CFR 63.181(g)(1)(ii)]
 - c) A description of the parameters monitored, as required in § 63.172(e), monitoring paragraph (a)(3), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why the parameters were selected for the monitoring. [40 CFR 63.181(g)(1)(iv)]

Reporting:

- 1) The permittee shall submit semi-annual reports that contain the following summary of monitoring information for each 6-month period: [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]
 - a) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]
 - b) The results of monitoring to show compliance with § 63.172(f) of this subpart, [monitoring paragraph (b)]. [40 CFR 63.182(d)(2)(xiv)]
 - c) Any other revisions to items reported in the Notification of Compliance Status report or any previous semi-annual reports, if the method of compliance has changed since these reports. [40 CFR 63.184(d)(4)]

Permit Condition EU0060-012 and EU0070-012

Equipment Leaks from Connectors in Gas/Vapor Service and in Light Liquid Service in the Polystyrene Resin TPPU

40 CFR Part 63, Subpart H

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Emission Limitation:

A leak is defined as an instrument reading of 500 parts per million or greater for connectors in gas/vapor and in light in light liquid service. [40 CFR 63.174(a)(2)]

Monitoring:

- 1) The permittee shall monitor all connectors in gas/vapor and light liquid service, except as provided in § 63.162(b) of Subpart H, and in § 63.162(f) through (h) of Subpart H, at the intervals specified below. The connectors shall be monitored to detect leaks by Method 21 in accordance with the procedures specified in §63.180(b) of Subpart H. [40 CFR 63.174(a) & 63.180(b)(1)]
 - a) Once per year (i.e., 12-month period), if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period. [40 CFR 63.174(b)(3)(i)]

- b) Once every 2 years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. The permittee may comply with this requirement by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year (biennial) period. [40 CFR 63.174(b)(3)(ii)]
 - c) If the calculated percent leaking connectors is less than 0.5 percent from the 2-year monitoring period, the permittee may monitor the connectors one time every 4 years. The permittee may comply with this requirement by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years. [40 CFR 63.174(b)(3)(iii)]
 - d) If the percent leaking connectors is 0.5 percent or greater, but less than 1 percent during the last 4-year monitoring interval program, the permittee shall increase the monitoring frequency to one time every 2 years. The permittee may comply with this requirement by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The permittee may again elect to use the provisions of paragraph (a)(3) of this monitoring section when the percent leaking connectors decreases to less than 0.5 percent. [40 CFR 63.174(b)(3)(iv)]
 - e) If the percent leaking connectors is 1 percent or greater using a 4-year monitoring interval program, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of paragraph (a)(3) of this monitoring section when the percent leaking connectors decreases to less than 0.5 percent. [40 CFR 63.174(b)(3)(v)]
- 2) The permittee shall comply with one of the monitoring requirements listed below for each connector that has been opened or has otherwise had the seal broken: [40 CFR 63.174(c)(1)(i) & (ii)]
- a) Monitor such connector for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of paragraph (e) of the monitoring section of PW070, unless it is determined to be non-repairable, in which case it is counted as a non-repairable connector (CAN) for the purposes of paragraph (i) of this monitoring section. [40 CFR 63.174(c)(1)(i)]
 - b) Calculate the percent leaking connectors for the monitoring periods described in paragraph (a) of this monitoring section, by setting the nonrepairable component, CAN, in the equation in paragraph (i) of this monitoring section to zero for all monitoring periods. [40 CFR 63.174(c)(1)(ii)]
- 3) The permittee may switch alternatives described in paragraphs (b) of this monitoring section at the end of the current monitoring period he is in, provided that it is reported as required in 40 CFR 63.182 of Subpart H and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch. [40 CFR 63.174(c)(1)(iii)]
- 4) As an alternative to the requirements of paragraph (a) of the this monitoring section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before December 31, 1992 of this section may: [40 CFR 63.174(c)(2)]
- a) Comply with the requirements of 40 CFR 63.169 of Subpart H, and [40 CFR 63.174(c)(2)(i) & 63.169]
 - b) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of 40 CFR 63.174(d). [40 CFR 63.174(c)(2)(ii)]

- 5) 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 (g) of this monitoring section. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [40 CFR 63.174(d)]
- 6) Any connector that is designated as an unsafe-to-monitor connector is exempt from the requirements of paragraph (a) of this monitoring section if: [40 CFR 63.174(f)]
 - a) The permittee determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraph (a) of this monitoring section; and [40 CFR 63.174(f)(1)]
 - b) The permittee has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods, but not more frequently than the periodic schedule otherwise applicable. [40 CFR 63.174(f)(2)]
 - c) Identification of connectors designated as unsafe to monitor, difficult to monitor, or unsafe to inspect are recorded. [40 CFR 63.181(b)(7)(i)]
- 7) Any connector that is designated as an unsafe-to-repair connector is exempt from the requirements of paragraphs (a) and (e) of this monitoring section if: [40 CFR 63.174(g)]
 - a) The permittee determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (e) of this monitoring section, [40 CFR 63.174(g)(1)]
 - b) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair are recorded; and [40 CFR 63.181(b)(7)(iii)]
 - c) The connector will be repaired before the end of the next scheduled process unit shutdown. [40 CFR 63.174(g)(2)]
- 8) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a), (b), (c), and (d) of this monitoring section and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 40 CFR 63.182 of Subpart H. An inaccessible connector includes connectors that are buried; insulated in such a manner that prevents access by a monitor probe; and obstructed by equipment or piping that prevents access by a monitor probe; or inaccessible as described in 40 CFR 63.174(h)(1)(iv) through (1)(vi). For inaccessible or ceramic connectors, if a leak is detected by visual, audible, olfactory or other means, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected with a first attempt at repair made within 5 calendar days. [40 CFR 63.174(h)(1), (1)(i) through (vi), (h)(2), and (h)(3)]
- 9) For use in determining the monitoring frequency, as specified in paragraph (a) of this monitoring section, the percent leaking connectors shall be calculated using the following equation: [40 CFR 63.174(i) & (i)(1)]

$$\%C_L = \left[\frac{C_L - C_{AN}}{C_t + C_C} \right] \times 100$$

Where:

$\%C_L$ = Percent leaking connectors determined through periodic monitoring required in monitoring paragraph (a)

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by Method 21 in accordance with the procedures established 40 CFR 63.180(b) of Subpart H.

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in monitoring paragraphs (a) and (b), not to exceed 2 percent of the total connector population, C_t

C_t = Total number of monitored connectors, including nonrepairables, in the process unit.

C_C = Optional credit for removed connectors = $0.67 \times$ net number (i.e., total removed - total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

- 10) Credit for removed connectors may be used in the calculation to determine the percent leaking connectors ($\%C_L$), as required in monitoring paragraph (i), provided that the connector was welded after September 12, 1996 and the integrity of the weld is demonstrated by monitoring it by using Method 21 in accordance with the procedure established in 40 CFR 63.180(b) of Subpart H or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method within 3 months after being welded. If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is not exempt from this subpart. [40 CFR 63.174(j), (j)(1), (j)(2), (j)(4), & (j)(5)]
- 11) Delay of repair in leaking connectors is allowed if the repair is technically infeasible without a process unit shutdown, if the equipment is isolated from the process and is not in organic HAP service, or if it is determined that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and destroyed. Repair of leaking connectors for which delay of repair applies shall be complete by the end of the next process unit shutdown. [40 CFR 63.171(a), (b), (c)(1), & (c)(2)]

Recordkeeping:

- 1) Maintain records of the following information in a manner that can be readily accessed at the plant site for a minimum of 5 years (except that, if Subpart H requires records to be maintained for a time period different than 5 years) from the date of each occurrence, measurement, maintenance, corrective action, report, or record: [40 CFR 63.181(a) & (b)]
- a) A list of identification numbers for:
- i) Connectors (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 of Subpart H and instrumentation systems) subject to the requirements of 40 CFR 63 Subpart H. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63 Subpart H are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the list shall be complete no later than the completion of the initial survey required by 40 CFR 63.174 (b)(1) or (b)(2) of Subpart H. [40 CFR 63.181(b)(1)(i)]
 - ii) Screwed connectors installed before December 31, 1992. Identification can be by area or grouping as long as the total number within each group or area is recorded. [40 CFR 63.181(b)(5)]
 - iii) Each connector that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined). [40 CFR 63.181(b)(7) & 63.174(h)]
 - iv) Connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair. . [40 CFR 63.181(b)(7)(iii) & 63.174.(g)]

- b) Identification of connectors designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. [40 CFR 63.181(b)(7)(i) & 63.174(f)]
- c) A list of connectors removed from and added to the process unit and documentation of the integrity of the weld for any removed connectors. This is not required unless the net credits for removed connectors is expected to be used. [40 CFR 63.181(b)(8)(ii), 63.174(i)(2), & 63.174(j)]
- d) When leak is detected, the following information shall be recorded and kept for 2 years:
[40 CFR 63.181(d)]
 - i) The instrument and the equipment identification and the operator name, initials, or identification number. [40 CFR 63.181(d)(1)]
 - ii) The date the leak was detected and the date of first attempt to repair the leak. [40 CFR 63.181(d)(2)]
 - iii) The date of successful repair of the leak. [40 CFR 63.181(d)(3)]
 - iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be non-repairable. [40 CFR 63.181(d)(4)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.181(d)(5)]
 - (1) 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/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
[40 CFR 63.181(d)(5)(i)]
 - (2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.
[40 CFR 63.181(d)(5)(ii)]
 - vi) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 63.181(d)(6)]
 - vii) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required, unless the permittee has switched alternatives to not count nonrepairable connectors, as provided in 40 CFR 63.174(c)(1)(ii), in their percent leaking connectors calculation and has reported the switch as provided in 40 CFR 63.174(c)(1)(iii). [40 CFR 63.181(d)(7)(i), 63.174(b), & 63.174(c)(1)]
 - viii) The date and results of monitoring conducted on connectors as a result of being opened or otherwise having the seal broken. If identification of connectors that have been opened or otherwise had the seal broken is made by location (area or grouping), then all connectors within the designated location shall be monitored; otherwise, each connector as identified shall be monitored.
[40 CFR 63.181(d)(7)(ii) & 63.174(c)(1)(i)]
 - ix) Copies of the semi-annual reports, if records are not maintained on a computerized database capable of generating summary reports from the records. [40 CFR 63.181(d)(9)]

Reporting:

- 1) The permittee shall submit semiannual reports that contains the following summary of monitoring information for each 6-month period: [40 CFR 63.182(a)(3), (d)(1), & (d)(2)]

- a) The number of connectors for which leaks were detected, the percent of connectors leaking, the total number of connectors monitored, the applicable monitoring frequency, and any revisions to items reported in the earlier Notification of Compliance Status Report or previous semi-annual reports if the method of compliance has changed since the previous reports. [40 CFR 63.182(d)(2)(ix), & 63.173(a) & 63.174(a)]
 - b) The number of connectors for which leaks were not repaired within 15 days after the date that the leak was detected with a first attempt at repair accomplished within 5 days after the date the leak was detected. Identify the number of those that are determined nonreparable. [40 CFR 63.182(d)(2)(xi) & 63.174(d)]
 - c) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 63.182(d)(2)(xiii)]
- 2) If applicable, notification of a change in connector monitoring alternatives to monitor each connector that has been opened or has otherwise had the seal broken. The notification shall state if the intended change is to switch to monitoring each connector within 3 months after being returned to organic hazardous air pollutant service using the procedure in 40 CFR 63.180(b) and including the non-reparable component, C_{AN}, in the percent leaker calculations or to switch to not monitoring each connector that has been opened or otherwise had the seal broken and setting the nonreparable component, C_{AN}, in the percent leaker calculations equal to zero. [40 CFR 63.182(d)(2)(xvi) & 63.174(c)(1)]
- 3) Any other revisions to items reported in the Notification of Compliance Status report or any previous semi-annual reports, if the method of compliance has changed since these reports. [40 CFR 63.182(d)(4)]

3) EU0090 Polystyrene Cutter/Screening with Vent Sock		
Description	Manufacturer/ Model #	2004 EIQ Reference #
Polystyrene Cutter/Screening with Vent Sock	MAC/Model 54AVS16-3, Year 1992	EP-32

Permit Condition EU0090-001

10 CSR 10-6.400
Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

- 1) The permittee shall not emit particulate matter in excess of 20.40 pounds per hour (lbs/hr) from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot (gr/scf).

Monitoring/Recordkeeping:

- 1) The permittee shall retain the potential to emit calculations in Attachment D which demonstrate that the above emission limitation will never be exceeded. No further recordkeeping shall be required to demonstrate compliance with the emission limitations.
- 2) The calculation shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

4) EU0100 Two Polystyrene Classifying Cyclones		
Description	Manufacturer/ Model #	2004 EIQ Reference #
Two Polystyrene Classifying Cyclones	Bull Engineering, Year 1977	EP-35

Permit Condition EU0100-001

10 CSR 10-6.400

Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

- 1) The permittee shall not emit particulate matter in excess of 35.40 pounds per hour (lbs/hr) from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot (gr/scf).

Monitoring/Recordkeeping:

- 1) The permittee shall retain the potential to emit calculations in Attachment D which demonstrate that the above emission limitation will never be exceeded. No further recordkeeping shall be required to demonstrate compliance with the emission limitations.
- 2) The calculation shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

5) EU0110 Extruded Polystyrene Scrap Baghouse – M/L Line		
Description	Manufacturer/ Model #	2004 EIQ Reference #
Extruded Polystyrene Scrap Baghouse – M/L Line	Aerpulse/PR-361-10-W-P-N, Year 1988	EP-05

Permit Condition EU0110-001
10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

- 1) The permittee shall not emit particulate matter in excess of 3.38 pounds per hour (lbs/hr) from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot (gr/scf).

Monitoring:

The baghouse stack emissions shall be visually inspected once per operating day. A high differential pressure drop switch continuously monitors the pressure drop. A particle sensor continuously monitors for leaking filter bags. A written response procedure shall be followed, whenever the pressure drop switch or particle sensor alarm is activated.

Recordkeeping

The permittee shall maintain a log of pressure drop switch and particle sensor alarms and the corrective actions taken. Baghouse inspections, bag replacement and particle sensor servicing shall be recorded. The records and calculations showing compliance with the applicable rules shall be retained for 60 consecutive and shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

6) EU0120 Extruded Polystyrene Scrap Baghouse – 48” Line		
Description	Manufacturer/ Model #	2004 EIQ Reference #
Extruded Polystyrene Scrap Baghouse – M/L Line	Flexclean/12-WPWC-350III, Year 1988	EP-05

Permit Condition EU0120-001

10 CSR 10-6.400

Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

- 1) The permittee shall not emit particulate matter in excess of 3.38 pounds per hour (lbs/hr) from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot (gr/scf).

Monitoring:

The baghouse stack emissions shall be visually inspected once per operating day. A high differential pressure drop switch continuously monitors the pressure drop. A particle sensor continuously monitors for leaking filter bags. A written response procedure shall be followed, whenever the pressure drop switch or particle sensor alarm is activated.

Recordkeeping

The permittee shall maintain a log of pressure drop switch and particle sensor alarms and the corrective actions taken. Baghouse inspections, bag replacement and particle sensor servicing shall be recorded. The records and calculations showing compliance with the applicable rules shall be retained for 60 consecutive and shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

7) EU0130 Central Vacuum System		
Description	Manufacturer/ Model #	2004 EIQ Reference #
Central Vacuum System	Not Available	EP-10

Permit Condition EU0130-001

10 CSR 10-6.400

Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

- 1) The permittee shall not emit particulate matter in excess of 7.58 pounds per hour (lbs/hr) from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot (gr/scf).

Monitoring/Recordkeeping:

- 1) The permittee shall retain the potential to emit calculations in Attachment D which demonstrate that the above emission limitation will never be exceeded. No further recordkeeping shall be required to demonstrate compliance with the emission limitations.
- 2) The calculation shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

8) EU0140 Emergency Fire Water Pump		
Description	Manufacturer/ Model #	2004 EIQ Reference #
258 hp Emergency Generator, #2 diesel fuel fired	Cummins, Year 1995	EP-57

Permit Condition EU0140-001

10 CSR 10-6.260

Restriction of Emissions of Sulfur Compounds

Emission Limitation

- 1) Emissions from this source operation shall not contain more than 500 parts per million by volume (ppmv) of sulfur dioxide or more than 35 milligrams per cubic meter (mg/m^3) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
- 2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
[10 CSR 10-6.260(3)(B) & 10 CSR 10-6.010 Ambient Air Quality Standards]¹

Operational Limitation:

- 1) The permittee shall not operate the emergency generator in excess of 500 hours in any consecutive 12-month period.
- 2) The emergency water pump shall be operated with No. 2 fuel oil with a sulfur content of no more than 0.5% sulfur by weight. The fuel oils known to be less than 0.5% by weight sulfur per Chapter 414 RSMo, section 414.032, ASTM D396-Table 1 and ASTM D975-Table 1, are fuel oil No. 1 and No. 2 and diesel fuel oil Grade Low Sulfur No. 1-D, Grade Low Sulfur No. 2-D. However, this unit

¹ 10 CSR10-6.260(3)(B) is a state-only requirement

is not limited to the known fuel oils listed above, but is limited to fuel oils based solely on having a percent sulfur by weight content of 0.5% or less.

Monitoring/Recordkeeping:

- 1) The permittee shall maintain records of the fuel type used verifying a sulfur content less than 0.5% by weight. Purchase receipts, analyzed samples or certifications that verify the fuel type as a grade level with a sulfur content less than 0.5% by weight will be acceptable. If this can not be accomplished then compliance to the emission limitations shall be determined by source testing and shall be accomplished as specified in 10 CSR 10-6.030(6) for sulfur dioxide emissions and 10 CSR 10-6.040 for measuring ambient sulfur compound concentrations. Other methods approved by the staff director in advance may be used.
- 2) Monthly records of hours of operation shall be kept, including calculated total for every consecutive 12-month period. Attachment E, or similar form, shall be used for this purpose.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;
 - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079 to satisfy the requirements of the Federal Clean Air Act, Title V.
- 3) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
 - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
 - b) Paving or frequent cleaning of roads, driveways and parking lots;
 - c) Application of dust-free surfaces;
 - d) Application of water; and
 - e) Planting and maintenance of vegetative ground cover.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, or to fires used for recreational purpose, or to fires used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

10 CSR 10-5.060 Refuse Not to be Burned in Fuel Burning Installations (Contained in State Implementation Plan)

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

10 CSR 10-5.070 Open Burning Restrictions

- 1) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- 2) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- 3) Any person intending to engage in open burning shall file a request to do so with the director. The request shall include the following:
 - a) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices,

the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;

- b) The schedule of burning operations;
 - c) The exact location where open burning will be used to dispose of the trade wastes;
 - d) Reasons why no method other than open burning is feasible; and
 - e) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.
- 4) Upon approval of the open burning permit application by the director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt The Dow Chemical Company – Riverside Plant from the provisions of any other law, ordinance or regulation.
 - 5) The permittee shall maintain files with letters from the director approving the open burning operation and previous DNR inspection reports.

10 CSR 10-5.160 Control of Odors in the Ambient Air

No person shall emit odorous matter as to cause an objectionable odor on or adjacent to:

- 1) Residential, recreational, institutional, retail sales, hotel or educational premises.
- 2) Industrial premises when air containing odorous matter is diluted with 20 or more volumes of odor-free air; or
- 3) Premises other than those in 1 and 2 above when air containing odorous matter is diluted with four or more volumes of odor-free air.

The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when 30% or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy; the sample size to be at least 20 people or 75% of those exposed if fewer than 20 people are exposed.

This requirement is not federally enforceable.

10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area

The Air Conservation Commission may prescribe more restrictive air quality control requirements that are more restrictive and more extensive than provided in regulations of general application for:

- 1) Areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from these sources by regulations of general application are or would be greater than 2000 tons per year or 500 pounds per hour.
- 2) Areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than 1000 tons for any consecutive three months or 1000 pounds per hour.

10 CSR 10-6.100 Alternate Emission Limits

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61 Subpart M National Emission Standard for Asbestos

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
 - 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

10 CSR 10-6.280 Compliance Monitoring Usage

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a) Applicable monitoring or testing methods, cited in:
 - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";

- ii) 10 CSR 10-6.040, “Reference Methods”;
- iii) 10 CSR 10-6.070, “New Source Performance Standards”;
- iv) 10 CSR 10-6.080, “Emission Standards for Hazardous Air Pollutants”; or
- b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements

- 1) Recordkeeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) October 1st for monitoring which covers the January through June time period, and
 - ii) April 1st for monitoring which covers the July through December time period.
 - iii) Exception. Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
 - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.

- ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under Section 112(r)

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to

the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None

10 CSR 10-6.065(6)(C)1.J Emissions Trading

The permittee banked 107 tons of VOC emission credits after eliminating the use of methyl chloride as a blowing agent in October 1989, and substituted a mix of ethyl chloride and non-VOC blowing agent. Thirty-six (36) tons of the banked VOC emissions were used in Construction Permit No. 1291-005, leaving 71 tons banked for future trading or credit.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, as well as the Air Pollution Control

Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:

- a) The identification of each term or condition of the permit that is the basis of the certification;
- b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
- c) Whether compliance was continuous or intermittent;
- d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

- 1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
 - a) The application requirements are included and specifically identified in this permit, or
 - b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
- 2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
 - a) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
 - b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
 - c) The applicable requirements of the acid rain program,
 - d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
 - e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
 - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
 - b) That the installation was being operated properly,
 - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
 - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

- 1) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting or compliance requirements of the permit.
 - a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the APCP as soon as possible after learning of the need to make the change.
 - b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

- 1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
 - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
 - b) The permittee must provide written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-

6.065(6)(B)3. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.

- c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
- d) The permit shield shall not apply to these changes.

10 CSR 10-6.020(2)(R)12 Responsible Official

The application utilized in the preparation of this permit was signed by William K. Alexander, Site Leader. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
 - a) The permit has a remaining term of less than three years;
 - b) The effective date of the requirement is later than the date on which the permit is due to expire;
or
 - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit;
or
- 5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow.

Attachment A-1

10 CSR 10-6.220 Compliance Demonstration

Opacity Emission Observations

This attachment or an equivalent may be used to help meet the recordkeeping requirements of Permit Condition PW001

Method 22 (Outdoor) Observation Log		
Emission Unit		
Observer	Date	
Sky Conditions		
Precipitation		
Wind Direction	Wind Speed	
Sketch process unit: Indicate the position relative to the source and sun; mark the potential emission points and/or the observing emission points.		
Observation Clock Time	Observation Period Duration (minute:second)	Accumulative Emission Time (minute:second)
Begin Observation		
End Observation		

Attachment A-3

10 CSR 10-6.220 Compliance Demonstration Method 9 Visual Determination of Opacity

This attachment or an equivalent may be used to help meet the recordkeeping requirements of Permit Condition PW001.

Method 9 Opacity Emissions Observation	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plum (Check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY				
Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation? _____

YES NO Signature of Observer

Attachment D

This attachment may be used to help meet the recordkeeping requirements of Permit Conditions: EU0090-001, EU0100-001 and EU0130-001.

Allowable Hourly Emission Rate

$$\begin{aligned} \text{Maximum Allowable PM Emissions} &= E \text{ (lb/hr)} = 4.1(P)^{0.67} \text{ if } P \leq 30 \text{ tons/hr} \\ &= E \text{ (lb/hr)} = 55(P)^{0.11} - 40 \text{ if } P > 30 \text{ tons/hr} \end{aligned}$$

P = Process weight rate (tons/hr)

E = Allowable emission rate limit (lb/hr)

Emissions from these units are exhausted through cyclones.

Emission Unit	Maximum Hourly Design Rate	PM Emission Factor	Emission Factor Reference *	Potential PM Emission Rate **	Allowable PM Emission Rate
EU0090	11 ton/hr	0.0692 lb/ton	EC	0.76 lb/hr	20.4 lb/hr
EU0100	25 ton/hr	0.09 lb/ton	EC	2.25 lb/ton	35.4 lb/hr
EU0130	2.5 ton/r	0.276lb/ton	EC	0.69	7.58 lb/hr

* Engineering Calculation (mass balance)

** Uncontrolled Potential PM Emission Rate = MHDR(lbs/hr) × Emission Factor(lbs/lb)

STATEMENT OF BASIS

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Part 70 Operating Permit Renewal Application, received September 12, 2005;
- 2) 2004 Emissions Inventory Questionnaire, received April 4, 2005;
- 3) Part 70 Operating Permit OP2001-026, issued April 11, 2001;
- 4) Part 70 Amended Permit OP2001-026A, issued December 3, 2004
- 5) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
- 6) Construction Permit Number: 0992-022;
- 7) Construction Permit Number: 1291-005;
- 8) Construction Permit Number: 0688-008A;
- 9) Construction Permit Number: 0688-007A;
- 10) Construction Permit Number: 0382-002-A; and
- 11) Construction Permit Number: 0879-008

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

None

Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-5.030, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating.*

The following indirect heating sources listed in the table below are subject to the requirements of this rule. However, the APCP does not consider these units to be capable of exceeding the particulate matter (PM) emission limitation (0.40 pounds of particulate matter per million BTU's of heat input) of this rule.

Therefore, as shown in the following calculations, these units are always expected to be in compliance with the PM limitation, this rule was not included in the applicable requirements section of this operating permit.

EIQ Reference. #	Description	Heat Input (MMBtu/hr)
EP-27C	Boiler No. 1 East	3.35
EP-27D	Boiler No. 2 West	3.35
	Total Heat Input	6.70

Regulatory PM Limit [10 CSR 10-5.030(3)(B)1.]:= 0.40 lb/MMBtu/hr
Conservatively assuming 1050 Btu per standard cubic foot of natural gas, and using the PM emission factor 7.6 lb/MMscf for natural gas combustion (AP-42, Sections 1.4, July 1998); the potential emission is 0.0072 lb/MMBtu.

10 CSR 10-5.420, *Control of Equipment Leaks From Synthetic Organic Chemical and Polymer Manufacturing Plants*

This rule are is not applicable to this installation as it does not produce, as intermediate or final products, one or more of the chemicals listed in Subpart VV, §60.489.

10 CSR 10-5.500, *Control of Emissions From Volatile Organic Liquid Storage*

The provisions of this rule apply to all storage containers of volatile organic liquid (VOL) with a maximum true vapor pressure of one-half pound per square inch (0.5 psia) or greater in any stationary tank, reservoir or other container of forty thousand (40,000) gallon capacity or greater, except to vessels listed in subparagraphs paragraphs (1)(A)1 through (1)(A)7 of this rule.

Since the true vapor pressure of styrene is less than 0.5 psia, the provisions of this rule are not applicable to EU0010 or EU0040, the West and East Styrene Storage Tanks.

10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides*

This rule applies to all installations located in the counties of Franklin, Jefferson, St. Charles and St. Louis and the City of St. Louis with the potential to emit one hundred (100) tons or greater of nitrogen oxides.

The potential to emit nitrogen oxides from this installation is less than 100 tons, therefore, 10 CSR 10-5.510 is not applicable to this installation.

10 CSR 10-5.520, *Control of Volatile Organic Compound Emissions From Existing Major Sources*

This rule applies to any installation in the counties of St. Charles, St. Louis, Franklin, or Jefferson or the City of St. Louis that have the potential to emit greater than one hundred (100) tons per year of volatile organic compounds. This rule does not apply to any installation that meets one or more of the following:

- 1) One or more rule under Title 10, Division 10, Chapter 5 of the Code of State Regulations (CSR) applies to volatile organic compound (VOC) emissions from a product process, or a raw material, intermediate or product tank;
- 2) Is exempted from one or more rule under Title 10, Division 10, Chapter 5 of the CSR as it applies to VOC emissions from a product process, or a raw material, intermediate or product tank; or
- 3) Is affected by any federal rulemaking promulgated under 40 CFR Part 60, 40 CFR Part 61, or 40 CFR Part 63 applies to VOC emissions from a product process, or a raw material, intermediate or product tank.

Therefore, 10 CSR 10-5.520 is not applicable to this installation as both 10 CSR 10-5.410, *Control of Emissions From Manufacture of Polystyrene Resin* and 40 CFR Part 63, Subpart JJJ, *National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins*, are applicable and the installation is exempt from 10 CSR 10-5.520.

10 CSR 10-5.550, *Control of Volatile Organic Compound Emissions From Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry*

The provisions of this rule apply to any vent stream originating from a process unit in which a reactor process or distillation operations is located except to processes vessels listed in subparagraphs paragraphs (1)(B)1 through (1)(B)5 of this rule.

The provisions of this rule do not apply to this installation, as the rule exempts any reactor process that is part of a polymer manufacturing process per 10 CSR 10-5.550(1)(B)2.

10 CSR 10-6.060, *Construction Permit No. 1291-005*

The permit limited the use of VOC blowing agents in the extruded polystyrene production plant. The permittee has replaced the VOC/HAPs material with non-VOC/non-HAPs material, therefore Construction Permit 1291-005 is not currently applicable. If future needs of the permittee require a VOC blowing agent, the permittee will have to reapply for a permit.

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

This rule is amended to update emission limits and references to regulations, changes the rule organization, and brings the rule up to date. The amended rule clarifies applicability of sources subject to New Source Performance Standards and this rule. The amended rule also includes an exemption for combustion equipment that uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 or liquefied petroleum gas as defined by American Society for Testing and Materials (ASTM), or any combination of these fuels.

Combustion equipment listed as units without limitation which uses pipeline grade natural gas are exempt from the requirements of this rule.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

- 1) Dow Chemical – Riverside Plant has converted from VOC blowing agent in the extruded polystyrene production plant to non-VOC blowing agent. The company has applied and received 260 tons of banked VOC credits and has sold 160 tons of the credits. In the modified permit (OP2001-026A), Dow Chemical has applied and was granted a plant-wide voluntary limit of 95 tons of VOC in any consecutive 12-month period. Furthermore, Dow Chemical has requested in the Title V renewal application that all permit conditions and emission units remain the same as those listed in the amended operating permit OP2001-026A issued December 3, 2004.
- 2) Construction Permit No. 1291-005
This permit that limited VOC emissions from the extruded polystyrene production plant to 481 tons in any consecutive 12-month period, is not included in this operating permit and cannot be reactivated for VOC emissions until modified or replaced. As described above, the permittee has replaced the VOC/HAP material with a non-VOC/non-HAP material; therefore construction permit 1291-005 is not included in this operating permit as it is not currently applicable. If future needs of the permittee require a VOC blowing agent, the permittee will have to reapply for a construction permit.

- 3) Construction Permit No. 0879-008
This permit for the construction of expansion to the SAN process, ABS process and polystyrene feedstock plants and dock facilities contained no special conditions. Therefore, construction permit 0879-008 is not included in this operating permit.
- 4) Construction Permit No. 0382-002A
This permit for the construction of a 200 horsepower pipeline natural gas fired boiler contained no special conditions. Therefore, construction permit 0382-002A is not included in this operating permit.
- 5) Construction Permit No. 0688-007A
This permit for the construction of component additive system for polystyrene production contained no special conditions. Therefore, construction permit 0688-007A is not included in this operating permit.
- 6) Construction Permit No. 0688-008A
This permit for the construction of a 30,000-gallon non-emitting storage tank to replace a 6,000-gallon non-emitting storage contained no special conditions. Therefore, construction permit 0688-008A is not included in this operating permit.
- 7) Construction Permit No. 0992-022
This permit for the modification of an existing burner to allow combustion of process vapors contained no special conditions. Therefore, construction permit 0992-022 is not included in this operating permit.

NSPS Applicability

CFR Part 60, Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*

This rule is not applicable to this installation as it does not produce, as intermediate or final products, one or more of the chemicals listed in Subpart VV, §60.489.

CFR Part 60, Subpart DDD, *Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industries*

The provisions of this subpart apply to affected facilities involved in the manufacture of polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate) as defined in §60.561 of Subpart DDD. The applicability date for manufacturing polystyrene is September 30, 1987. As the source was constructed prior to this date, this subpart is not applicable.

CFR Part 60, Subpart III, *Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes*

The provisions of this subpart apply air oxidation unit processes listed in 40 CFR 60.610(b) for which construction, modification, or reconstruction commenced after October 21, 1983.

This subpart is not applicable to this installation because it does not utilize an air oxidation reaction.

CFR Part 60, Subpart NNN, *Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations.*

The provisions of this subpart apply to distillation operations designated in 40 CFR 60.660(b) for which construction, modification, or reconstruction commenced after December 30, 1983, and the affected facility is part of a process unit that produces any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, except as provided in 40 CFR 60.660(c)

This subpart is not applicable to this installation because it does not utilize a distillation process.

CFR Part 60, Subpart RRR, *Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes*

The provisions of this subpart apply to each affected facility designated in 40 CFR 60.700(b) for which construction, modification, or reconstruction commenced after December 30, 1983 and the affected facility is part of a process unit that produces any of the chemicals listed in §60.707 as a product, co-product, by-product, or intermediate, except as provided in §60.700(c).

This rule is not applicable to this installation because it does not produce as a product, co-product, by-product, or intermediate any chemical listed in §60.707.

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984.*

The NSPS Subpart Kb only applies to storage tanks with capacities greater than 75 m³ (19,800 gallons) with vapor pressures greater than 15 kPa. The Ethyl Chloride storage tank was constructed in 1987. This tank operates at a pressure of 405.3 kPa and has no emissions. NSPS Subpart Kb excludes vessels operating in excess of 204.9 kPa and without emissions to the atmosphere. Since the ethyl chloride tank operates at pressures well above this level, Subpart Kb is not applicable.

MACT Applicability

CFR Part 63, Subpart F, *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry*

The provisions of this subpart apply to chemical manufacturing process units that meet all the criteria specified in §63.100(b)(1), (b)(2) and (b)(3).

This rule is not applicable, as the source does not manufacture any of the hazardous air pollutant chemicals listed in paragraphs §63.100(b)(1)(i) or §63.100(b)(1)(ii).

CFR Part 63, Subpart G, *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater*

This subpart applies to all process vents, storage vessels, transfer racks, wastewater streams, and in process equipment subject to 40 CFR 63.149 within a source subject to Part 63, Subpart F.

This subpart is not applicable to this installation, as the installation is not subject to Subpart F of 40 CFR Part 63.

40 CFR Part 63, Subpart JJJ, *National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins*

The Dow Chemical Company – Riverside Plant was an affected source subject to the provisions of this subpart because it is a thermoplastic product process unit that uses as a reactant, or produces as a by-product any organic hazardous air pollutant and was a major source. The installation is no longer a major source, because the VOC/HAPs polystyrene foam blowing agent has been replaced with non-VOC/non-HAPs material. However, a May 16, 1995 memo from EPA Director of the Office of Air Quality Planning and Standards states that installations subject to a MACT standard on the “first compliance date” are required to comply permanently with the MACT standard.

A performance test was conducted on June 14, 2001 that demonstrated compliance with the organic HAP concentration limit of 20 ppmv on a dry basis @3% oxygen (O₂) and established a minimum hotbox temperature level that indicates proper operation of the process heater.

Test Results – Stack Test of June 14, 2001

Parameter	Stack
VOC ppmvd @3% O ₂ (as Styrene)	15.2
% Oxygen	11.3
Firebox Temperature (C)	380.5

40 CFR Part 63, Subpart H, *National Emission Standards for Hazardous Air Pollutants for Equipment Leaks*

The provisions of this subpart apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific subpart in 40 CFR Part 63 that references this subpart.

This subpart is applicable to this installation, as 40 CFR Part 63, Subpart JJJ references this subpart.

40 CFR Part 63, Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*

The installation is not a major source of HAPs and is not subject to this subpart.

NESHAP Applicability

40 CFR Part 61 Subpart M, *National Emission Standard for Asbestos, §61.145(a), Standard for demolition and renovation.*

This regulation has been included in the operating permit because it applies to any demolition or renovation (as outlined in 40 CFR 61.145) of buildings containing asbestos at the installation.

CAM Applicability

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that meets all of the following:

- Be subject to an emission limitation or standard, and

- Use a control device to achieve compliance, and
- Have pre-control emissions that exceed or are equivalent to the major source threshold.

The Dow Chemical Company – Riverside Plant is not subject to 40 CFR Part 64 because the installation does not have a pre-control potential to emit that exceeds or equals the major source threshold.

[\$64.2(a)]

Other Regulatory Determinations

- 1) The two (2) 3.35 MMBtu boilers and the fourteen (14) space heaters with a capacity of 21.78 MMBtu/hr only emit combustion products, only burn pipeline natural gas, emit less than 150 pounds per day of any air contaminant and each has less than 10 MMBtu/hr heat input. These units would not be expected to exceed the opacity limits, therefore, they are not listed in the permit as emission units with limitation.
- 2) 10 CSR 10-6.065, *Operating Permits*
Voluntary Permit Condition, 10 CSR 10-6.065(6)(C)2.A
In the modified permit (OP2001-026A), Dow Chemical applied and was granted a plant-wide voluntary limit of 95 tons of VOC in any consecutive 12-month period for the installation and a maximum limit of 9.5 tons per year each for both styrene and ethylbenzene emissions from the polystyrene production plant. These voluntary limits were accepted and an additional limit for the installation of 24.5 tons of total HAPs per consecutive 12-month period has been added and became part of the modified permit. Dow Chemical has requested in the Title V renewal application that all permit conditions and emission units remain the same as those listed in the amended operating permit OP2001-026A issued December 3, 2004. This request has been granted.
- 3) 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Process*
Calculation of the PM limits and emission rates for emission units subject to 10 CSR 10-6.400. Process information and data used in these calculations are from the Amended Part 70 Operating Permit (OP2001-026A), 2004 EIQ, AP-42 and FIRE factors.
Also, one of the following equations from 10 CSR 10-6.400 is used to calculate the PM allowable limit:
 $E = 4.10P^{0.67}$ for process weight rates up to 30 tons (60,000 lbs) per hour, and
 $E = 55.0P^{0.11} - 40$ for process weight rates greater than 30 tons (60,000 lbs) per hour
Where: E = rate of emission in lb/hr; and
P = process weight rate in tons/hr (maximum hourly design rate)

Emission Unit # or EIQ Ref #	PM Control Device & Efficiency	Maximum Design Rate (ton/hr)	PM Emission Factor (lb/ton)	PM Uncontrolled Emissions (lb/hr)	PM Controlled Emissions (lb/hr)	PM Allowable Emission Rate
EU0090	Fabric Filter 95%	11	0.0692	0.76	0.038	20.4
EU0100	Cyclone 95%	25	0.09	2.25	0.113	35.4
EU0110	Fabric Filter 99%	0.75	9	6.75	0.068	3.38
EU0120	Fabric Filter 99%	0.75	9	6.75	0.068	3.38
EU0130	Fabric Filter 99%	2.5	0.276	0.69	0.05	7.58
EP-01 & 03	N/A	0.5	0.0081	0.004		2.58
EP-06	Fabric Filter 95%	5	0.0081	0.04	0.002	12.1
EP-07	Fabric Filter 95%	5	0.0081	0.04	0.002	12.1
EP-13 & 16	N/A	2.5	0.0081	0.02		7.58
EP-19	N/A	10	0.0081	0.081		19.2
EP-20	N/A	10	0.0081	0.081		19.2
EP-33	N/A	11	0.0081	0.089		20.4
EP-34	Fabric Filter 95%	25	0.003	0.0075	0.0004	35.43
EP-36	N/A	25	0.0081	0.203		35.4

EU0090 – Polystyrene Cutter/Screening/w Sock (EP-32)

At the maximum hourly design rate (11 tons/hr), the uncontrolled emission rate (0.76 lbs/hr) is approximately twenty-six and eight tenth (26.8) times less than the allowable emission rate (20.4

lbs/hr). The process is equipped with a fabric filter (95% control efficiency). It is highly unlikely that the allowable emission rate will be exceeded without the control device operating. The permittee will retain the potential to emit calculations in Attachment D which demonstrate that the allowable emission rate will never be exceeded. No further recordkeeping or monitoring will be required to demonstrate compliance with the emission limitations.

EU0100 – Two Polystyrene Classifying Cyclones (EP-35)

At the maximum hourly design rate (25 tons/hr), the uncontrolled emission rate (2.25 lbs/hr) is approximately fifteen and seven tenth (15.7) times less than the allowable emission rate (35.4 lbs/hr). It is highly unlikely that the allowable emission rate will be exceeded. The permittee will retain the potential to emit calculations in Attachment D which demonstrate that the allowable emission rate will never be exceeded. No further recordkeeping or monitoring will be required to demonstrate compliance with the emission limitations.

EU0110 – Extruded Polystyrene Scrap Baghouse – M/L Line (EP-04)

At the maximum hourly design rate (0.75 tons/hr), the uncontrolled emission rate (6.75 lbs/hr) is approximately twice the allowable emission rate (3.35 lbs/hr). The process is equipped with a fabric filter (99% control efficiency); the controlled emission rate (0.068 lbs/hr) is approximately fort-nine (49) times less than the allowable emission rate. It is highly unlikely that the allowable emission rate will be exceeded with the control device operating. Monitoring and recordkeeping will be required to ensure that the control device is operating properly.

EU0120 – Extruded Polystyrene Scrap Baghouse – 48” Line (EP-05)

At the maximum hourly design rate (0.75 tons/hr), the uncontrolled emission rate (6.75 lbs/hr) is approximately twice the allowable emission rate (3.35 lbs/hr). The process is equipped with a fabric filter (99% control efficiency); the controlled emission rate (0.068 lbs/hr) is approximately fort-nine (49) times less than the allowable emission rate. It is highly unlikely that the allowable emission rate will be exceeded with the control device operating. Monitoring and recordkeeping will be required to ensure that the control device is operating properly.

EU0130 – Central Vacuum System (EP-10)

At the maximum hourly design rate (2.5 tons/hr), the uncontrolled emission rate (0.69 lbs/hr) is approximately eleven (11) times less than the allowable emission rate (7.58 lbs/hr). The process is equipped with a fabric filter (99% control efficiency). It is highly unlikely that the allowable emission rate will be exceeded without the control device operating. The permittee will retain the potential to emit calculations in Attachment D which demonstrate that the allowable emission rate will never be exceeded. No further recordkeeping will be required to demonstrate compliance with the emission limitations.

EP-01, EP-03, EP-06, EP-07, EP-13, EP-16, EP-19, EP-20, EP-33, EP-34 and EP-36

The potential to emit (PTE) from each unit is less than 0.5 pounds per hour of particulate matter. Per 10 CSR 10-6.400(1)(B)11, emission units with potential to emit less than 0.5 pounds per hour of particulate matter are exempt from the requirements of this rule. Therefore, these units are not subject to the requirements of this rule.

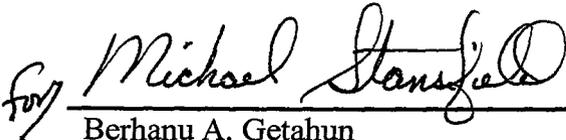
Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

- 1) The specific pollutant regulated by that rule is not emitted by the installation;
- 2) The installation is not in the source category regulated by that rule;
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule;
- 4) The installation does not contain the type of emission unit which is regulated by that rule;
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:



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