*West Virginia Department of Environmental Protection*

*Austin Caperton*
*Cabinet Secretary*

# Title V Operating Permit Revision

## *For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act*

| | | | |
|---|---|---|---|
| **Permit Action Number:** | MM04 | **SIC:** | 2834 |
| **Name of Permittee:** | Mylan Pharmaceuticals, Inc. | | |
| **Facility Name/Location:** | Morgantown | | |
| **County:** | Monongalia | | |
| **Facility Address:** | 781 Chestnut Ridge Rd.; Morgantown, WV 26505 | | |

**Description of Permit Revision:** The purpose of MM04 is to increase the aggregate particulate matter emission rate from the production rooms, update equipment and configuration information in the Emission Units Table, and make various administrative changes to permit language. These changes were approved under R13-2068W.

**Title V Permit Information:**

| | |
|---|---|
| **Permit Number:** | R30-06100033-2017 |
| **Issued Date:** | March 9, 2017 |
| **Effective Date:** | March 23, 2017 |
| **Expiration Date:** | March 9, 2022 |

**Directions To Facility:** I-79 to Exit 155. Follow signs for WVU. Follow US Route 19 to Coliseum. Turn left onto SR 705 for approximately 1.2 miles. Turn right to stay on SR 705 (Chestnut Ridge Road). Follow for approximately 0.6 miles to plant on left.

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THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

Laura M. Crowder
Director

October 21, 2019
Date Issued

# 1.0 Emission Units and Active R13, R14, and R19 Permits

## 1.1. Emission Units

| Emission Point ID | Control Device | Emission Unit ID | Mylan ID & Emission Unit Description | Design Capacity | Year Installed/ Modified |
|---|---|---|---|---|---|
| 001 | None | 001 | Boiler 3: Natural gas boiler | 6.27 MMBtu/hr | 1987 |
| ~~002~~ | ~~None~~ | ~~002~~ | ~~Boiler 4: Natural gas boiler~~ | ~~1.5 MMBtu/hr~~ | ~~1987~~ |
| 003 | None | 003 | Boiler 5: Natural gas boiler | 6.00 MMBtu/hr | 1991 |
| 004 | None | 004 | Boiler 2: Natural gas boiler | 1.18 MMBtu/hr | 1974 |
| 006 | None | 006 | Boiler 1: Natural gas boiler | 3.34 MMBtu/hr | 1968 |
| 007 | None | 007 | Boiler 7: Natural gas boiler | 6.99 MMBtu/hr | 1997 |
| 008 | None | 008 | Boiler 8: Natural gas boiler | 6.99 MMBtu/hr | 1997 |
| 009 | None | 009 | Boiler 11: Natural gas boiler | 2.07 MMBtu/hr | 2000 |
| 009 | None | 009A | Boiler 12: Natural gas boiler | 2.07 MMBtu/hr | 2000 |
| 010 | None | 010 | Boiler 15: Natural gas boiler | 7 MMBtu/hr | 2004 |
| 011 | None | 011 | Boiler 2343: Natural gas boiler | 21.0 MMBtu/hr | 2005 |
| 012 | None | 012 | Boiler 2344: Natural gas boiler | 21.0 MMBtu/hr | 2005 |
| 013 | None | 013 | Boiler 2345: Natural gas boiler | 21.0 MMBtu/hr | 2005 |
| 014 | None | 014 | Boiler 2674: Natural gas boiler | 0.65 MMBtu/hr | 2005 |
| 015 | None | 015 | Boiler 2675: Natural gas boiler | 0.65 MMBtu/hr | 2005 |
| 016 | None | 016 | Boiler 24524: Natural gas boiler | 6.0 MMBtu/hr | 2016 |
| 210 | 210 | 210 | Coating Pan 169: Coating pan controlled by cartridge collector EF169 | 500 lb/load | 1985 |
| 215 | CC EF1390* | 215 | Coating Pan 1390 | 750 lb/load | 1999 |
| 220 | 220 | 220 | Coating Pan 186: Coating pan controlled by cartridge collector EF186 | 500 lb/load | 1986 |
| 230 | 230 | 230 | Coating Pan 217: Coating pan controlled by cartridge collector EF217 | 500 lb/load | 1987 |
| 240 | 240 | 240 | Coating Pan 99: Coating pan controlled by cartridge collector EF99 | 500 lb/load | 1983 |
| 241 | CC EF 4553* | 241 | Coating Pan 4549 | 750 lb/load | 2009 |
| 242 | CC EF4101* | 242 | Coating Pan 4027 | 245 lb/load | 2008 |
| 243 | 243 | 243 | Coating Pan 3853: Coating Pan controlled by cartridge collector 4164 | 750 lbs/load | 2008 |
| 244; 10008085(2) | CC 10031225; RTO* | 244 | Coating Pan 7552 | 750 lb/load | 2010 |
| 245; 10008085(2) | CC 10024525; RTO* | 245 | Coating Pan 8421 | 750 lb/load | 2010 |

| Emission Point ID | Control Device | Emission Unit ID | Mylan ID & Emission Unit Description | Design Capacity | Year Installed/ Modified |
|---|---|---|---|---|---|
| 246 10008085(2) | CC 10023583; RTO* | 246 | Coating Pan 23581 | 750 lbs/load | 2015 |
| 247 10008085(2) | CC 10024526; RTO* | 247 | Coating Pan 30426 | 750 lbs/load | 2017 |
| 260; 10008085(2) | RTO* | 260 | Oven 19 | Varies | Prior to 1973 |
| ~~261; 10008085(2)~~ | ~~RTO*~~ | ~~261~~ | ~~Oven 18~~ | ~~Varies~~ | ~~Prior to 1973~~ |
| 264; 10008085(2) | RTO* | 264 | Oven 0021 | Electric, Load Varies | 2013 |
| 1911; 10008085(2) | RTO* | 1911 | Coating Line 1911 | 10.77 lb/hr | 2014 |
| 281 | Rotoclone 3 | Rooms 91-130, 91-132, 91-134 – 91-137, 91-229, 91-230, 91-232, 91-330, 91-332, 91-334 – 91-337 | Room General Exhaust | Varies | 1991 |
| 282 | Rotoclone 3798* | Rooms 74-150, 74-152, 74-154, 74-159, 74-160, 74-161, 74-162, 74-212, 91-232, 91-233 | Room General Exhaust | Varies | 2013 |
| 283 | Rotoclone 2 | Rooms 74-205 – 74-209, 99-217 – 99-219 | Room General Exhaust | Varies | 1982 |
| 287 | Rotoclone 6* | Rooms BL209, BL211, BL214, BL304, BL306, BL307, BL309- BL314, BL316, BL402 – BL404, BL406-BL414, BL416 | Room General Exhaust | Varies | 1996 |
| 288 | Rotoclone 5* | Rooms BB101-BB103, BB106, BB108-BB111, BB113-BB118, BB201-BB203, BB206-BB208, BB210-BB217, BB303, BB312 | Room General Exhaust | Varies | 1996 |
| 291 | Rotoclone 7* | Rooms 85-205A~~—85-208A~~, 99-105, 99-114 – 99-122, 99-209, ORG201A – ORG204A | Room General Exhaust | Varies | 1999 |
| 294 | Rotoclone 9* | Rooms BB112, 85-106, 85-108, 85-114, 85-115, 85-102, 85-104, 85-107, 85-110 | Room General Exhaust | Varies | 2003 |
| 295 | Rotoclone 10* | Rooms BL218, BL219 | Room General Exhaust | Varies | 2004 |
| 296 | Rotoclone 2317* | Rooms NEX140, NEX142, NEX144, NEX146, NEX159 - NEX162 | Room General Exhaust | Varies | 2005 |

| Emission Point ID | Control Device | Emission Unit ID | Mylan ID & Emission Unit Description | Design Capacity | Year Installed/ Modified |
|---|---|---|---|---|---|
| 316 | Rotoclone 2333* | Rooms NEX464 - NEX467, NEX481, NEX482, NEX484 - NEX492 | Room General Exhaust | Varies | 2005 |
| 317 | Rotoclone 2334* | Rooms NEX305-NEX312, NEX316 | Room General Exhaust | Varies | 2005 |
| 318 | Rotoclone 2335* | Rooms NEX445B, NEX445C, NEC445D, NEX445E, NEX445F, NEX445G | Room General Exhaust | Varies | 2005 |
| 319 | Rotoclone 2336* | Rooms NEX514, NEX516A-D, NEX522 -NEX524, NEX526, NEX528, NEX530, NEX535 - NEX538 | Room General Exhaust | Varies | 2005 |
| 320 | Rotoclone 2337* | Rooms NEX503, NEX505, NEX507, NEX509, NEX511, NEX513 | Room General Exhaust | Varies | 2005 |
| 321 | Rotoclone 2338* | Rooms NEX506, NEX508, NEX510, NEX512, NEX515 | Room General Exhaust | Varies | 2005 |
| 322 | CC 17034* | Rooms 74-174, 74-175, 74-176, 74-177, 74-179, 74-179A, 74-180, 74-180A | Room General Exhaust | Varies | 2012 |
| 533 | CC 10024047* | 533 | Fluid Bed 527 | Up to 575 Kg/Load | 1991 |
| 534; 10008085(2) | CCEF473; RTO* | 534 | Fluid Bed 473 | Up to 250 Kg/Load | 1997 |
| 535 | CC EF1339* | 535 | Fluid Bed 1339 | Up to 575 Kg/Load | 1997 |
| 536 10008085(2) | CC EF1222*; RTO | 536 | Fluid Bed 1222 | Up to 250 Kg/Load | 1997 |
| 537 | CC 10022730* | Rooms 91-129, 91-139, 91-329 | Room General Exhaust | Varies | 1997 |
| 538; 10008085(2) | CC EF2113; RTO* | 538 | Fluid Bed 1855 | Up to 250 Kg/Load | 2002 |
| 571 | CC EF2113* | 571 | Fluid Bed 2113 | Up to 575 Kg/Load | 2004 |
| 572; 10008085(2) | CC EF2181; RTO* | 572 | Fluid Bed 2181 | Up to 250 Kg/Load | 2004 |
| 573; 10008538(2) | CC 3340*; Absorber | 573 | Fluid Bed 2811 | Up to 575 Kg/Load | 2006 |
| 574; 10008085(2) | CC 3416; RTO* | 574 | Fluid Bed 3287 | Up to 250 Kg/Load | 2006 |
| 575; 10008085(2) | CC 10007649; RTO* | 575 | Fluid Bed 3620 | Up to 250 Kg/Load | 2007 |

| Emission Point ID | Control Device | Emission Unit ID | Mylan ID & Emission Unit Description | Design Capacity | Year Installed/ Modified |
|---|---|---|---|---|---|
| 576; 10008085[2] | CC 3407; RTO* | 576 | Fluid Bed 3426 | Up to 575 Kg/Load | 2007 |
| 577; 10008085[2] | CC 3881; RTO* | 577 | Fluid Bed 3704 | Up to 250 Kg/Load | 2008 |
| 578; 10008085[2] | CC 3879; RTO* | 578 | Fluid Bed 3705 | Up to 575 Kg/Load | 2008 |
| 579; 10008538[2] | CC 4287*; Absorber | 579 | Fluid Bed 4001 | Up to 575 Kg/Load | 2008 |
| 580; 10008085[2] | CC 10007482; RTO* | 580 | Fluid Bed 7560 | Up to 575 Kg/Load | 2010 |
| 581 | CC 15982* | 581 | Fluid Bed 15982 | Up to 250 Kg/Load | 2011 |
| 582 | CC 16117* | 582 | Fluid Bed 16117 | Up to 575 Kg/Load | 2011 |
| 583 | CC 10024247* | 583 | Fluid Bed 24410 | Up to 575 Kg/Load | 2016 |
| N/A | None | N/A | Class I or Class II CFC-containing Equipment Subject to 40 CFR Part 82 Subpart F | Varies | Varies |
| 10008085 | None | 10008085 | Regenerative Thermal Oxidation | 16.0 mmBtu/hr<br>3,070 lbs/hr | 2010 |
| 10008538 | None | 10008538 | Absorber | Up to 4,000 cfm | 2010 |
| 10007530 | None | 10007530 | Kohler 100 REZG Natural Gas Fired Emergency Generator | 162 bhp/1,800 rpm | 2010 |
| 10008594 | None | 10008594 | Kohler 100 REZG Natural Gas Fired Emergency Generator | 162 bhp/1,800 rpm | 2011 |
| 1053 | None | 1053 | 750 kW Detroit Diesel/MTU | 1,006 bhp/1800 rpm | 2011 |
| 1053 | None | 1053 | Diesel Fuel Tank | 2,100 Gallons | 2011 |
| 323 | CC 10023125* | Rooms 87-103 to 87-117 | Room General Exhaust | Varies | 2014 |
| 324 | CC 10030432* | Rooms 74-101 to 74-114, 74-116 to 74-119, 74-184 | Room General Exhaust | Varies | 2017 |
| 325 | CC 10003643* | Rooms 85-208A to 85-208C, 85-208E | Room General Exhaust | Varies | 2018 |
| 326 | CC ~~TBD~~ 10034484* | Rooms 85-206A to 85-206D | Room General Exhaust | Varies | 2018 |
| 327 | CC ~~TBD~~ 10034483* | Rooms 85-207A to 85-207D | Room General Exhaust | Varies | 2018 |

*Identifies pollution control equipment included in R13-2068V.
[1]CC = Cartridge Collector; WS = Wet Scrubber; RTO = Regenerative Thermal Oxidizer
[2]Noted Emissions Units/Sources are authorized to exhaust (after the Cartridge Collector) to the RTO/Absorber (as applicable) and to atmosphere

## 1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

| Permit Number | Date of Issuance |
|---|---|
| R13-2068~~V~~W | ~~June 14, 2018~~<br>August 15, 2019 |
| G60-C035A | December 28, 2011 |

## 4.0 Boilers [emission point ID(s): 001, ~~002,~~ 003, 004, 006, 007, 008, 009, 009A, 010, 011, 012, 013, 014, 015, 016]

### 4.1. Limitations and Standards

4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six-minute block average.
**[45CSR§2-3.1 and 45CSR13, Permit No. R13-2068 (Condition 5.1.1.)]**

4.1.2. Compliance with the visible emission requirements of 45CSR2, subsection 3.1 (4.1.1.), shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 4.1.1. Continuous opacity monitors shall not be required on fuel burning units, which employ wet scrubbing systems for emission control.
**[45CSR§2-3.2 and 45CSR13, R13-2068 (Condition 5.1.2.)]**

4.1.3. The maximum amount of natural gas to be burned by a single boiler 7, 8, 15 (Emission Unit IDs 007, 008, 010) shall not exceed 7,000 $ft^3$/hr or 61,320,000 $ft^3$/yr.
**[45CSR13, Permit No. R13-2068 (Condition 5.1.11.)]** *(007, 008, 010)*

4.1.4. Maximum emissions from each boiler 7, 8, 15 (Emission Unit IDs 007, 008, 010) shall not exceed the following limits:

| Pollutant | Maximum Hourly Emissions (lb/hr) | Maximum Annual Emissions (tpy) |
|---|---|---|
| Carbon Monoxide | 0.59 | 2.58 |
| Nitrogen Oxides | 0.70 | 3.07 |
| $PM_{2.5}/PM_{10}/PM^{(1)}$ | 0.10 | 0.30 |
| Sulfur Dioxide | 0.10 | 0.10 |
| Volatile Organic Compounds | 0.10 | 0.20 |

(1) Including Condensables

**[45CSR13, Permit No. R13-2068 (Conditions 5.1.5., 5.1.6. and 5.1.7.)]** *(007, 008, 010)*

4.1.5. The three (3) Bryan Steam Corporation boilers 2343, 2344 & 2345 (Emission Unit IDs 011, 012, & 013) shall combust only natural gas fuel. The maximum amount of natural gas consumed by each boiler shall not exceed 20,590 $ft^3$/hr and 180.4 million $ft^3$/yr.
**[45CSR13, Permit No. R13-2068 (Condition 5.1.12.)]** *(011, 012, 013)*

## 5.0 Fluid Bed Granulators [emission point ID(s): 533, 534, 535, 536, 538, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, and 583]

### 5.1. Limitations and Standards

5.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation, which is greater than twenty (20) percent opacity.
**[45CSR§7-3.1 and 45CSR13, Permit No. R13-2068 (Condition 6.1.1.)]**

5.1.2. Maximum particulate matter emissions ($PM_{2.5}$/$PM_{10}$/PM) from each Fluid Bed to the atmosphere shall not exceed 0.1 pounds per hour and 0.1 tons per year.
**[45CSR§7-4.1. and 45CSR13, Permit No. R13-2068 (Conditions 6.1.2. and 6.1.3.)]** *Compliance with this streamlined limit will assure compliance with 45CSR§7-4.1. and Permit No. R13-2068 (Condition 6.1.2.)*

5.1.3. The fluid beds shall operate according to the following requirements:

a. The aggregate dry material loading of the fluid bed (excluding times of tablet/beads coating in a fluid bed) shall not exceed the following limits:

(1) Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3704, 15982 (Emission Unit IDs 534, 536, 538, 572, 574, 575, 577, 581): 250 kg/load
(2) Fluid Beds 527, 1339, 2113, 2811, 3426, 3705, 4001, 7560, 16117, 24410 (Emission Unit IDs 533, 535, 571, 573, 576, 578, 579, 580, 582, 583): 575 kg/load

b. The annual aggregate dry material loading of all fluid beds shall not exceed 99,000,000 pounds on a rolling yearly total basis.

c. Cartridge collectors shall be used at all times on each fluid bed to control particulate matter emissions. Each collector shall, at a minimum, achieve a collection efficiency of 95%.

d. The spray rate used in each fluid bed shall not exceed 4 kilograms-VOC/minute.

e. Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580) shall have the capability of directing exhaust to the RTO for control of VOCs or emitting directly to atmosphere.

f. Fluid Beds 2811 and 4001 (Emission Unit IDs 573 and 579) shall have the capability of directing exhaust to the absorber for control of VOCs or emitting directly to atmosphere.

g. No HAP-containing solvents shall be processed in any fluid bed.

**[45CSR13, Permit No. R13-2068 (Condition 6.1.6.)]**

5.1.4. Maximum hourly VOC emissions to the atmosphere from the Fluid Beds shall not exceed:

a. 529.2 lb/hr for each fluid bed if not venting exhaust to the RTO or absorber for the purpose of controlling VOC emissions.

b. 10.59 lb/hr (as emitted from the RTO) each for Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580) if venting exhaust to the RTO for the purpose of controlling VOC emissions.

c. 26.46 lb/hr (as emitted from the absorber) each for Fluid Bed 2811 and 4001 (Emission Unit IDs 573 and 579) if venting exhaust to the absorber for the purpose of controlling VOC emissions.

**[45CSR13, Permit No. R13-2068 (Condition 6.1.4.)]**

5.1.5. Maximum total combined annual VOC emissions to the atmosphere from the Fluid Beds shall not exceed 74.0 tons/year.
**[45CSR13, Permit No. R13-2068 (Condition 6.1.5.)]**

## 5.2. Monitoring Requirements

5.2.1. For the purposes of demonstrating compliance with the minimum cartridge collection efficiency as given under 5.1.3.c, the permittee shall:

a. Install, maintain, and operate the cartridge collectors consistent with safety and good air pollution control practices for minimizing emissions, and shall follow all manufacturer's recommendations concerning control device maintenance and performance.

b. Conduct a weekly visual inspection of the cartridge, cartridge connections, and dust hoppers of each cartridge collector, in order to ensure proper operation of cartridge collectors. Records shall be maintained on site for five (5) years from the record creation date. Records shall state the date and time of each cartridge collector inspection, the inspection results, and corrective actions taken, if any.

c. Either conduct representative performance testing, pursuant to the performance testing procedures as outlined under 3.3.1. of this permit, on the cartridge collectors to determine a minimum collection efficiency or produce a vendor guarantee stating that the cartridge collectors (or associated filters) will meet a minimum collection efficiency of 95%.

**[45CSR13, Permit No. R13-2068 (Condition 6.2.2.)]**

5.2.2. Visible emissions monitoring shall be conducted initially at least once per month of operation for all emission points subject to opacity limitations. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emissions checks once per three months of operation. If visible emissions are then observed from an emission point(s) during monitoring, then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct visible emissions checks once per three months of operation only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These visible emission checks shall be conducted in accordance with 40 CFR 60, Appendix A, Method 22 during periods of normal facility operation for a sufficient time interval, but not less than one (1) minute, to determine if the unit has visible emissions. If sources of visible emissions are identified during the survey, or at any other time, the permittee shall conduct a 40 CFR 60, Appendix A, Method 9 evaluation within twenty four (24) hours. A Method 9 evaluation shall not be required if the visible emissions condition is corrected within twenty four (24) hours from the time the visible emission condition was identified and the unit is operated at normal operating conditions.
**[45CSR13, Permit No. R13-2068 (Conditions 6.2.1.); 45CSR§30-5.1.c]**

5.2.3. For the purposes of demonstrating compliance with maximum dry material loading set forth in 5.1.3.a., the permittee shall monitor and record the total dry material per load for each fluid bed. This requirement may be waived if the permittee is able to demonstrate that the maximum reasonable design capacity of each fluid bed is equal or less than the maximum load given under 5.1.3.a. or if the permittee is able to demonstrate that the maximum loading based on product formulations is equal or less than the maximum load given under 5.1.3.a.
**[45CSR13, Permit No. R13-2068 (Conditions 6.2.3.)]**

5.2.4. For the purposes of demonstrating compliance with maximum annual aggregate dry material loading set forth in 5.1.3.b., the permittee shall monitor and record the aggregate monthly and rolling twelve month total amount of dry material into the fluid beds.
**[45CSR13, Permit No. R13-2068 (Conditions 6.2.4.)]**

5.2.5. For the purposes of demonstrating compliance with maximum annual VOC emission limit set forth in 5.1.5, the permittee shall:

a. Monitor and record the aggregate monthly and rolling twelve month total amount of VOCs in pounds used in each fluid bed with the exception of Fluid Beds 473, 1222, 1855, 2181, 2811, 3287, 3620, 3426, 3704, 3705, 4001, 7560 (Emission Unit IDs 534, 536, 538, and 572 – 580).

b. Monitor and record the aggregate monthly and rolling twelve month total amount of VOCs in pounds used in Fluid Beds 473, 1222, 1855, 2181, 2811, 3287, 3620, 3426, 3704, 3705, 4001, 7560 (Emission Unit IDs 534, 536, 538, and 572 – 580) when each bed is and is not venting exhaust to the RTO/Absorber (as applicable) for the purpose of controlling VOCs.

c. Calculate and record the monthly and rolling twelve month aggregate VOC emissions from all fluid beds by summing the following:

(1) The total amount of VOCs in pounds used in each fluid bed with the exception of Fluid Beds 473, 1222, 1855, 2181, 2811, 3287, 3620, 3426, 3704, 3705, 4001, 7560 (Emission Unit IDs 534, 536, 538, and 572 – 580).

(2) The total amount of VOCs in pounds used in Fluid Beds 473, 1222, 1855, 2181, 2811, 3287, 3620, 3426, 3704, 3705, 4001, 7560 (Emission Unit IDs 534, 536, 538, and 572 – 580) when not venting exhaust to the RTO/Absorber (as applicable) for the purpose of controlling VOCs.

(3) The total amount of VOCs used in Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580) when venting exhaust to the RTO for the purpose of controlling VOCs. Based on compliance with Requirement 8.1.7 of this permit, the permittee may apply a VOC destruction efficiency of 98% to the amount of VOCs used in Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580) when venting exhaust to the RTO for the purpose of controlling VOCs.

(4) The total amount of VOCs used in Fluid Beds 2811 and 4001 (Emission Unit IDs 573 and 579) when venting exhaust to the Absorber for the purpose of controlling VOCs. Based on compliance with Requirement 11.1.2 of this permit, the permittee may apply a VOC destruction efficiency of 95% to the amount of VOCs used in Fluid Beds 2811 and 4001 (Emission Unit IDs 573 and 579) when venting exhaust to the Absorber for the purpose of controlling VOCs.

**[45CSR13, Permit No. R13-2068 (Conditions 6.2.5.)]**

## 6.0 Production Rooms [emission point ID(s): 281, 282, 283, 287, 288, 291, 294, 295, 296, 297, 298, 299, 300, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 537]

### 6.1. Limitations and Standards

6.1.1. No person shall cause, suffer, allow or permit emission of smoke and /or particulate matter into the open air from any process source operation, which is greater than twenty (20) percent opacity.
**[45CSR§7-3.1. and 45CSR13, Permit No. R13-2068 (Condition 7.1.1.)]** *(All units listed above)*

6.1.2. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified for each of the following emission points (under the appropriate source operation type in Table 45-7A found at the end of 45CSR7):

| Emission Point | PM Emission Limit (lb/hr) |
|---|---|
| 281, 283 | 1.20[1] |
| 287, 288, 291, 294, & 295 | 1.20[1] |
| 282, 296-300, 305-322 | 2.12[2] |
| 323 | 1.16[3] |
| 324 | 1.11[4] |
| ~~324,~~ 325~~, 326,~~ ~~327~~, ~~537~~ | ~~1.11[4]~~ 0.15[5] |
| 537 | 0.35[6] |

[1] Based on a PWR of 1,000 lb/hr for a Type "a" source operation.
[2] Based on a PWR of 1,764 lb/hr for a Type "a" source operation.
[3] Based on a PWR of 964 lb/hr for a Type "a" source operation.
[4] Based on a PWR of 919 lb/hr for a Type "a" source operation.
[5] Based on a PWR of 123 lb/hr for a Type "a" source operation.
[6] Based on a PWR of 294 lb/hr for a Type "a" source operation.

Compliance with 45CSR§7-4.1 for emission points 287, 288, 291, 294, 295, 282, 296-300, 305-327, and 537 shall be demonstrated through compliance with the more stringent particulate emission limit set forth in 6.1.3 and 6.1.5.

**[45CSR§7-4.1. and Permit No. R13-2068 (Condition 7.1.2.)]**

6.1.3. Maximum particulate matter emissions to the atmosphere shall not exceed the following:

| Source | Maximum PM Hourly Emissions (lb/hr) |
|---|---|
| Rotoclone (287) | 0.4 |
| Rotoclone (288) | 0.4 |
| Rotoclone (291) | 0.4 |
| Rotoclone (294) | 0.4 |
| Rotoclone (295) | 0.4 |

**[45CSR§7-4.1. and Permit No. R13-2068 (Condition 7.1.3.)]** *Compliance with this streamlined limit will assure compliance with 45CSR§7-4.1.and Permit Number R13-2068 (Condition 7.1.2.)*

6.1.4. At all times the production rooms listed under Table 1.0 are in operation, exhaust from these shall be vented to the applicable control devices as listed under Table 1.0.
**[45CSR13, Permit No. R13-2068 (Condition 7.1.5.)]**

6.1.5. Maximum aggregate particulate matter (PM) emissions to the atmosphere from Emission Points 282, 296-300, 305-327, and 537 as emitted through the applicable control devices listed under Table 1.0, shall not exceed a maximum hourly emission rate of 1.~~18~~56 pounds per hour (lb/hr) and ~~2.87~~ 3.35 tons per year (tpy).
**[45CSR§7-4.1. and 45CSR13, Permit No. R13-2068 (Condition 7.1.6.)]** *Compliance with this streamlined limit will assure compliance with 45CSR§7-4.1.and Permit R13-2068 (Condition 7.1.2.).*

6.1.6. The Rotoclone control devices and cartridge collector servicing production rooms shall be designed to achieve a collection efficiency of 98% for particulate matter emissions.
**[45CSR13, Permit No. R13-2068 (Condition 7.1.4.)]**

6.1.7. The permittee shall maintain and operate low water supply pressure sensors with control panel alarms for each Rotoclone to ensure adequate water supply and flow rate to the Rotoclones at each emission point specified, in order to ensure proper operation of the Rotoclone.
**[45CSR13, Permit No. R13-2068 (Condition 7.1.7.)]**

## 6.2. Monitoring Requirements

6.2.1. Visible emissions monitoring shall be conducted initially at least once per month for all emission points subject to opacity limitations. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emissions checks once per calendar quarter. If visible emissions are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emissions checks only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These visible emission checks shall be conducted in accordance with 40 CFR 60, Appendix A, Method 22 during periods of facility operation for a sufficient time interval, but not less than one (1) minute, to determine if the unit has visible emissions. If sources of visible emissions are identified during the survey, or at any other time, the permittee shall conduct a 40 CFR 60, Appendix A, Method 9 evaluation within twenty four (24) hours. A Method 9 evaluation shall not be required if the visible emissions condition is corrected within twenty four (24) hours from the time the visible emission condition was identified and the unit is operated at normal operating conditions.
**[45CSR13, Permit No. R13-2068 (Conditions 7.2.1.); 45CSR§30-51.1.c]**

6.2.2. For the purposes of demonstrating compliance with the minimum cartridge collection efficiency as given under 6.1.6, the permittee shall:

a. Install, maintain, and operate the cartridge collectors consistent with safety and good air pollution control practices for minimizing emissions, and shall follow all manufacturer's recommendations concerning control device maintenance and performance;

b. Conduct a weekly visual inspection of the cartridge, cartridge connections, and dust hoppers of each cartridge collector, in order to ensure proper operation of cartridge collectors. Records shall be maintained on site for five (5) years from the record creation date. Records shall state the date and time of each cartridge collector inspection, the inspection results, and corrective actions taken, if any;

c. The aggregate maximum amount of solvent combusted by the RTO(s) shall not exceed 3,070 lb/hour or 1,019,240 pounds per rolling twelve month period.

**[45CSR13, Permit No. R13-2068 (Condition 9.1.4.)]**

8.1.5. The RTO shall, at all times when Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580); Coating Pans 7552, 8421, 23581, and 30426 (Emission Unit IDs 244, 245, 246, and 247); Oven Dryers 19~~, 18~~ and 0021 (Emission Unit IDs 260, ~~261,~~ and 264); and the coating line are venting exhaust to the RTO for the purpose of controlling VOCs, achieve a minimum VOC destruction efficiency of 98%.
**[45CSR13, Permit No. R13-2068 (Condition 9.1.5.)]**

8.1.6. The permittee shall, within 60 days of the date of the performance test required under 8.3.2, determine the optimal operating ranges of the RTO parameters listed under 8.1.6(a) and (b) so as to monitor the effective operation of the RTO. The determination of operating ranges shall be based on data obtained from performance testing, manufacturing recommendations, or operational experience. The permittee shall maintain on-site, and update as necessary, a certified report listing the operating ranges. Any changes to the operating ranges shall be accompanied by the date of the change and reason for the change.

a. Minimum RTO Combustion Chamber Temperature; and

b. RTO Exhaust Flow Rate.
**[45CSR13, Permit No. R13-2068 (Condition 9.1.6.)]**

8.1.7. The permittee shall, to the extent reasonably possible, operate the RTO within the operating ranges as established under 8.1.6 at all times Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580); Coating Pans 7552, 8421, 23581, and 30426 (Emission Unit IDs 244, 245, 246, and 247); Oven Dryers 19~~, 18~~ and 0021 (Emission Unit IDs 260, ~~261,~~ and 264); and the coating line are venting exhaust to the RTO for the purpose of controlling VOCs. If an excursion from the operating ranges occurs, the permittee shall attempt to immediately correct the problem and follow the record-keeping procedures under 8.4.1. If the permittee is unable to correct the excursion in a timely fashion, for the purposes of emissions calculations under 5.2.5(c)(3), a VOC destruction efficiency of 98% may not be assumed for the duration of the venting of VOC from Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580); Coating Pans 7552, 8421, 23581, and 30426 (Emission Unit IDs 244, 245, 246, and 247); Oven Dryers 19~~, 18~~ and 0021 (Emission Unit IDs 260~~, 261~~, and 264); and the coating line.
**[45CSR13, Permit No. R13-2068 (Condition 9.1.7.)]**

8.1.8. The permittee shall conduct, at a minimum, an annual inspection of the RTO to ensure proper operation of the control device. The inspection shall include the burner assemblies, blowers, fans, dampers, refractory lining, oxidizer shell, fuel lines, and ductwork.
**[45CSR13, Permit No. R13-2068 (Condition 9.1.8.)]**

## 8.2. Monitoring Requirements

8.2.1. Visible emissions monitoring shall be conducted initially at least once per month for all emission points subject to opacity limitations. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emissions checks once per calendar quarter. If visible emissions are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring

shall be allowed to again conduct quarterly visible emissions checks only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These visible emission checks shall be conducted in accordance with 40 CFR 60, Appendix A, Method 22 during periods of facility operation for a sufficient time interval, but no less than one (1) minute, to determine if the unit has visible emissions. If sources of visible emissions are identified during the survey, or at any other time, the permittee shall conduct a 40 CFR 60, Appendix A, Method 9 evaluation within twenty four (24) hours. A Method 9 evaluation shall not be required if the visible emissions condition is corrected within twenty four (24) hours from the time the visible emission condition was identified and the unit is operated at normal operating conditions.
**[45CSR13, Permit No. R13-2068 (Condition 9.2.1.); 45CSR§30-5.1.c.]**

8.2.2. For the purposes of demonstrating compliance with maximum annual natural gas combustion rates set forth in 8.1.4.b, the permittee shall monitor and record the rolling twelve month total of natural gas combusted by the RTO.
**[45CSR13, Permit No. R13-2068 (Condition 9.2.2.)]**

8.2.3. For the purposes of demonstrating compliance with maximum solvent combustion rates set forth in 8.1.4.c, the permittee shall monitor and record the amount of solvent, in pounds, sent to the RTO from Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580); Coating Pans 7552, 8421, 23581, and 30426 (Emission Unit IDs 244, 245, 246, and 247); Oven Dryers 19~~, 18~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264); and the coating line. The monthly and rolling twelve month total of solvent sent to RTO from Fluid Beds 473, 1222, 1855, 2181, 3287, 3620, 3426, 3704, 3705, and 7560 (Emission Unit IDs 534, 536, 538, 572, 574 – 578, and 580); Coating Pans 7552, 8421, 23581, and 30426 (Emission Unit IDs 244, 245, 246, and 247); Oven Dryers 19~~, 18~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264); and the coating line-shall be summed and recorded.
**[45CSR13, Permit No. R13-2068 (Condition 9.2.3.)]**

8.2.4. For the purposes of demonstrating compliance with the requirements set forth in 8.1.5, the permittee shall continuously monitor and record the RTO Combustion Chamber Temperature (as measured at the outlet of the combustion chamber) and the RTO Exhaust Flow Rate (as measured at the RTO outlet or based on fan instrumentation). Monitoring shall be effected by use of the following:

a. RTO Combustion Chamber Temperature: Thermocouples, RTDs, or alternative methods/ instrumentation as appropriate for gas stream;

b. RTO Exhaust Flow Rate: Differential pressure flow device, fan motor ammeter, or other type of device that measures gas velocity or flow rate.

**[45CSR13, Permit No. R13-2068 (Condition 9.2.4.)]**

8.2.5. The permittee shall install, maintain, and operate all monitoring equipment required by this section in accordance with all manufacturer's recommendations.
**[45CSR13, Permit No. R13-2068 (Condition 9.2.5.)]**

## 8.3. Testing Requirements

8.3.1. Within 60 days after achieving the maximum solvent combustion rate at which the RTO(s) are permitted to operate at, but not later than 180 days after initial startup, and at such times thereafter as may be required by the Secretary, the permittee shall conduct, or have conducted, a performance test on the RTO(s) to determine compliance with the CO and $NO_x$ emission limits listed in 8.1.3. The permittee shall use EPA approved test methods unless granted approval in writing by the Director to use an alternative test method in a protocol submitted pursuant to 3.3.1.c.
**[45CSR13, Permit No. R13-2068 (Condition 9.3.1.)]**

## 10.0 Oven Dryers [emission point ID(s): 260, ~~261,~~ 264]

### 10.1. Limitations and Standards

10.1.1. Maximum hourly volatile organic compound (VOC) emissions to the atmosphere from Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261~~ and 264) shall not exceed:

a. 529.2 lb/hr for each Oven Dryer if not venting exhaust to the RTO for the purpose of controlling VOC emissions.

b. 10.59 lb/hr (as emitted from the RTO) for each Oven Dryers if venting exhaust to the RTO for the purpose of controlling VOC emissions.

**[45CSR13, Permit No. R13-2068 (Condition 10.1.1.)]**

10.1.2. The maximum total combined annual volatile organic compound (VOC) emissions to the atmosphere from Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) shall not exceed 5.0 tons/year. **[45CSR13, Permit No. R13-2068 (Condition 10.1.2.)]**

10.1.3. Oven Dryers 19 and 0021 (Emission Unit IDs: 260~~, 261,~~ and 264) shall operate according to the following requirements:

a. Each Oven Dryers shall have the capability of directing exhaust to RTO for control of VOCs or emitting directly to atmosphere; and

b. No HAP-containing solvents shall be processed in any Oven Dryer.

**[45CSR13, Permit No. R13-2068 (Condition 10.1.3.)]**

### 10.2. Monitoring Requirements

10.2.1. For the purposes of demonstrating compliance with maximum annual VOC emission limit set forth in 10.1.2., the permittee shall:

a. Monitor and record the aggregate monthly and rolling twelve month total amount of VOCs in pounds used in Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) when each Oven Dryer is and is not venting exhaust to the RTO for the purpose of controlling VOCs; and

b. Calculate and record the monthly and rolling twelve month aggregate VOC emissions from Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) by summing the following:

i. The total amount of VOCs in pounds used in Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) when not venting exhaust to the RTO for the purpose of controlling VOCs; and

ii. The total amount of VOCs used in Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) when venting exhaust to the RTO for the purpose of controlling VOCs. Based on compliance with Requirement 8.1.7 of this permit, the permittee may apply a VOC destruction efficiency of 98% to the amount of VOCs used in Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) when venting exhaust to the RTO for the purpose of controlling VOCs.

**[45CSR13, Permit No. R13-2068 (Condition 10.2.1.)]**

## 10.3. Testing Requirements

10.3.1. See Section 3.3.1.

## 10.4. Recordkeeping Requirements

10.4.1. The permittee shall maintain a record of all solvents used in Oven Dryers 19~~, 18,~~ and 0021 (Emission Unit IDs 260~~, 261,~~ and 264) and keep a copy of the associated MSDS to verify that the solvents did not contain any constituent HAPs.
**[45CSR13, Permit No. R13-2068 (Condition 10.4.1.)]**

## 10.5. Reporting Requirements

10.5.1. See Section 3.5 Facility - Wide Reporting Requirements

## 10.6. Compliance Plan

10.6.1. None