



November 29, 2022

Muhammad Zaman
Northcentral Regional Air Quality Program Manager
Pennsylvania Department of Environmental Protection
Northcentral Regional Office
208 W. 3rd St., Suite 101
Williamsport, PA 17701

**Re: Notification of RACT III Applicability [25 Pa. Code §129.115(a)] and Alternative RACT Compliance Analysis [25 Pa. Code §129.114(i)]
Title V Operating Permit No. 59-00004
Ward Manufacturing, LLC – Blossburg Borough, Tioga County, PA**

Dear Mr. Zaman:

Ward Manufacturing, LLC (Ward) is providing this summary of Reasonably Available Control Technology (RACT) applicability and compliance plans for its iron foundry in Blossburg, Pennsylvania (Facility) in accordance with the recently promulgated provisions of 25 Pa. Code §§129.111-129.115. This document represents the required notification of applicability and compliance proposal under 25 Pa. Code §129.115(a). In addition, this document includes the analysis of alternative RACT compliance required under 25 Pa. Code §129.114(i) for those sources at the Facility subject to case-by-case RACT determinations that were previously approved by the Pennsylvania Department of Environmental Protection (PADEP) under 25 Pa. Code §129.99.

Facility Background and RACT III Rule Applicability

The Facility manufactures cast iron piping components such as pipe fittings that are commonly used in homes, commercial developments, and public buildings. The Facility operates pursuant to PADEP Title V Operating Permit (TVOP) No. 59-00004.

On November 12, 2022, PADEP published 25 Pa. Code §§129.111-129.115, “Additional RACT Requirements for Major Sources of NO_x and VOCs for the 2015 Ozone NAAQS” also known as the RACT III Rule. The RACT III requirements or emissions limitations supersede the requirements or emissions limitations of a RACT permit previously issued in accordance with 25 Pa. Code §§129.91-129.95 and 129.96-129.100, except in cases where an existing RACT permit specifies more stringent requirements and/or emissions limitations. Compliance with applicable RACT III Rule requirements or emissions limitations must be demonstrated no later than January 1, 2023.

The RACT III Rule applies to major nitrogen oxides (NO_x) and/or major volatile organic compound (VOC) emitting facilities. 25 Pa. Code §121.1 defines major NO_x and VOC emitting facilities as follows:

- Major NO_x emitting facility – a facility-wide potential to emit (PTE) greater than 100 tons per year (TPY).
- Major VOC emitting facility – a facility-wide PTE greater than 50 TPY.

The Facility-wide NO_x PTE is less than 100 TPY and therefore, Ward understands that the Facility is not subject to the NO_x provisions of RACT III. The Facility-wide VOC PTE is greater than 50 TPY and Ward is a major VOC emitting facility subject to the VOC provisions of RACT III per 25 Pa. Code §129.111(a). This submittal is being made in accordance with the requirements of the RACT III Rule for the Facility's VOC-emitting sources only.

Notification of Applicability and Compliance Proposal [25 Pa. Code §129.115(a)]

The following subsections provide the notification of applicability and compliance proposal required under 25 Pa. Code §129.115(a).

25 Pa. Code §129.115(a)(1) – Submission Deadline

Because the Facility was a major VOC emitting facility prior to August 3, 2018, this submittal is being made on or before December 31, 2022 per 25 Pa. Code §129.115(a)(1)(i).

25 Pa. Code §129.115(a)(2) – Identification of Air Contamination Sources That Commenced Operation on or Before August 3, 2018

Table A-1 of Attachment A provides the RACT III Rule Applicability Summary, which identifies the following:

- Air contamination sources that do not emit VOC and are not required to be evaluated under the RACT III Rule.
- Air contamination sources exempted from 25 Pa. Code §§129.112-129.114 because they are already subject to certain Chapter 129 RACT requirements [i.e., §§129.51, 129.52(a)-(k) and Table I categories 1-11, 129.52a-129.52e, 129.54-129.63a, 129.64-129.69, 129.71-129.75, 129.77, and 129.101-129.107].
- Air contamination sources subject to a presumptive RACT requirement or RACT emissions limitation in 25 Pa. Code §129.112.
- Air contamination sources subject to an alternative RACT requirement or RACT emissions limitation under 25 Pa. Code §129.114.

25 Pa. Code §129.115(a)(3) – Identification of Air Contamination Sources That Commenced Operation After August 3, 2018

Not Applicable (N/A) – the Facility was a major VOC emitting facility prior to August 3, 2018 and there are no air contamination sources that were installed, modified, or experienced a change in the method of operation after August 3, 2018.

25 Pa. Code §129.115(a)(4) – Identification of Air Contamination Sources That Emit Less Than 1 TPY

N/A – there are no air contamination sources at the Facility that are exempt from the RACT III Rule on the basis that it emits less than 1 TPY of VOC.

25 Pa. Code §129.115(a)(5) – Air Contamination Source Information (Commenced Operation on or Before August 3, 2018)

Table A-2 of Attachment A provides a Source Inventory that includes a description, make, model, and location (as available) of each air contamination source subject to the RACT III Rule. The applicable RACT requirement or RACT emissions limitation for each source is provided in the RACT III Rule Applicability Summary as Table A-1 of Attachment A.

There have been no changes to the applicable presumptive RACT requirements or RACT emissions limitations since the promulgation of 25 Pa. Code §§129.96-129.100 (RACT II). For the four sources at the Facility that require case-by-case RACT determinations, Ward has determined that the alternative RACT requirements and/or RACT emissions limitations that were previously approved by PADEP under 25 Pa. Code §129.99(e) continue to represent RACT for these sources. An analysis is provided below to certify that the case-by-case RACT determinations approved by PADEP under 25 Pa. Code §129.99(e) remain valid. Ward proposes to comply with the RACT III Rule by continuing to comply with the applicable RACT conditions of the current TVOP No. 59-00004. Ward will meet the January 1, 2023 compliance deadline of the RACT III Rule through continued compliance with these conditions. The RACT-specific conditions of the TVOP are provided in Table A-3 of Attachment A.

25 Pa. Code §129.115(a)(6) – Air Contamination Source Information (Commenced Operation After August 3, 2018)

N/A – 25 Pa. Code §129.115(a)(3) does not apply.

25 Pa. Code §129.115(a)(7) – Air Contamination Source Information (Sources That Emit Less Than 1 TPY)

N/A – 25 Pa. Code §129.115(a)(4) does not apply.

25 Pa. Code §129.115(b) – Demonstration of Compliance by Monitoring or Testing Procedures

N/A – sections (b)(1) through (b)(5) are not applicable because the facility does not maintain a continuous emissions monitoring system (CEMS) for any air contamination source subject to a VOC RACT requirement or VOC RACT emission limitation under §129.112.

Section (b)(6) is not applicable to most of the sources because the sources subject to §129.112 are only subject to work practice standards under §129.112(c) and there are no applicable emission limitations that require testing to demonstrate compliance for these sources.

The only source that requires stack testing is Source 101 (Cupola). The Facility completed a stack test on this source per the current permit requirements on June 18, 2021. The Facility will continue to comply with the testing requirements of this section per the current permit conditions which require periodic testing every 5 years.

Analysis of Alternative RACT Compliance [25 Pa. Code §129.114(i)]

Ward has identified Source ID 101 (Cupola), Source ID 149 (Core Room Operations), Source ID 173 (Molding & Casting Operations), and Source ID 199 [Molding Lines (SP01 & SP03)] as sources that require case-by-case RACT determinations and proposed RACT for control of VOC emissions because they do not fall into a presumptive RACT category included in 25 Pa. Code §129.112. In accordance with 25 Pa. Code §129.114(i), an alternative RACT proposal, as required under 25 Pa. Code §129.114(d), is not necessary if the source in question was in operation prior to October 24, 2016, has not been modified or changed since October 24, 2016, and does not fall into one of the presumptive source categories subject to 25 Pa. Code §§129.112(c)(11) or (i)-(k). Source IDs 101, 149, 173, and 199 meet the stated criteria and therefore, this letter serves as a demonstration that Ward can maintain compliance with the alternative RACT requirements and/or emissions limitations previously approved as RACT by PADEP.

The following subsections provide the analysis of alternative RACT compliance under 25 Pa. Code §129.114(i)(1)(i). Ward has determined that there are no new pollutant-specific air cleaning devices, air pollution control technologies or techniques available at the time of submittal of this analysis and that each technically feasible air cleaning device, air pollution control technology or technique approved under 25 Pa. Code §129.99(e) had a cost effectiveness greater than \$12,000 per ton of VOC emissions reduced. There were no alternative RACT requirements approved for Ward under 25 Pa. Code §129.99(e) that were below the economic feasibility benchmark value and therefore, 25 Pa. Code §129.114(i)(1)(ii) does not apply. In addition, because Ward did not identify any new or upgraded pollutant-specific air cleaning devices, air pollution control technologies or techniques, a new technical and economic feasibility analysis per 25 Pa. Code §129.114(i)(2) is not required.

25 Pa. Code §129.114(i)(1)(i)(A) – Identification of New Air Cleaning Devices, Air Pollution Control Technologies, or Techniques

Ward conducted an analysis of the RACT/BACT/LAER Clearinghouse (RBLC) to determine if any new air cleaning devices, air pollution control technologies, or techniques could be applied to the units onsite. A summary of the RBLC search results is provided in Attachment B. No new air cleaning devices, air pollution control technologies, or techniques were discovered and the current emissions controls for the RACT III affected units are consistent with recent and historical Best Available Control Technology (BACT) determinations. Furthermore, Ward contacted an air pollution control device vendor and determined that no significant or fundamentally different VOC control devices or technologies have come into existence since the previous alternative RACT submittal.

25 Pa. Code §129.114(i)(1)(i)(B) – List Previously-Identified Technically Feasible Controls

Refer to Table 1 for a list of technically feasible air pollution control technologies previously examined under 25 Pa. Code §§129.92(b)(1)-(3) that were included in Ward's 25 Pa. Code §129.99(d) RACT submittal previously approved by PADEP.

Table 1
Technically Feasible Air Pollution Control Technologies

Source ID	Name	Control Technology Option	Feasibility	Rationale for Infeasibility ^(a)
101	Cupola	Afterburners	Technically Feasible	N/A
149	Core Room Operations	Thermal Oxidizer (TOX)	Economically Infeasible	Approximately \$135,000/ton VOC removed
		Use of Low-VOC Resin (Binder)	Technically Feasible	N/A
173 and 199 ^(b)	Molding & Casting Operations / Molding Lines (SP01 & SP03)	TOX	Economically Infeasible	Approximately \$130,000/ton VOC removed
		Mold Vent Gas Ignition	Technically Feasible	N/A

^(a) Economic infeasibility demonstrations were submitted to PADEP in accordance with 25 Pa. Code §129.99(d) and the values provided herein reflect the cost effectiveness determinations previously approved by PADEP under 25 Pa. Code §129.99(e).

^(b) Due to the operational codependence between the operations included under Source IDs 173 and 199, these sources were evaluated together in the previous alternative RACT determination.

Ward considered the feasibility of a Packed-Bed Scrubber (PBS) for Source ID 149 (Core Room Operations). However, due to the nature of the Core Room Operations and the type of resin used, Ward has determined that the PBS would be ineffective because Ward uses a warm box core making process. The PBS technology used by the facilities identified in the RBLC search is designed for use in cold box core making processes.

25 Pa. Code §129.114(i)(1)(i)(C) – Summary of Previous Economic Feasibility Analyses

As part of Ward’s 25 Pa. Code §129.99(d) RACT submittal, Ward evaluated the cost effectiveness of add-on VOC controls, calculated consistent with the methods presented in the “EPA Air Pollution Control Cost Manual” (Sixth Edition, EPA/452/B-02-001, January 2002). Ward evaluated TOX technology as the top-level of available add-on VOC control to determine the economic feasibility of such controls for Source IDs 149, 173, and 199. For the other technically feasible control technologies, a cost effectiveness evaluation was not required. The results of the 25 Pa. Code §129.99(d) cost effectiveness evaluations, as applicable, are summarized in Table 1 above.

25 Pa. Code §129.114(i)(1)(i)(D) – Statement of Economic Infeasibility

Based on the economic feasibility analyses previously performed by Ward and approved by PADEP, there are no economically feasible add-on control devices that can be applied to Source IDs 149, 173, and 199 because the cost effectiveness remains equal to or greater than \$12,000 per ton of VOC emissions reduced (as summarized in Table 1 above). The cost of the control technologies evaluated have not considerably changed since the analysis was performed in 2016 and, considering increases the cost of fuel and in certain economic indicators such as the Consumer Price Index (CPI), the control cost in 2022 dollars is only expected to have increased. Therefore, the control technologies for which cost effectiveness was evaluated in Ward's 25 Pa. Code §129.99(d) RACT submittal remain economically infeasible.

25 Pa. Code §129.114(i)(1)(i)(E) – Additional Information

Upon request from PADEP, Ward will provide additional information to support the Alternative RACT Compliance Analysis included herein.

Alternative RACT Compliance Summary

Based on the 25 Pa. Code §129.114(i) analysis provided above, Ward has determined that the alternative RACT requirements and/or RACT emissions limitations that were previously approved by PADEP under 25 Pa. Code §129.99(e) continue to represent RACT for the four sources evaluated. Ward proposes to comply with the RACT III Rule by continuing to comply with the applicable RACT conditions of the current TVOP No. 59-00004. Thus, Ward will meet the January 1, 2023 compliance deadline of the RACT III Rule through continued compliance with these conditions. The RACT-specific conditions of the TVOP are provided in Table A-3 of Attachment A.

Source ID 101 (Cupola) has a throughput restriction of 226,680 tons of iron per 12 consecutive months, according to Section D, Source ID 101, Condition #005 of TVOP No. 59-00004. This results in an uncontrolled PTE of 20.40 TPY of VOC emissions using an emissions factor of 0.18 pounds of VOC per ton of iron. Per 25 Pa. Code §129.114(c), the owner or operator of a VOC air contamination source with a PTE of 2.7 tons of VOC per year or greater shall perform a case-by-case RACT determination. However, the Cupola is already equipped with afterburners to control VOC emissions, the use of which was previously approved by PADEP under 25 Pa. Code §129.99(e) as RACT. The control efficiency of the afterburner system is 98% as presented in the Cupola emissions control system Plan Approval. Therefore, the controlled PTE for Source ID 101 is 0.408 TPY of VOC, which is below the 2.7 TPY of VOC threshold. The most recent stack test of the Cupola was performed in June 2021 and resulted in a VOC concentration of 1.58 parts per million by volume (ppmvd), corrected to 10% oxygen. As such, Source ID 101 is in compliance with the current VOC RACT limit of 20 ppmvd per Section D, Source ID 101, Condition #003 of TVOP No. 59-00004.

Ward will continue to operate Source ID 149 (Core Room Operations) in accordance with good operating practices and manufacturer specifications. Specifically, Ward will continue to utilize



the low-VOC resin approved in the current TVOP (i.e., Binder WB950 or equivalent, as approved by PADEP).

Ward will continue to ignite gases from the mold vents of Source IDs 173 (Molding & Casting Operations) and 199 [Molding Lines (SP01 & SP03)] in accordance with TVOP No. 59-00004 and 40 CFR §63.7710(b)(6), which says that Ward must operate Source IDs 173 and 199 with a procedure for providing an ignition source to each of their mold vents, unless it is determined that the mold vent gases are not ignitable, ignite automatically, or can't be ignited due to accessibility or safety concerns.

Certification of Alternative RACT Compliance Analysis

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this 25 Pa. Code §129.114(i) Alternative RACT Compliance Analysis are true, accurate, and complete.

RACT III Rule Recordkeeping

In accordance with 25 Pa. Code §129.115(f), Ward will keep sufficient records for demonstrating compliance with the RACT III Rule, including continued compliance with the RACT-specific recordkeeping conditions of the TVOP summarized in Table A-3 of Attachment A, and the NOx exemption documentation per 25 Pa. Code §129.115(g). Also, per 25 Pa. Code §129.115(k), all records will be maintained for at least five years, and will be made available to PADEP upon receipt of a written request.

If you have any additional questions, please contact Trisha Chase at 570-638-2131 ext. 303 or via email at trisha.chase@wardmfg.com.

Sincerely,
Ward Manufacturing, LLC

AP Guidi Jr

Arthur Guidi
President and CEO

**ATTACHMENT A -
RACT III RULE APPLICABILITY AND COMPLIANCE SUMMARY**

Table A-1
RACT III Rule Applicability Summary
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	Source Capacity/ Throughput	Fuel/ Throughput Material	VOC PTE	RACT III Applicability		
					Classification	Citation	VOC Limitation/ Requirement
034	Air Makeup Units (24)	Various, < 10 MMBtu/hr each	Natural Gas or Propane	<2.7 tpy (each)	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
035	Combustion Units	Various, < 2.5 MMBtu/hr each	Natural Gas or Propane	<2.7 tpy (each)	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
101	Cupola	37.78 tons/hr	Iron	20.40 tpy (uncontrolled); 0.41 tpy (controlled)	VOC air contamination source with PTE >2.7 ton/yr VOC	§129.114(c)-(d)	Case-by-Case Determination
105	Anneal Ovens	12.25 MMBtu/hr (combined)	Natural Gas	<2.7 tpy (each)	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
107	Tumblast Machines (3)	12 tons/hr	Castings	N/A	N/A - Not a source of VOC emissions		
109	Grinders & Sanders (23)	16 tons/hr	Castings	N/A	N/A - Not a source of VOC emissions		
149	Core Room Operations	400 lbs/hr	Core Binders	72.66 tpy	VOC air contamination source with PTE >2.7 ton/yr VOC	§129.114(c)-(d)	Case-by-Case Determination
149A	New Core Machines	N/A	N/A	2.59 tpy (each)	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
163	Tumblast Machines (5)	25 tons/hr	Castings	N/A	N/A - Not a source of VOC emissions		
173	Molding & Casting Operations	N/A	N/A	109.5 tpy ^(a)	VOC air contamination source with PTE >2.7 ton/yr VOC	§129.114(c)-(d)	Case-by-Case Determination ^(a)
181	Plant 1 Evaporator	0.395 MMBtu/hr	Natural Gas or Propane	<2.7 tpy	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
181A	Wastewater Evaporator	0.395 MMBtu/hr	Natural Gas or Propane	1.75 tpy	VOC air contamination source with PTE <2.7 ton/yr VOC	§129.112(c)(2)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
183	Scrap & Charge Handling Operations	N/A	N/A	N/A	N/A - Not a source of VOC emissions		
185	Bond Silo	N/A	N/A	N/A	N/A - Not a source of VOC emissions		
189	Existing Emergency Generators	N/A	Natural Gas or Propane	N/A	Emergency standby engine operating less than 500 hours in a 12-month rolling period	§129.112(c)(10)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
189A	New Emergency Generator	Various	Natural Gas and LPG	N/A	Emergency standby engine operating less than 500 hours in a 12-month rolling period	§129.112(c)(10)	Shall install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices.
191	Parts Washers (14)	N/A	N/A	N/A	N/A - Pursuant to 25 Pa. Code §129.111(a), exempt for VOC based on applicability to §129.63		
199	Molding Lines (SP01 & SP03)	N/A	N/A	109.5 tpy ^(a)	VOC air contamination source with PTE >2.7 ton/yr VOC	§129.114(c)-(d)	Case-by-Case Determination ^(a)

^(a) Due to the operational codependence between the operations included under Source IDs 173 and 199, these sources were evaluated together in the previous alternative RACT determination. The PTE for these sources represents the combined PTE for all equipment associated with molding and casting at the Facility.

Table A-2
VOC Emissions Source Inventory
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	Equipment Name/Description	Make	Model	Location	Capacity	Fuel
034	Air Makeup Units	Air Makeup Unit #1	Aerovent	GA-60L422-956-20	SPO 1, Above SPO 1 inside, S/N 90139	5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #2	Aerovent	GA-60L422-956-20	SPO 2, Above SPO 2 inside, S/N 90140	5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #3	Aerovent	GA-48L422-1104-10	# 3 sort line, #3 sort table inside 2nd floor, S/N 9624	3 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #4	Aerovent	GA-48L422-1104-10	# 1/2 sort line, #1 sort table inside 2nd floor, S/N 9625	3 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #5	Aerovent	GACDW-710BI-1145-15	SPO 3, Roof Above SPO 3. S/N 9780	2.75 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #6	Aerovent	GACDW-1250BI-591-40	Located on roof above 1 & 2 Sort, S/N 9782	5.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #7	Aerovent	GACDW-1250BI-640-50	Located above SPO 1 on roof	6.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #8	Aerovent	GA-36L422-1396-5	sort belt are north on mezzanine, S/N 95120	1.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #9	Aerovent	GA-36L422-1396-5	Sort belt are south on mezzanine, S/N 95121	1.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #10	Jackson and Church	Unknown	On platform above west end of No 4 Anneal Oven	1.9 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #11	Aerovent	GACDW-800BI-963-20	SPO 3, Located on roof above tail end of SPO 3, Roof above creek pump, S/N 9781	2 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #12	Aerovent	GACDW-800BI-1023-20	Shooter room, above shooters on roof	2.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #13	Aerovent	GACDW-800BI-1202-30	CBA room, above EMI's on roof	2.5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #14	Aerovent	GACDW-1120BI-720-40	Osborn Room, Above osborn's on roof	5 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #15 - FA Core Machine	Aerovent	GACDW-560BI-1308-7 1/2	FA core machine, Old SPH-40 area 2nd floor	1 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #16 - Hand Finners Station	Aerovent	GACDW-630BI-1226-15	hand finner station, above core room finners on roof	1.4 MMBtu/hr	Natural Gas or Propane
		Air Makeup Unit #17	Renzor	RPBL 700-8-S2J	Above Gnutti 348	0.7 MMBtu/hr	Natural Gas
		Air Makeup Unit #18	Aerovent	GA50	Above Cluster 4 Pack Area, S/N 9707	1.5 MMBtu/hr	Natural Gas
		Air Makeup Unit #19	Aerovent	GA36	Above Cluster 9	1.5 MMBtu/hr	Natural Gas
		Air Makeup Unit #20	Aerovent	GA30L422-A457-3	Above Cluster 5	0.6 MMBtu/hr	Natural Gas
		Air Makeup Unit #21	Renzor	S/N EAUC66KIN20518-M	Above 700 Area	0.3 MMBtu/hr	Natural Gas

Table A-2
VOC Emissions Source Inventory
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	Equipment Name/Description	Make	Model	Location	Capacity	Fuel	
		Air Makeup Unit #22	Renzor	S/N EAUC66KIN20519-M	Above 700 Area	0.3 MMBtu/hr	Natural Gas	
		Air Makeup Unit #23	Renzor	S/N EAUC66KIN20520-mv4	Above Union Cell	0.3 MMBtu/hr	Natural Gas	
		Air Makeup Unit #24	Renzor	S/N EAUC66KIN20521-mv4	Above Union Cell	0.3 MMBtu/hr	Natural Gas	
035	Combustion Units	Plant 1 Heating Units (65)	Unknown	Unknown	Plant 1	< 2.5 MMBtu/hr each	Natural Gas or Propane	
		Plant 1 Boilers (2)	Various	Unknown	Plant 1	< 2.5 MMBtu/hr each	Natural Gas or Propane	
		Plant 2 Heating Units (35)	Unknown	Unknown	Plant 2	< 2.5 MMBtu/hr each	Natural Gas or Propane	
		Plant 3 Heating Units (50)	Various	Various	Plant 3	< 2.5 MMBtu/hr each	Natural Gas or Propane	
101	Cupola	Coke-fired, water-cooled cupola	Modern Equipment		Plant 1	37.78 tons of iron/hr	Coke (Coal)	
105	Anneal Ovens	Anneal Oven #1	General Electric	158L614G1-2-3-4	Plant 1	12.25 MMBtu/hr (combined)	Natural Gas	
		Anneal Oven #2	General Electric	158L614G1-2-3-4	Plant 1		Natural Gas	
		Anneal Oven #3	General Electric	158L614G1-2-3-4	Plant 1		Natural Gas	
149	Core Room Operations	<i>Core Room Machines</i>					400 lbs of core binders/hr; 60-320 cfh of natural gas each	
		Core Room Machine #1	Osborne #1	9A	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #2	Osborne #2	9A	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #3	EMI (110 125 001)	803-H	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #4	EMI (110 125 002)	803-H	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #5	Shalco Core Machines	U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #6	Shalco Core Machines	U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #7		U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #8		U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #9	Fepeco Core Machines	U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #10	Eastern Co.	U-180	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #11	Shooter #15		Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #12	Shooter #16		Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #13	Shooter #17		Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #14	Shooter #21	3167-EL	Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #15	Shooter #22		Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #16	Shooter #23		Plant 1 - Core Room	N/A	Natural Gas	
		Core Room Machine #17			Plant 1 - Core Room	N/A	Natural Gas	
Core Room Machine #18			Plant 1 - Core Room	N/A	Natural Gas			

Table A-2
VOC Emissions Source Inventory
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	Equipment Name/Description	Make	Model	Location	Capacity	Fuel
149A	New Core Machines	New Core Machine #1	EMI	803-H	Plant 1 - Core Room	15,708 tons/yr of shell and warm box core sand 408.41 tons/yr of shell core binders 249.76 tons/yr of warm box core binders	Natural Gas
		New Core Machine #2	EMI	803-H	Plant 1 - Core Room	15,708 tons/yr of shell and warm box core sand 408.41 tons/yr of shell core binders 249.76 tons/yr of warm box core binders	Natural Gas
		New Core Machine #3	Osborne #1	9A	Plant 1 - Core Room		Natural Gas
		New Core Machine #4	Osborne #2	9A	Plant 1 - Core Room		Natural Gas
173	Molding & Casting Operations	Vibratory Casting Sort Conveyors (3)	Power Pack		Plant 1		N/A
		Sand Discharge/Sand Return Belt	General Kinematics	SCLR 30/36 X 20	Plant 1		N/A
		"Hex Screen" Rotary Separator	Hoff Mechanical		Plant 1		N/A
		Sand Separator Conveyors			Plant 1		N/A
		Bond Dump Station			Plant 1		N/A
		Muller	Beardsley & Piper		Plant 1		N/A
		Cupola Bottom Sand Muller Burner	National Engineering	Hauck	PBG 1000	Plant 1	1.29 MMBtu/hr
181	Plant 1 Evaporator	Plant 1 Wastewater Evaporator	Samsco Manufacturing	600	Plant 1	0.395 MMBtu/hr	Natural Gas or Propane
181A	Wastewater Evaporator	Plant 3 Wastewater Evaporator	Samsco Manufacturing	600	Plant 3	0.395 MMBtu/hr	Natural Gas or Propane
189	Existing Emergency Generators	Plant 1 Annealing Oven Emergency Generator	Generac	Type SG0065, Model 1660340050	Plant 1	65 kW	Natural Gas
189A	New Emergency Generator	Plant 1 Creek Sump Emergency Generator	Generac	Type SG130, Model QT13068JNAC	Plant 1	130 kW/193.5 bhp	Natural Gas
		Plant 3 Emergency Generator	Generac	Model QT02516GNSN	Plant 3	25 kVa	Natural Gas
		Main Office Emergency Generator	Generac	Model RG 06024 GVSX	Main Office	60 kW	LPG

Table A-2
VOC Emissions Source Inventory
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	Equipment Name/Description	Make	Model	Location	Capacity	Fuel
191	Parts Washers (14)	Plant 1 Degreaser #1	Safety-Kleen	Model 30	Plant 1 - Garage	15 Gallons	N/A
		Plant 1 Degreaser #2	Safety-Kleen	Model 30	Plant 1 - Electrical	15 Gallons	N/A
		Plant 1 Degreaser #3	Safety-Kleen	Model 44.1	Plant 1 - Maintenance	30 Gallons	N/A
		Plant 1 Degreaser #4	Safety-Kleen	Model 30	Plant 1 - Compressor	15 Gallons	N/A
		Plant 1 Degreaser #5	Safety-Kleen	Model 60 Benchtop	Plant 1 - Core	5 Gallons	N/A
		Plant 1 Degreaser #6	Safety-Kleen	Model 60 Benchtop	Plant 1 - Pattern	5 Gallons	N/A
		Plant 2 Degreaser	Safety-Kleen	Model 60 Benchtop	Plant 2 - Test Lab	5 Gallons	N/A
		Plant 3 Degreaser #1	Safety-Kleen	Model 44	Plant 3 - Auto	30 Gallons	N/A
		Plant 3 Degreaser #2	Safety-Kleen	Model 44	Plant 3 - Test Lab	30 Gallons	N/A
		Plant 3 Degreaser #3	Safety-Kleen	Model 44.1	Plant 3 - Tool Crib	30 Gallons	N/A
		Plant 3 Degreaser #4	Safety-Kleen	Model 44.1	Plant 3 - Gnutti Area	30 Gallons	N/A
		Plant 3 Degreaser #5	Safety-Kleen	Model 44.1	Plant 3 - Union	30 Gallons	N/A
		Plant 3 Degreaser #6			Plant 3 - Maintenance	120 Gallons	N/A
		Plant 3 Degreaser #7	Safety-Kleen	Model 44.1	Plant 3 - By Maintenance	30 Gallons	N/A
199	Molding Lines (SP01 & SP03)	SPO1 Molding Line			Plant 1		N/A
		SPO3 Molding Line			Plant 1		N/A

Table A-3
Summary of TVOP No. 59-00004 RACT-Specific Conditions
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	RACT-Specific Permit Condition(s)					
		Emissions/Fuel/Throughput Restriction(s)	Testing Requirement	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement	Work Practice Standards
034	Air Makeup Units (24)	VOC emissions \leq 3 lbs/hr, \leq 15 lbs/day, $<$ 2.7 tpy (each unit). [Section D, Source ID 034, Condition #003] Fire only natural gas or propane. [Section D, Source ID 034, Condition #004]	N/A	N/A	Keep records of type and volume of fuel combusted. [Section D, Source ID 034, Condition #005]	N/A	N/A
035	Combustion Units	VOC emissions \leq 3 lbs/hr, \leq 15 lbs/day, $<$ 2.7 tpy (each unit). [Section D, Source ID 035, Condition #002] Fire only natural gas or propane. [Section D, Source ID 035, Condition #003]	N/A	N/A	Keep records of type and volume of fuel combusted. [Section D, Source ID 035, Condition #004]	N/A	N/A
101	Cupola	VOHAP \leq 20 ppmv @ 10% O ₂ [Section D, Source ID 101, Condition #003] Iron melt rate \leq 37.78 tons/hr and \leq 226,680 tons/12-month period. [Section D, Source ID 101, Condition #005]	Stack test every five years. [Section D, Source ID 101, Condition #006]	N/A	Keep records of the melt rate (once per operating shift) and amount of iron poured (monthly). Maintain records for at least 5 years. [Section D, Source ID 101, Condition #012]	N/A	Combustion zone temperature of the Maxon burners shall be \geq 1,300 degF (15-min avg). [Section D, Source ID 101, Condition #023] Use of two 5.2 MMBtu/hr natural gas-fired Maxon afterburners for control of VOC is required. [Section D, Source ID 101, Condition #029] Prepare and operate at all times according to a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, plastics, or free organic liquids. Or, prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics in the charge materials used by the iron and steel foundry. [Section D, Source ID 183, Condition #001]
105	Anneal Ovens	VOC emissions $<$ 2.7 tpy (each unit). [Section D, Source ID 105, Condition #003]	N/A	N/A	Keep records of VOC emissions calculations for a minimum of 5 years. [Section D, Source ID 105, Condition #005]	N/A	N/A
107	Tumblast Machines (3)	N/A - Not a source of VOC emissions					
109	Grinders & Sanders (23)	N/A - Not a source of VOC emissions					
149	Core Room Operations	VOC emissions \leq 72.66 tons/12-month period (combined). [Section D, Source ID 149, Condition #003] Fire only natural gas or propane. [Section D, Source ID 149, Condition #004]	N/A	N/A	Keep records of monthly and 12-month rolling VOC calculations and identification of all binders used in core making machines. Maintain records for at least 5 years. [Section D, Source ID 149, Condition #006]	N/A	Only use Binder WB950 or an equivalent binder approved by PADEP. [Section D, Source ID 149, Condition #007]
149A	New Core Machines	VOC emissions \leq 2.59 tons/12-month period (each unit). [Section D, Source ID 149A, Condition #003]	N/A	N/A	Keep monthly and 12-month rolling records of: combined amount of shell and warm box core sand used in the two EMI core machines, amount of core binders (shell and warm box) used in each of the two EMI core machines. Maintain records for at least 5 years. [Section D, Source ID 149A, Condition #006]	N/A	N/A
163	Tumblast Machines (5)	N/A - Not a source of VOC emissions					

Table A-3
Summary of TVOP No. 59-00004 RACT-Specific Conditions
Ward Manufacturing, LLC - Blossburg, PA

Source ID	Source Name	RACT-Specific Permit Condition(s)					
		Emissions/Fuel/Throughput Restriction(s)	Testing Requirement	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement	Work Practice Standards
173	Molding & Casting Operations	VOC emissions ≤ 55.3 lbs/hr and ≤ 109.5 tpy. (emissions limits combined with Source 199) [Section D, Source ID 173, Condition #002]	N/A	N/A	Keep records of VOC emissions calculations (combined Source IDs 173 and 199) for a minimum of 5 years. [Section D, Source ID 173, Condition #006]	N/A	N/A
181	Plant 1 Evaporator	VOC emissions < 2.7 tpy. [Section D, Source ID 181, Condition #002]	N/A	N/A	Keep records of type and volume of fuel combusted. [Section D, Source ID 181, Condition #004]	N/A	N/A
181A	Wastewater Evaporator	VOC emissions ≤ 1.75 tons/12-month period. [Section D, Source ID 181A, Condition #002]	N/A	N/A	Keep records of monthly and 12-month rolling VOC calculations and monthly records of the type, quantity, and VOC content of each fluid processed. Maintain records for at least 5 years. [Section D, Source ID 181A, Condition #005]	N/A	N/A
183	Scrap & Charge Handling Operations	N/A - Not a source of VOC emissions					
185	Bond Silo	N/A - Not a source of VOC emissions					
189	Existing Emergency Generators	Fire only natural gas or propane. [Section D, Source ID 189, Condition #003] Operate ≤ 450 hours/12-month period. [Section D, Source ID 189, Condition #004]	N/A	N/A	Keep records of monthly and 12-month rolling operating hours. Maintain records for at least 5 years. [Section D, Source ID 189, Condition #006]	N/A	N/A
189A	New Emergency Generator	Operate < 500 hours/12-month period (each engine). [Section D, Source ID 189A, Condition #005]	N/A	N/A	Keep records of monthly and 12-month rolling operating hours. Maintain records for at least 5 years. [Section D, Source ID 189A, Condition #007]	N/A	N/A
191	Parts Washers (14)	N/A - Subject to §129.63					
199	Molding Lines (SP01 & SP03)	VOC emissions ≤ 55.3 lbs/hr and ≤ 109.5 tpy. (emissions limits combined with Source 173) [Section D, Source ID 199, Condition #002]	N/A	N/A	Keep records of the procedures for igniting gases from mold vents associated with Source ID 199 or maintain records of the ignitability determination according to 40 CFR 63.7710(b)(6). [Section D, Source ID 199, Condition #009] Keep records of VOC emissions calculations (combined Source IDs 173 and 199) for a minimum of 5 years. [Section D, Source ID 199, Condition #011]	N/A	Ignite gases from mold vents according to the procedures in the plan required by 40 CFR 63.7710(b)(6). [Section D, Source ID 199, Condition #013]

**ATTACHMENT B -
RBLC SEARCH RESULTS**

Table B-1
RBLC Search Results
Ward Manufacturing, LLC - Blossburg, PA

RBLCID	Facility Name	Facility State	Permit Number	Permit Issuance Date	Process Name	Process Type	Primary Fuel	Throughput	Throughput Unit	Process Notes	Pollutant	Control Method Code	Control Method Description	Emission Limit 1	Emission Limit 1 Unit	Emission Limit 1 Average Time Condition	Percent Efficiency	Emission Limit 2	Emission Limit 2 Unit	Emission Limit 2 Average Time Condition	Cost Effectiveness	
IN-0257	Intat Precision, Inc.	IN	139-36453-00011	8/25/2016	Casting Line 2	81.45	--	15	ton/hr of metal	One casting line, identified as Casting Line 2, constructed in 1004, consisting of a pouring station, a cooling line, a shakeout unit, and a bad heat shakeout unit.	Volatile Organic Compounds (VOC)	P	Mold Vent Off-Gas Ignition System	1.2	lb/ton of metal	3 hours	0%	79000	ton/yr of metal	12 consecutive month period	\$64,583	
KY-0109	Fritz Winter North America, LP	KY	V-16-022 R1	10/24/2016	Pouring Station #1 & #2 (EU50 & EU51)	81.45	Natural Gas	45793	ton gray iron/year, each	Molds are moved to the pouring and cooling area via a conveyor where the casting takes place along one continuous line. Molds are brought to the pouring furnaces on a rail system. The furnace is tilted and the molten material flows into the mold. The extreme heat of the material contacting carbon in the mold causes volatile organic compounds (VOCs) and carbon monoxide (CO) to be generated. These gases escape through vents designed into the mold and auto ignite due to the extreme heat. Natural gas pilot burners are placed around the mold conveyor to ensure vent gases ignite and burn off pollutants.	Volatile Organic Compounds (VOC)	P	The permittee shall install two natural gas burners along the conveyor downstream of the pouring station (EU50 and EU51). These burners shall be oriented such that they ignite the vents of the mold assemblies in the event that they are not already burning.	0	--	--	0%	0	--	--	--	\$0
KY-0109	Fritz Winter North America, LP	KY	V-16-022 R1	10/24/2016	Core Machines #1-#4 (ST08) [EU39, EU40, EU41, EU42]	81.44	--	3.58	ton amine gas/yr, each	Before the mold can be assembled, a core must be formed that is shaped to allow the hollows and voids of the brake rotor to form when the molten metal is poured into the mold. The core must be strong enough to stand up to the heat of the molten material and is formed of silica sand, resin and hardener. Core silica sand is processed through a sand classifier that sorts out fine-sized particles to ensure a uniform grain sized sand. It is then mixed with a two part phenolic resin and hardener in an enclosed mixer. This blend is sent to an automated core machine where it is shaped into the desired form and subjected to an amine gas that acts as a catalyst to accelerate curing of the resin. Hardened cores are separated from their molds and dipped into a coating that provides abrasive protection. The cores are then heated in a natural-gas fired dryer (4.0 MMBtu/hr, each) before exiting the automatic core machines. Emissions from most of the core making area, including the sand silos, sand classifier, sand bin, weigh hopper, core removal area and dryers are vented to the pouring and cooling baghouse (CU08) and then to stack (ST09). Emissions from use of the amine gas are sent through a sulfuric acid scrubber, to control odors, before exiting to the atmosphere through a stack.	Volatile Organic Compounds (VOC)	A	Sulfuric Acid Scrubber - controls amine gas, a VOC	0.7	lb/hr	3-hour average	99%	1.67	ton/yr	12-month rolling	\$0	
*WI-0293	Grede-Reedsburg, LLC	WI	18-RAB-012	9/27/2019	P60- Cold Box Core Making	81.44	--	7.7	ton/hr	Throughput in tons of core per hour. Throughput in tons of core per hour. Throughput is maximum operating rate of P60A & P60B combined. P60A & B do the same process. The same BACT limitations apply to P60A & B.	Volatile Organic Compounds (VOC)	A	Packed-bed scrubber, 99% control efficiency, packing media saddles or balls	99	% by weight	--	99%	1	ppm	--	\$0	