COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Molson Coors Beverage Company USA LLC
Facility Name:	Molson Coors – Shenandoah Brewery
Facility Location:	5135 South Eastside Highway Rockingham County, Virginia
Registration Number:	81012
Permit Number:	VRO81012

This permit includes the following programs:
Federally Enforceable Requirements – Clean Air Act

June 1, 2022
Effective Date

May 31, 2027
Expiration Date

Jonathan R Porter
Air Permit Manager

May 11, 2022
Signature Date

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Facility Information

Permittee
Molson Coors Beverage Company USA LLC
5135 South Eastside Highway
Elkton, Virginia 22827

Responsible Official
Jonathan Lowes
Plant Manager and Brewery Vice President

Facility
Molson Coors – Shenandoah Brewery
5135 South Eastside Highway
Rockingham County, Virginia

Contact Person
Kayla Cook
Environmental Engineer
540-209-5165

Facility Description: NAICS Code 312120 – Malt Beverages

Molson Coors – Shenandoah Brewery (Molson Coors) manufactures malt beverages. Operations at the facility include a brewery (grain handling, brewing, fermenting, aging, and conditioning processes), packaging (bottles, cans, and kegs and carton assembly and label application), and a wastewater treatment plant. In addition, there are auxiliary processes supporting the operations.

Molson Coors is a Title V major source of nitrogen oxides (NO_X) and volatile organic compounds (VOC). This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a minor new source review permit approved on June 10, 2011, as amended on November 18, 2013, February 3, 2016, July 12, 2017, and October 5, 2017. The Title V operating permit was effective on July 1, 2016. The permit was administratively amended on June 9, 2020. The TV permit expired on June 30, 2021.

Emission Units

The emission units at this facility consist of the following:

Fuel Burning Equipment

Emission EU ID	Stack ID	Emission EU Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit
1	S-1	Cleaver Brooks boiler Model # D-34, EU # W-3371 Constructed November 1985	18 Million BTU/hr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
2	S-2	Cleaver Brooks boiler Model # D-34, EU # W-3372 Constructed November 1985	18 Million BTU/hr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
3	S-3	Cleaver Brooks boiler Model # D-34, EU # W-3373 Constructed November 1985	18 Million BTU/hr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
4	S-4	Nebraska boiler Model # NS-E-64 Constructed January 2002	97 Million BTU/hr	Low NO_X Burners	PC-5	NO_X	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
5	S-5	Nebraska Boiler Model #NS-E-64 Constructed January 2006	97 Million BTU/hr	Low NO_X Burners Flue Gas Recirculation	100SSAPC-6	NO_X	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17

Brewing

Emission EU ID	Stack ID	Emission EU Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit
10	S-10	Grain Handling System	133,000 tons malt/yr	Fabric Filters	PC-10-A PC-10-B PC-10-C	PM/PM-10	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
20	S-20	Brewing Process	10 Million barrels/yr	--	--	--	6/10/11 permit, as amended 11/18/13,

							2/3/16, 7/12/17, and 10/5/17
23	S-23	Fermenting Process	10 Million barrels/yr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
24	S-24	Maturation (Aging) Process	10 Million barrels/yr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
25	S-25-1 through S-25-5	Conditioning Process	10 Million barrels/yr	Closed vessels under CO_2 gas pressure during storage and cleaning.	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
26	S-26-1 S-26-2 S-26-3	Byproducts Handling System	Waste Beer: 1,740,000 gal/yr Yeast: 10,250,859 gal/yr Waste yeast: 12,122,021 gal/yr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
38	--	CO_2 Recovery System	10 Million barrels/yr	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17

Packaging

Emission EU ID	Stack ID	Emission EU Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit
27	S-P-1 through S-P-13	Packaging Fillers Process, consisting of: Bottle Lines 3 and 4; Aluminum Bottle Line 5, Can Lines 1, 2, 3, and 5; and 8-Lane Centramatic Keg Line	17,855,564 barrels (bbls)/yr	Beer Dispensing Technology and Beer Spillage Management	--	VOC	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
29	--	Product Marking	--	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17

30	--	Carton Assembly	--	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
31	--	Label Application	--	--	--	--	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
32	S-32	Packaging Defill Process	1,182,600 lb-aluminum/yr 19,272,000 lb-glass/yr	Water Spraying System	PC-32	VOC	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17

Wastewater Treatment

33	S-33-1 through S-33-11	Wastewater Treatment Plant	4,500,000 gal/day	VAREC Biogas Flare and/or Two Cleaver-Brooks Biogas Boilers	PC-33 (VAREC) EUs 34 and 35 (Boilers)	VOC and H_2S	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
CHP-1		One combined heat and power (CHP) biogas-fired stationary reciprocating engine generator plant, General Electric Model JMC 420 GS-B.L.	12.349 MMBTU/hr, 1426 KW	-	-	NOx	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17
--		Biogas Flare	11.9 Million BTU/hr	--	--	VOC	6/10/11 permit, as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Fuel Burning Equipment Requirements – Emission Unit IDs 1, 2, 3, 4, and 5

Limitations

1. Limitations (EU ID 5) – Nitrogen oxide emissions from the 97 Million BTU/hr boiler (EU ID 5) shall be controlled by the use of low NO_x burners and flue gas recirculation or Department of Environmental Quality (DEQ)-approved equivalent methods.
(9 VAC 5-80-110 and Condition 2 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

2. Limitations (EU ID 4) – Nitrogen oxide emissions from the 97 Million BTU/hr boiler (EU ID 4) shall be controlled by the use of low NO_x burners.
(9 VAC 5-80-110 and Condition 1 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

3. Limitations (EU IDs 1, 2, 3, 4, and 5) – The approved fuel for the five process steam boilers (EU IDs 1, 2, 3, 4, and 5) is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 19 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

4. Limitations (EU IDs 4 and 5) –Visible emissions from each of the 97 Million BTU/hr boiler stacks (EU IDs 4 and 5) shall not exceed five percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity.
(9 VAC 5-50-80, 9 VAC 5-80-110, and Condition 25 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

5. Limitations (EU IDs 1, 2, and 3) – Visible emissions from each of the 18 Million BTU/hr boiler stacks (EU IDs 1, 2, and 3) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-50-80 and 9 VAC 5-80-110)

6. Limitations (EU IDs 1, 2, 3, 4, and 5) – Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all relevant boiler equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at a minimum. The permittee shall maintain records of the required training including a statement of the time, place, and nature of the training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boilers. These procedures shall be based on the manufacturer’s recommendations, at a minimum.
(9 VAC 5-80-110 and Condition 56 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

7. Limitations (EU ID 4) – Emissions from the operation of the 97 Million BTU/hr boiler (EU ID 4) shall not exceed the limits specified below:

Pollutant	lbs/Million BTU
PM	0.0075
PM-10	0.0075
Sulfur Dioxide	0.0006
Nitrogen Oxides* (as NO_2)	0.0900
Carbon Monoxide	0.0824
Volatile Organic Compounds	0.0054

*30-day rolling average

Compliance with these limits may be determined as stated in Conditions 2, 3, and 17. (9 VAC 5-80-110 and Condition 22 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

8. Limitations (EU ID 5) – Emissions from the operation of the 97 Million BTU/hr boiler (EU ID 5) shall not exceed the limits specified below:

Pollutant	lbs/Million BTU
PM	0.0075
PM-10	0.0075
Sulfur Dioxide	0.0006
Nitrogen Oxides* (as NO_2)	0.0400
Carbon Monoxide	0.0824

Pollutant	lbs/Million BTU
Volatile Organic Compounds	0.0054

*30-day rolling average

Compliance with these limits may be determined as stated in Conditions 1, 3, and 17.
(9 VAC 5-80-110 and Condition 23 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

9. Limitations (EU IDs 4 and 5) – Emissions from the operation of the 97 Million BTU/hr boilers (EU IDs 4 and 5), combined, shall not exceed the limits specified below:

PM	6.37 tons/yr
PM-10	6.37 tons/yr
Sulfur Dioxide	0.51 tons/yr
Nitrogen Oxides (as NO_2)	59.81 tons/yr
Carbon Monoxide	70.02 tons/yr
Volatile Organic Compounds	4.59 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 24 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

10. Limitations (EU IDs 1, 2, and 3) – Emissions from the operation of each of the 18 Million BTU/hr boilers (EU IDs 1, 2, and 3) shall not exceed the limits specified below:

Pollutant	lbs/Million BTU (per boiler)
PM	0.0075
PM-10	0.0075
Nitrogen Oxides (as NO_2)	0.0980

Pollutant	lbs/Million BTU (per boiler)
Carbon Monoxide	0.0824
Volatile Organic Compounds	0.0054

Compliance with these limits may be determined as stated in Condition 3.
(9 VAC 5-80-110 and Condition 20 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

11. Limitations (EU IDs 1, 2, and 3) – Total emissions from the operation of the 18 Million BTU/hr boilers (EU IDs 1, 2, and 3), combined, shall not exceed the limits specified below:

PM	1.77 tons/yr
PM-10	1.77 tons/yr
Nitrogen Oxides (as NO_2)	23.18 tons/yr
Carbon Monoxide	19.49 tons/yr
Volatile Organic Compounds	1.28 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 21 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

12. Limitations (EU IDs 1, 2, and 3) – Each of the three 18 Million BTU/hr boilers (EU IDs 1, 2, and 3) shall be fitted with devices to continuously measure and record the fuel gas flow.
(9 VAC 5-80-110 and Condition 14 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

13. Limitations (EU IDs 4 and 5) – Each of the two 97 Million BTU/hr boilers (EU IDs 4 and 5) shall be fitted with devices to continuously measure and record the fuel gas flow.
(9 VAC 5-80-110 and Condition 15 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Monitoring

14. Monitoring (CEMS - EU IDs 4 and 5) – Continuous Emission Monitoring Systems (CEMS) shall be installed to measure and record the concentration of nitrogen oxides

(NO_X) emitted by the two 97 Million BTU/hr boilers (EU IDs 4 and 5). Nitrogen oxide monitors shall be co-located with a CO_2 or O_2 diluent monitor. The monitors shall meet the certification, operation, and maintenance requirements of 40 CFR 60.13 and the quality assurance requirements of 40 CFR, Part 60, Appendix F, or a DEQ-approved equivalent method. A valid data point must be obtained every 15 minutes from each of the boilers being monitored in accordance with 40 CFR 60.13 (e)(2).
(9 VAC 5-50-40, 9 VAC 5-80-110, and Condition 48 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

15. Monitoring (CEMS Performance Evaluations) – Performance evaluations of the continuous monitoring systems shall be conducted in accordance with 40 CFR Part 60, Appendix B, and shall take place during the performance tests or within 30 days thereafter. One copy of the performance evaluation report shall be submitted to the DEQ within 45 days of the evaluation. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device.
(9 VAC 5-50-40, 9 VAC 5-80-110, and Condition 49 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

16. Monitoring (CEMS - EU IDs 4 and 5) – All continuous monitoring required by this permit shall meet minimum data availability of greater than or equal to 90 percent of the individual boiler operating hours of each of the two 97 Million BTU/hr boilers (EU IDs 4 and 5) monitored on a calendar quarter basis. The monitoring shall meet the certification, operation, and maintenance requirements of 40 CFR 60.13 and the quality assurance requirements of 40 CFR, Part 60, Appendix F, or a DEQ-approved equivalent method.
(9 VAC 5-50-40, 9 VAC 5-80-110, and Condition 50 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

17. Monitoring (CEMS - EU IDs 4 and 5) – The continuous monitoring data generated by all continuous emission monitoring systems shall be used to determine compliance with the emission limitations in Conditions 7, 8, and 9; compliance shall be demonstrated on a calendar quarter basis. The permittee shall install and maintain instrumentation necessary to determine compliance. This instrumentation should indicate and record the following for the two 97 Million BTU/hr boilers (EU IDs 4 and 5), at minimum:

    a. the hourly heat input of each boiler in Million BTU/hr;

    b. the total hourly heat input of both boilers in Million BTU/hr; and

    c. the 30-day rolling average NO_x emission rate in lbs/Million BTU and lb/hr, on a daily basis for each boiler.

    (9 VAC 5-80-110 and Condition 51 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

18. Monitoring (EU IDs 4 and 5) – The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Test ports will be provided on each of the 97 Million BTU/hr (EU IDs 4 and 5) stacks.
(9 VAC 5-50-30 F, 9 VAC 5-80-110, and Condition 27 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Recordkeeping

19. Recordkeeping – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. The DEQ-approved, pollutant-specific emission factors and equations used to demonstrate compliance with Conditions 7, 8, 9, 10, and 11.

    b. Monthly and annual emissions from the 97 MMBtu/hr boilers (EU IDs 4 and 5) to show compliance with Condition 9.

    c. Monthly and annual emissions from the 18 MMBtu/hr boilers (EU IDs 1, 2 and 3) to show compliance with Condition 11.

    d. Continuous monitoring data required in Conditions 16 and 17.

    e. Results of all stack tests, visible emission evaluations, and performance evaluations.

    f. Records of maintenance, operating procedures, and training as required in Condition 6.

    These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
    (40 CFR 60.48c(g), 40 CFR 60.48c(i), 9 VAC 5-80-110, and Condition 53 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Testing

20. Testing – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Reporting

21. Reporting – The permittee shall submit reports to the DEQ within 30 days after the end of each calendar quarter for the two 97 Million Btu/hr boilers (EU IDs 4 and 5). Each quarterly report shall contain, at a minimum, the following:

    a. The source operating time, in hours;

    b. For each boiler operating day, the information required under 40 CFR 60.49b (g)(1), (g)(2), and (g)(3);

    c. The quality assurance information required under 40 CFR 60.49b (g)(10);

    d. The dates and times of all outages of the NO_X continuous monitoring system, with reasons for the outages, and corrective actions taken; and

    e. The calculated NO_X emission rates in lb/Million Btu.

    One copy of the quarterly report shall be sent to the EPA at the following address:

    R3_APD_Permits@epa.gov

    (9 VAC 5-80-110 and Condition 52 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Brewery Requirements – Emission Units 10, 20, 23-26, and 38

Limitations

22. Limitations – The annual throughput of barley malt shall not exceed 133,000 tons per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 23 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

23. Limitations (EU ID 10) – Particulate matter (PM and PM-10) emissions from the operation of the following equipment shall be controlled by fabric filters:

    - barley malt receiving system including grain receiving by railcar (choke unloading) and headhouse and internal handling (EU ID 10); and

    - barley malt storage, screening, and milling system (EU ID 10).

    (9 VAC 5-80-110 and Condition 3 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

24. Limitations (EU ID 10) – PM and PM-10 emissions from the operation of the following equipment shall not exceed the limits specified below:

Equipment	Pollutant	lbs/hr	tons/yr
Barley Malt Receiving System – Grain Receiving by Railcar and Headhouse and Internal Handling - EU ID 10	PM	1.3	1.1
	PM-10	0.3	0.3
Barley Malt Storage, Screening, and Milling System - EU ID 10	PM	0.3	0.6
	PM-10	0.2	0.5

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 29 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

25. Limitations – Visible emissions from all fabric filters, except as indicated in Condition 29, shall not exceed five percent opacity as determined by 40 CFR 60, Appendix A, Method 9.
(9 VAC 5-80-110 and Condition 34 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

26. Limitations (EU ID 25) – VOC emissions from conditioning (EU ID 25) shall be controlled by maintaining closed vessels under CO_2 gas pressure during storage and cleaning activities.
(9 VAC 5-80-110 and Condition 5 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

27. Limitations (EU IDs 20, 23, 24, 25, 26, and 38) – VOC emissions from the operation of the equipment listed below shall not exceed the following limits:

Equipment	tons/month	tons/yr
Brewing Process (EU ID 20)	0.73	5.12
Fermentation (EU ID 23)	4.18	4.48
Maturation Process (EU ID 24)	0.24	2.85
Conditioning Process (EU ID 25)	0.34	3.73
By-Products Handling System (EU ID 26)	0.12	1.46
CO_2 Recovery System (EU ID 38)	0.01	0.13

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 32 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

28. Limitations (EU ID 20) – PM and PM-10 emissions from the operation of the brewing process (EU ID 20) shall not exceed 0.3 tons per month and 2.1 tons per year. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 32 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

29. Limitations (EU IDs 20, 23, 24, 25, and 26) – Visible emissions from the following equipment shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity, as determined by 40 CFR 60, Appendix A, Method 9:

- Brewing Process (EU ID 20);
- Fermentation (EU ID 23);
- Maturation Process (EU ID 24);
- Conditioning process (EU ID 25); and,

- By-products Handling System (EU ID 26).

(9 VAC 5-50-80 and 9 VAC 5-80-110)

Monitoring

30. Monitoring (EU ID 10) – Each fabric filter required in Condition 23 shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendation. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating. A log shall be maintained in paper copy or electronic format to record the pressure drop across each fabric filter once a month. The permittee shall also keep a log of all corrective actions taken pursuant to this condition.
(9 VAC 5-80-110 and Condition 20 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

31. Compliance Assurance Monitoring (CAM) – The permittee shall monitor, operate, calibrate, and maintain EU ID 10, Grain Handling System, as specified in the Fabric Filter CAM Plan (Attachment A) for each fabric filter in EU ID 10.
(9 VAC 5-80-110 and 40 CFR 64.6(c))

32. Compliance Assurance Monitoring (CAM) - The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))

33. Compliance Assurance Monitoring (CAM) - At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
(9 VAC 5-80-110 E and 40 CFR 64.7 (b))

34. Compliance Assurance Monitoring (CAM) - Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals as outlined in the CAM plan) at all times that EU ID 10 is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9 VAC 5-80-110 E and 40 CFR 64.7 (c))

35. Compliance Assurance Monitoring (CAM) - Upon detecting an excursion or exceedance, the permittee shall restore operation of EU ID 10 (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))

36. Compliance Assurance Monitoring (CAM) - Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9 VAC 5-80-110 E and 40 CFR 64.7(d)(2))

37. Compliance Assurance Monitoring (CAM) - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the DEQ and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9 VAC 5-80-110 E and 40 CFR 64.7(e))

38. Compliance Assurance Monitoring (CAM) – If the number of exceedances or excursions exceeds two in a two-week period per each control device or, if monitoring has been reduced to monthly in accordance with the CAM plan, then one excursion or exceedance during the monthly monitoring, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:

a. Improved preventative maintenance practices;

b. Process operation changes;

c. Appropriate improvements to control methods;

d. Other steps appropriate to correct control performance; and

e. More frequent or improved monitoring.

(9 VAC 5-80-110 and 40 CFR 64.8(a) and (b))

Recordkeeping

39. Recordkeeping – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

a. Monthly and annual throughput of barley malt (in tons) (EU ID 10), calculated monthly as required by Condition 22.

b. Monthly and annual throughput of waste beer through waste beer tanks (by volume) (EU ID 26). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

c. Monthly and annual total of CO_2 consumed (by weight) during conditioning activities (EU ID 25). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

d. The annual total of CO_2 recovery system outage (by time), calculated monthly as the sum of each consecutive 12-month period.

e. Monthly and annual PM and PM-10 emissions (in tons) from the grain handling system (EU ID 10), calculated monthly as required by Condition 24.

f. Monthly and annual PM and PM-10 emissions (in tons) from the operation of the brewing process (EU ID 20), calculated monthly as required by Condition 28.

g. Differential pressure drop logs required in Condition 30.

h. Inspection records as required by the Fabric Filter Compliance Assurance Monitoring (CAM) Plan (Attachment A) in Condition 31. These records shall include, but are not limited to:

i. Visible emissions observation records for each fabric filter including date, time, and name of qualified person performing each observation;

ii. Method 9 Visible Emissions Evaluation results;

iii. Monthly and annual inspection logs, which include bag filter condition;

iv. Pressure drop records when necessary; and

v. Records of all excursions, including date, time and corrective actions taken.

i. The DEQ-approved VOC emission factors and equations used to demonstrate compliance with Condition 27.

j. Monthly and annual VOC emissions (in tons) from the brewing process (EU ID 20), fermentation (EU ID 23), the maturation process (EU ID 24), the conditioning process (EU ID 25), the by-products handling system (EU ID 26), and the CO_2 recovery system (EU ID 38), calculated monthly as required by Condition 27.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition 51 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7//12/17, and 10/5/17)

40. Recordkeeping - Compliance Assurance Monitoring (CAM) – The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan (QIP) required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan (QIP), and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
(9 VAC 5-80-110 E and 40 CFR 64.9(b))

Testing

41. Testing – The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Sampling ports, safe sampling platforms, and access at appropriate locations shall be provided when requested.
(9 VAC 5-50-30 and 9 VAC 5-80-110)

42. Testing – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Reporting

43. Reporting - Compliance Assurance Monitoring (CAM) - the permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports required by Condition 84 of this permit to the DEQ. Such reports shall include at a minimum:

    a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

    b. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable; and

    c. A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

    (9 VAC 5-80-110 F and 40 CFR 64.9(a))

Packaging Requirements – Emission Units 27, 29, 30, 31, and 32

Limitations

44. Limitations – The production of beer through packaging shall not exceed 10 million barrels per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 30 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

45. Limitations (EU ID 27) –Volatile organic compound (VOC) emissions from the Packaging Fillers Process (EU ID 27) shall be controlled by beer dispensing technology and beer spillage management practices. The beer dispensing technology and beer spillage management shall include fillers which are operated to minimize overfill of containers. The packaging operation shall be maintained by the permittee such that it is in proper working order at all times.
(9 VAC 5-80-110 and Condition 6 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

46. Limitations (EU ID 32) –VOC emissions from the defill operation (EU ID 32) shall be controlled by the use of a water spraying system. The water spraying system shall be maintained by the permittee such that it is in proper working order at all times and shall be in operation when the bottles and cans are crushed.
(9 VAC 5-80-110 and Condition 9 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

47. Limitations (EU ID 29) –VOC emissions from product marking (EU ID 29) shall be controlled by the use of the approved low-VOC content product marking inks and makeup cleaners. As new inks and makeup cleaners become available, the permittee shall evaluate the feasibility of their use. The product marking operations shall be maintained by the permittee such that it is in proper working order at all times.
(9 VAC 5-80-110 and Condition 7 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

48. Limitations (EU IDs 30 and 31) –VOC emissions from carton assembly (EU ID 30) and bottle label application (EU ID 31) shall be controlled by the use of ultra-low solvent based adhesives (containing less than 0.01 percent by weight VOC).
(9 VAC 5-80-110 and Condition 8 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

49. Limitations (EU IDs 27, 29 – 32) –VOC emissions from the operation of the equipment listed below shall not exceed the following limits:

Equipment	tons/month	tons/yr
Packaging Fillers Process (EU 27), consisting of: -Bottle Lines 3, 4, and 5; -Can Lines 1, 2, and 3; and -Centramatic Keg Line	10.22	71.04
Product Marking (EU ID 29)	2.42	11.00
Carton Assembly (EU ID 30)	0.0025	0.03
Bottle Label Application (EU ID 31)	0.0025	0.03
Defilling (EU ID 32)	2.50	16.00

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 29 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Recordkeeping

50. Recordkeeping – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Monthly and annual volumes of cans filled (EU ID 27). Annual volumes shall be calculated monthly as the sum of each consecutive 12-month period.

    b. Monthly and annual volumes of bottles filled (EU ID 27). Annual volumes shall be calculated monthly as the sum of each consecutive 12-month period.

    c. Monthly and annual volumes of kegs filled (EU ID 27). Annual volumes shall be calculated monthly as the sum of each consecutive 12-month period.

    d. Monthly and annual volumes of beer packaged (in 1000 barrels) (EU ID 27). Annual volumes shall be calculated monthly as the sum of each consecutive 12-month period.

    e. Monthly and annual total of bottle glass recovered from bottle defill crushing operations (by weight) (EU ID 32). Annual totals shall be calculated monthly as the sum of each consecutive 12-month period.

    f. Monthly and annual total of can aluminum recovered from can defill densifying operations (by weight) (EU ID 32). Annual totals shall be calculated monthly as the sum of each consecutive 12-month period.

g. Monthly and annual volumes of product marking ink used (EU ID 29). Annual volumes shall be calculated monthly as the sum of each consecutive 12-month period.

h. The DEQ-approved VOC emission factors and equations used to demonstrate compliance with Condition 49.

i. Monthly and annual VOC emissions (in tons) from packaging fillers process (EU ID 27), product marking (EU ID 29), carton assembly (EU ID 30), bottle label application (EU ID 31), and defilling (EU ID 32), calculated monthly as required by Condition 49.

j. Certified Material Safety Data Sheets (MSDS) showing VOC content (by weight) for each conveyor line lubricant, product marking ink, carton assembly glue, and label application glue.

k. Records of ink and makeup cleaner evaluations, as required in Condition 47.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition 53 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Testing

51. Testing – A performance test shall be conducted for VOC from the filler rooms of the Packaging Fillers Process – Can Line 1, using 40 CFR 60, Appendix A, Method 25A to determine the emission factor to be used in VOC emission calculations to show compliance with the emission limits in Condition 49 for the Packaging Fillers Process (EU ID 27). This test shall be conducted within five years from the date of the performance tests on the Bottle Line 3 and Can Line 2, which were conducted on December 3 – 4, 2019.

    The permittee shall submit a test protocol at least 30 days prior to testing. Testing shall conform to the test report format enclosed with this permit. One copy of the test results shall be submitted to the DEQ within 60 days after completion of the testing. Other details of the test shall be arranged with the DEQ.
    (9 VAC 5-80-110)

52. Testing – Upon request by the DEQ, the permittee shall conduct additional performance tests for VOC from the filler rooms of the Packaging Fillers Process – Can Lines (Can 1, 2, 3, or 5) and Packaging Fillers Process – Bottle Lines (Bottle 3, 4, or 5) to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.
    (9 VAC 5-80-110)

53. Testing – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate test method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Wastewater Treatment Requirements – Emission Units 33 and CHP-1

Limitations

54. Limitations (EU ID CHP-1) – The approved fuel for the wastewater treatment biogas flare, and the CHP stationary reciprocating engine generator plant (EU ID CHP-1) is primary digester gas. The approved fuel for the flare pilot flame is propane. The flare, and/or EU ID CHP-1, may only be used for the combustion of digester gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 36 of 6/10/2011 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

55. Limitations (EU ID CHP-1) – NOx emissions from the CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall be controlled by a low NOx engine.
(9 VAC 5-80-110 and Condition 12 of 6/10/2011 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

56. Limitations (EU ID CHP-1) – Emissions from the CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall be controlled by proper operation and maintenance. Operators shall be trained in the proper operation of this equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at a minimum. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for EU ID CHP-1. These procedures shall be based on the manufacturer's recommendations, at a minimum.
(9 VAC 5-80-110 and Condition 13 of 6/10/2011 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

57. Limitations (EU ID CHP-1) – Emissions from the operation of the CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall not exceed the limits specified below. The permittee may choose to comply with the emission standards in EUs of g/HP-hr or ppmvd at 15% O_2.

	g/HP-hr	ppmvd at 15% O_2
VOC	1.0	80
NOx	2.0	150
CO	5.0	610

Compliance with these emission limits shall be determined by performing stack testing as described in Condition 72.
(9 VAC 5-80-110, Condition 40 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17, and 40 CFR 60.4233(e))

58. Limitations (EU ID CHP-1) – The permittee must operate and maintain EU ID CHP-1 in such a way that achieves the emission standards as required in Condition 57 over the entire life of the engine.
(9 VAC 5-80-110 and 40 CFR 60.4234)

59. Limitations (EU ID CHP-1) – Emissions from the operation of the CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall not exceed the limits specified below:

PM	0.39 lbs/hr	1.7 tons/yr
PM-10	0.39 lbs/hr	1.7 tons/yr
SO2	0.96 lb/hr	4.2 tons/yr
NOx	2.60 lbs/hr	11.4 tons/yr
CO	13.0 lbs/hr	56.9 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 54, 55, and 56.
(9 VAC 5-80-110 and Condition 41 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

60. Limitations (EU ID CHP-1) – Except where this permit is more restrictive than the applicable requirement, the CHP stationary reciprocating engine generator (EU ID CHP-1) shall be operated in compliance with the requirements of 40 CFR 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).
(9 VAC 5-80-110 and 40 CFR 63 Subpart ZZZZ)

61. Limitations (EU ID CHP-1) – Except where this permit is more restrictive than the applicable requirement, the CHP stationary reciprocating engine generator (EU ID CHP-1) shall be operated in compliance with the requirements of 40 CFR 60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines).
(9 VAC 5-80-110 and 40 CFR 60 Subpart JJJJ)

62. Limitations (EU ID CHP-1) – The EU ID CHP-1 must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.
(9 VAC 5-80-110 and 40 CFR 63.6590))

63. Limitations (EU ID CHP-1) – As the owner of a non-certified engine, the permittee shall demonstrate compliance with the emission standards specified in Condition 57 according

to the requirements specified in Condition 72, as applicable. In addition, the permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate EU ID CHP-1 in a manner consistent with good air pollution control practice for minimizing emissions.
(9 VAC 5-80-110 and 40 CFR 60.4243(b))

64. Limitations (EU ID CHP-1) – Visible emissions from the CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-80-110 and Condition 42 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

65. Testing (EU ID CHP-1) – Upon request by the DEQ, the permittee shall conduct a visible emissions evaluation from the CHP stationary reciprocating engine generator plant (EU ID CHP-1) exhaust to demonstrate compliance with the visible emission limit in Condition 64. The details of the test shall be arranged with the DEQ.
(9 VAC 5-80-110, 9 VAC 5-30-30 G, and Condition 47 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17).

66. Limitations (EU ID 33) – The collection system for the wastewater treatment facility and influent structures must be covered to prevent escape of volatile organic compound emissions.
(9 VAC 5-80-110 and Condition 10 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

67. Limitations (EU IDs 33 and CHP-1) – Volatile organic compound (VOC) emissions from the wastewater treatment facility (EU ID 33) shall be controlled by an advanced wastewater treatment system. The facility shall not exceed VOC emission limits specified in Condition 68 and must use the biogas flare (PCD ID PC-33) or the CHP stationary reciprocating engine generator plant (EU ID CHP-1) for the combustion of biogas. The advanced wastewater treatment system shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 11 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

68. Limitations (EU ID 33) – VOC emissions from the operation of the wastewater collection/treatment and sludge handling systems shall not exceed 0.88 tons per month and 4.00 tons per year. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 39 of 6/10/2011 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Monitoring

69. Monitoring and Recordkeeping (EU IDs 34 and 35) – The biogas flare (PCD ID PC-33) shall be equipped with a device to ensure continuous operation of the biogas flare. The biogas flare shall be equipped with an automatic shutoff device and re-ignition controls. A log shall be maintained to record any periods when the biogas flare is non-operational. (9 VAC 5-80-110 and Condition 16 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

70. Monitoring (EU ID CHP-1) – The CHP stationary reciprocating engine generator plant (EU ID CHP-1) shall be equipped with a device to continuously measure and record the biogas flow to the unit.
(9 VAC 5-80-110 and Condition 17 of 6/10/2011 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Recordkeeping

71. Recordkeeping – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Records to show compliance with the required operator training, operating procedures, and maintenance of the EU ID CHP-1, as required by Condition 56.

    b. Records to show compliance with the process emission limits for EU ID CHP-1, as required in Condition 57.

    c. Monthly and annual emissions (in tons) from the CHP stationary reciprocating engine generator plant (EU ID CHP-1) to show compliance with the emission limits in Condition 59.

    d. Monthly and annual VOC emissions (in tons) from the wastewater collection/treatment and sludge handling systems (EU ID 33), calculated monthly as required by Condition 68.

    e. A log shall be maintained to record any periods when the biogas flare is non-operational, as required by Condition 69.

    f. Records of stack testing results for EU ID CHP-1, as required by Condition 72.

    g. Monthly and annual throughput of digester gas (in million cubic feet) for the CHP stationary reciprocating engine generator plant (EU ID CHP-1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

h. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

i. Documentation that the non-certified engine (EU ID CHP-1) meets the engine emission standards of 40 CFR 60 Subpart JJJJ.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110, 40 CFR 60.4245(a) and Condition 53 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Testing

72. Testing (EU ID CHP-1) – Every 8,760 hours of operation of the EU ID CHP-1, subsequent performance testing shall be conducted for NOx, CO, and VOC using the procedures in Condition 73 and methods specified in Table 2 of 40 CFR 60, Subpart JJJJ.

The permittee shall submit a test protocol at least 30 days prior to testing. Testing shall conform to the test report format enclosed with this permit. One copy of the test results shall be submitted to the DEQ within 60 days after completion of the testing. Other details of the test shall be arranged with the DEQ.

One copy of the performance test shall be submitted to the U.S. Environmental Protection Agency at the following address:

Associate Director
Office of Air Enforcement (3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-110 and 40 CFR 60.4243(b)(ii))

73. Testing (EU ID CHP-1) – The permittee shall follow the procedures outlined below when conducting performance tests on EU ID CHP-1 to show compliance with the emissions limits in Condition 57:

a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 to 40 CFR 60, Subpart JJJJ.

b. The permittee may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If the stationary SI internal combustion engine is non-operational, the permittee does not need to

startup the engine solely to conduct a performance test. However, the permittee must conduct the performance test immediately upon startup of the engine.

c. You must conduct three separate test runs for each performance test required in this section, as specified in 40 CFR 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

d. To determine compliance with the NO_X mass per EU output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1:

$$ER = \frac{C_d \times 1.912E^{-3} \times Q \times T}{HP - hr}$$

……..Equation 1

Where:

ER	= Emission rate of NO_X in g/HP-hr.
C_d	= Measured NO_X concentration in parts per million by volume (ppmv).
$1.912E^{-3}$	= Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.
Q	= Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.
T	= Time of test run, in hours.
HP-hr	= Brake work of the engine, horsepower-hour (HP-hr)

e. To determine compliance with the CO mass per EU output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2:

$$ER = \frac{C_d \times 1.164E^{-3} \times Q \times T}{HP - hr}$$

……..Equation 2

Where:

ER	= Emission rate of CO in g/HP-hr.
C_d	= Measured CO concentration in ppmv.
$1.164E^{-3}$	= Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.
Q	= Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
T	= Time of test run, in hours.
HP-hr	= Brake work of the engine, in HP-hr.

f. For purposes of this permit condition, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per EU output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3:

$$ER = \frac{C_d \times 1.833E^{-3} \times Q \times T}{HP - hr}$$

……..Equation 3

Where:

ER	= Emission rate of VOC in g/HP-hr.
C_d	= VOC concentration measured as propane in ppmv.
$1.833E^{-3}$	= Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.
Q	= Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
T	= Time of test run, in hours.
HP-hr	= Brake work of the engine, in HP-hr

(9 VAC 5-80-110 and 40 CFR 60.4244)

74. Testing – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate test method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Facility Wide Conditions

Limitations

75. Limitations – If the existing or permitted Molson Coors – Shenandoah Brewery facility is modified by a relaxation in any enforceable limitation on the capacity or emissions of the source which would have made this facility subject to the requirements of 40 CFR 52.21 on May 2, 1997, then the requirements of 40 CFR 52.21 shall apply to the facility as though construction had not yet commenced on the source or modification.
(9 VAC 5-80-110 and Condition 35 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

Recordkeeping

76. Recordkeeping – In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

    b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

    These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-80-110 and Condition 56 of 6/10/11 Permit as amended 11/18/13, 2/3/16, 7/12/17, and 10/5/17)

77. Recordkeeping – The permittee shall have available written operating procedures for all air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedure. The procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including the names of trainees, date of training, and nature of training. These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-80-110 and Condition 56 of 6/10/11 Permit as amended 11/18/13 and 2/3/16, 7/12/17, and 10/5/17)

Insignificant Emission Units

78. Insignificant Emission Units – The following emission Units at the facility are identified in the application as insignificant emission EUs under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity 9 VAC 5-80-720 C)
19	Diesel Fuel Storage	9 VAC 5-80-720 A	--	--
36	Wet Spent Grain Storage and Loadout	9 VAC 5-80-720 B	VOC	--
37	Adjuncts Handling	9 VAC 5-80-720 B	PM-10	--
40	Emergency Back-up Generator	9 VAC 5-80-720 B	-	NOx, CO
51	Yeast Propagation	9 VAC 5-80-720 B	VOC, SO_2	--
52	Cooling Towers	9 VAC 5-80-720 A	--	--
53	Deozonation Towers	9 VAC 5-80-720 B	VOC (ozone)	--
54	Packaging Traymaker	9 VAC 5-80-720 B	PM-10, VOC	--
55	CIP (Clean-in-Place) System	9 VAC 5-80-720 B	VOC	--
56	Hops Staging Room	9 VAC 5-80-720 B	VOC	--
57	Inline Defill EUs – Bottle Line 3	9 VAC 5-80-720 B	VOC	--
58	Warehouse Keg Defill	9 VAC 5-80-720 B	VOC	--
59	Keg Line Defill	9 VAC 5-80-720 B	VOC	--
60	Five-liter Keg Can Filling	9 VAC 5-80-720 B	VOC	--
61	Bottle Warmer	9 VAC 5-80-720 B	VOC	--
62	Flash Pasteurization	9 VAC 5-80-720 B	VOC	--
63	Central Vacuum System	9 VAC 5-80-720 B	PM, PM-10, VOC	--
64	Green Beer Centrifuges	9 VAC 5-80-720 B	VOC	--
65	Portable Gasoline Generators	9 VAC 5-80-720 B	VOC, NOx, CO	--
66	Parts Washers	9 VAC 5-80-720 B	VOC	
--	Rail and Truck Loading	9 VAC 5-80-720 A		
--	General Ventilation	9 VAC 5-80-720 A	--	--
--	Portable Heaters	9 VAC 5-80-720 A	--	--
--	Space Heaters	9 VAC 5-80-720 A	--	--
--	Office Activities	9 VAC 5-80-720 A	--	--
--	Janitorial Cleaning/Maintenance	9 VAC 5-80-720 A	--	--
--	Architectural Repair Activities	9 VAC 5-80-720 A	--	--
--	Grounds Maintenance	9 VAC 5-80-720 A	--	--
--	Locker Room Ventilation	9 VAC 5-80-720 A	--	--
--	Copier Activities	9 VAC 5-80-720 A	--	--
--	Blueprint Duplication	9 VAC 5-80-720 A	--	--
--	Cafeteria Activities	9 VAC 5-80-720 A	--	--

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity 9 VAC 5-80-720 C)
--	Safety Devices	9 VAC 5-80-720 A	--	--
--	Air Contaminate Test Equipment	9 VAC 5-80-720 A	--	--
--	Welding, Soldering Equipment	9 VAC 5-80-720 A	--	--
--	Forklift, Truck Engines	9 VAC 5-80-720 A	--	--
--	Firefighting Equipment and Training	9 VAC 5-80-720 A	--	--
--	Quality Control Lab Activities	9 VAC 5-80-720 A	--	--
--	Air Compressors	9 VAC 5-80-720 A	--	--
--	Dumpsters	9 VAC 5-80-720 A	--	--
--	Air Dryers for Instrument Air	9 VAC 5-80-720 A	--	--
--	Laboratory Activities	9 VAC 5-80-720 A	--	--
--	Sampling Activities	9 VAC 5-80-720 A	--	--
--	Solvent Storage	9 VAC 5-80-720 A	--	--
--	Cooling Ponds	9 VAC 5-80-720 A	--	--
--	Maintenance Activities	9 VAC 5-80-720 A	--	--
--	Spill Collection Tanks	9 VAC 5-80-720 A	--	--
--	Steam Vents	9 VAC 5-80-720 A	--	--
--	Boiler Treatment Operations	9 VAC 5-80-720 A	--	--
--	Nonhazardous Boiler Cleaning Activities	9 VAC 5-80-720 A	--	--
--	Portable Containers	9 VAC 5-80-720 A	--	--
--	Vents or Stacks for Sewer Lines	9 VAC 5-80-720 A	--	--
--	Fire Suppression Systems	9 VAC 5-80-720 A	--	--

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. (9 VAC 5-80-110)

Permit Shield & Inapplicable Requirements

79. Permit Shield & Inapplicable Requirements – Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following

requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR § 60.18	General Control Device Requirements	Applicable to control devices that are used to comply with applicable subparts of 40 CFR 60 or 40 CFR 61.
40 CFR 60 Subpart K (§ 60.110 - § 60.113)	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	Applicable to storage vessels for petroleum liquids which have a storage capacity greater than 40,000 gallons.
40 CFR 60 Subpart Ka (§ 60.110a - § 60.115a)	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	Applicable to storage vessels for petroleum liquids which has a storage capacity of greater than 40,000 gallons and for which construction is commenced after May 18, 1978.
40 CFR 60 Subpart Kb (§ 60.110b - § 60.117b)	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	Applicable to storage vessels with a capacity greater than 40 m^3 that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. Does not apply to vessels used to store beverage alcohol.
40 CFR 60 Subpart DD (§ 60.300 - § 60.304)	Standards of Performance for Grain Elevators	Applies to each affected facility at any grain terminal elevator or any grain storage elevator that commenced construction, modification, or reconstruction after August 3, 1978. Grain terminal elevators located at breweries are exempt from 40 CFR 60 Subpart DD.
40 CFR 60 Subpart VV (§ 60.480 - § 60.489)	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	Applies to affected facilities in the synthetic organic chemicals manufacturing industry. Facilities that produce beverage alcohol are exempt from § 60.482.
40 CFR 60 Subpart WW (§ 60.490 - § 60.496)	Standards of Performance for the Beverage Can Surface Coating Industry	Applies to the following affected facilities in beverage can surface coating lines: each exterior base coat operation, each over varnish coating operation, and each inside spray coating operation. Applies to affected facilities that commenced construction, modification, or reconstruction after November 26, 1980.
40 CFR 60 Subpart NNN (§ 60.660 - § 60.668)	Standards of Performance for VOC Emissions From Synthetic Organic Chemical Manufacturing Industry Distillation Operations	Applies to each affected facility that is part of a process EU that produces any of the chemicals listed in § 60.667 as a product, co-product, by-product, or intermediate. Does not apply to any distillation EU operating as part of process EU which produces beverage alcohols.

Citation	Title of Citation	Description of Applicability
9 VAC 5 Chapter 60, Part I	Special Provisions	Applies to all existing, new and modified hazardous air pollutant sources for which emission standards are prescribed under Chapter 60.
9 VAC 5 Chapter 60, Part II, Article I	Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants	Applies to all existing, new and modified hazardous air pollutant sources that are subject to NESHAP Standards (40 CFR 61).
9 VAC 5 Chapter 60, Part II, Article II	Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants for Source Categories	Applies to all existing, new and modified hazardous air pollutant sources that are subject to MACT Standards (40 CFR 63).
40 CFR 82 Subpart B (§ 82.30 - § 82.42, Appendices A-F)	Servicing of Motor Vehicle Air Conditioners	Applies to any person performing service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner.
40 CFR § 82.156(a)(2)(i)(B)	Required Practices	Applies to persons pressurizing low-pressure appliances.
40 CFR § 82.156(a)(4)(ii)	Required Practices	Applies to persons using recycling and recovery equipment manufactured on or after November 15, 1993.
40 CFR § 82.156(a)(5)	Required Practices	Applies to persons opening MVAC-like appliances.
40 CFR § 82.156(b)	Required Practices	Applies to persons opening and/or disposing of appliances. Does not apply to persons who maintain, service, repair, or dispose of only appliances that they own and that contain pump-out EUs.
40 CFR § 82.156(c)	Required Practices	Applies to system-dependent equipment that is used with appliances normally containing more than 15 pounds of refrigerant.
40 CFR § 82.156(e)	Required Practices	Applies to the return of refrigerant to appliances, except if the appliance is an MVAC or MVAC-like appliance.
40 CFR § 82.156(g)	Require Practices	Applies to all persons recovering refrigerant from MVACs or MVAC-like appliances for purposes of disposal of the appliances.
40 CFR § 82.156(i)(1)	Required Practices	Applies to owners or operators of commercial refrigeration equipment normally containing more than 50 pounds of refrigerant.
40 CFR § 82.156(i)(2)	Required Practices	Applies to owners or operators of industrial process refrigeration equipment normally containing more than 50 pounds of refrigerant.
40 CFR § 82.156(i)(3)	Required Practices	Applies to owners or operators of appliances normally containing more than 50 pounds of refrigerant.
40 CFR § 82.156(i)(4)	Required Practices	Applies to owners or operators of appliances normally containing more than 50 pounds of refrigerant.
40 CFR § 82.158(l)	Standards for Recycling and Recovery Equipment	Applies to equipment used to evacuate MVACs and MVAC-like appliances before they are disposed of.

Citation	Title of Citation	Description of Applicability
40 CFR § 82.161(a)(3)	Technician Certification	Applies to technicians who maintain, service, or repair low-pressure appliances or dispose of low-pressure appliances.
40 CFR § 82.161(5)	Technician Certification	Applies to technicians who maintain, service, or repair MVAC-like appliances.
40 CFR § 82.164	Reclaimer Certification	Applies to all persons reclaiming used refrigerant for sale to a new owner.
40 CFR § 82.166(j)	Reporting and Recordkeeping Requirements	Applies to persons servicing appliances normally containing 50 or more pounds of refrigerant.
40 CFR § 82.166(k)	Reporting and Recordkeeping Requirements	Applies to owners/operators of appliances normally containing 50 or more pounds of refrigerant.
40 CFR § 82.166(m)	Reporting and Recordkeeping Requirements	Applies to owners/operators of appliances normally containing 50 or more pounds of refrigerant.
40 CFR 60 Subpart A (§ 60.1 - § 60.19)	General Provisions	Applies to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard applicable to the facility. 40 CFR 60 Subpart A does not apply to EUs 1, 2, 3, 10, 16, 20, 23, 24, 25, 26, 27, 28, 29, 30, 32, and 33.
40 CFR § 60.7(a)(5)	Notification and Recordkeeping	Applies to continuous monitoring systems that are required in accordance with an NSPS standard (40 CFR 60. 40 CFR 60.7(a)(5) does not apply to EUs 4 and 5.
40 CFR § 60.7(a)(6)	Notification and Recordkeeping	Applies to opacity observations that are required in accordance with an NSPS standard (40 CFR 60. 40 CFR 60.7(a)(6) does not apply to EUs 4 and 5.
40 CFR § 60.7(a)(7)	Notification and Recordkeeping	Applies to facilities that intend to use continuous opacity monitoring system data to determine compliance with opacity standards contained within NSPS standards (40 CFR 60). 40 CFR 60.7(a)(7) does not apply to EUs 4 and 5.
40 CFR § 60.7(c)	Notification and Recordkeeping	Applies to owners and operators required to install a continuous monitoring system or monitoring device in accordance with an NSPS standard (40 CFR 60). 40 CFR 60.7(c) does not apply to EUs 4 and 5.
40 CFR § 60.7(e)	Notification and Recordkeeping	Applies to owners and operators who are required to submit excess emissions and monitoring systems performance reports on a quarterly basis in accordance with an NSPS standard (40 CFR 60). 40 CFR 60.7(e) does not apply to EUs 4 and 5.

Citation	Title of Citation	Description of Applicability
40 CFR § 60.7(f)	Notification and Recordkeeping	Applies to owners and operators who maintain and operate continuous monitoring systems or continuous monitoring devices, or were required to conduct performance tests in accordance with an NSPS standard (40 CFR 60). 40 CFR 60.7(f) does not apply to EUs 4 and 5.
40 CFR § 60.11(e)(1)	Compliance with Standards and Maintenance Requirements	Applies to facilities that are required to conduct initial compliance testing to demonstrate compliance with an opacity standard contained within an NSPS standard (40 CFR 60). 40 CFR 60.11(e)(1) does not apply to EUs 4 and 5.
40 CFR § 60.11(e)(2)	Compliance with Standards and Maintenance Requirements	Applies to owners and operators of an affected facility to which an opacity standard in 40 CFR 60 applies. 40 CFR 60.11(e)(2) does not apply to EUs 4 and 5.
40 CFR§ 60.13	Monitoring Requirements	Applies to all continuous monitoring systems required under applicable subparts of 40 CFR 60. 40 CFR 60.13 does not apply to EUs 4 and 5.
40 CFR 60 Subpart Db (§ 60.40b - § 60.49b)	Standards of Performance for Industrial-Commercial-Institutional Steam Generating EUs	Applies to steam generating EUs that commenced construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating EU of greater than 100 MMBtu/hr. 40 CFR 60 Subpart Db does not apply to EUs 1, 2, 3, 4 and 5.
40 CFR 60 Subpart Dc (§ 60.40c - § 60.48c)	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating EUs	Applicable to steam generating EUs for which construction commenced after June 9, 1989, and have a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than 10 MMBtu/hr. Does not apply to boilers that are fueled solely by natural gas. Therefore, 40 CFR 60 Subpart Dc does not apply to EUs 1, 2, and 3.
40 CFR § 60.42c	Standard for Sulfur Dioxide	Applies to affected facilities that combust coal, coal refuse, coal in combination with any other fuel, and/or oil. 40 CFR 60.42c does not apply to EUs 4 and 5.
40 CFR § 60.43c	Standard for Particulate Matter	Applies to affected facilities that commence construction, reconstruction, or modification after February 28, 2005, and that combust coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 30 MMBtu/hr or greater. 40 CFR 60.43c does not apply to EU 4.
40 CFR § 60.44c	Compliance and Performance Test Methods and Procedures for Sulfur Dioxide	Applies to affected facilities that are subject to the sulfur dioxide standards contained in 40 CFR 60.42c. 40 CFR § 60.44c does not apply to EUs 4 and 5.

Citation	Title of Citation	Description of Applicability
40 CFR § 60.45c	Compliance and Performance Test Methods and Procedures for Particulate Matter	Applies to affected facilities that commence construction, reconstruction, or modification after February 28, 2005, and that combust coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 30 MMBtu/hr or greater. 40 CFR 60.43c does not apply to EU 4.
40 CFR § 60.46c	Emission Monitoring for Sulfur Dioxide	Applies to affected facilities that are subject to the sulfur dioxide standards contained in 40 CFR 60.42c. 40 CFR 60.46c does not apply to EUs 4 and 5.
40 CFR § 60.47c	Emission Monitoring for Particulate Matter	Applies to affected facilities that commence construction, reconstruction, or modification after February 28, 2005, and that combust coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 30 MMBtu/hr or greater. 40 CFR 60.43c does not apply to EU 4.
40 CFR § 60.48c(b)	Reporting and Recordkeeping Requirements	Applies to affected facilities that are subject to the sulfur dioxide standards contained in 40 CFR 60.42c or the particulate matter standards contained in 40 CFR 60.43c. 40 CFR 60.48c(b) does not apply to EU 4.
40 CFR § 60.48c(c)	Reporting and Recordkeeping Requirements	Applies to each coal-fired, residual oil-fired, or wood-fired affected facilities that are subject to the opacity limits under § 60.43c(c). 40 CFR 60.48c(c) does not apply to EUs 4 and 5.
40 CFR § 60.48c(d)	Reporting and Recordkeeping Requirements	Applies to each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements in § 60.42c. 40 CFR 60.48c(d) does not apply to EUs 4 and 5.
40 CFR § 60.48c(e)	Reporting and Recordkeeping Requirements	Applies to each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements in § 60.42c. 40 CFR 60.48c(d) does not apply to EUs 4 and 5.
40 CFR § 60.48c(h)	Reporting and Recordkeeping Requirements	Applies to each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c. 40 CFR 60.48c(h) does not apply to EUs 4 and 5.
40 CFR 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	Molson Coors - Shenandoah Brewery is an area source of HAP. It is not subject to this subpart because all of its boilers are gas-fired. Per §63.11195(e), gas-fired boilers are not subject to the subpart.
9 VAC 5-80-10 J.2	Compliance Determination and Verification by Performance Testing	Applies to all existing, new and modified hazardous air pollutant sources for which emission standards are prescribed under Chapter 60.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any

violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-110 and 9 VAC 5-80-140)

General Conditions

80. General Conditions - Federal Enforceability – All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

81. General Conditions – Permit Expiration

a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

c. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

e. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

f. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

82. General Conditions - Recordkeeping and Reporting – All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements.

    b. The date(s) analyses were performed.

    c. The company or entity that performed the analyses.

    d. The analytical techniques or methods used.

    e. The results of such analyses.

    f. The operating conditions existing at the time of sampling or measurement.

    (9 VAC 5-80-110)

83. General Conditions - Recordkeeping and Reporting – Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (9 VAC 5-80-110)

84. General Conditions - Recordkeeping and Reporting – The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

    b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

        i. Exceedance of emissions limitations or operational restrictions;

        ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period".

(9 VAC 5-80-110)

85. General Conditions - Annual Compliance Certification – Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31.

b. The identification of each term or condition of the permit that is the basis of the certification.

c. The compliance status.

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

f. Such other facts as the permit may require to determine the compliance status of the source.

g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9 VAC 5-80-110)

86. General Conditions - Permit Deviation Reporting – The permittee shall notify the DEQ within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14

days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition 84 of this permit.
(9 VAC 5-80-110 F.2)

87. General Conditions - Failure/Malfunction Reporting – In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the DEQ of such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the DEQ.
(9VAC5-80-110 and 9VAC5-20-180)

88. General Conditions - Failure/Malfunction Reporting - The emission EUs that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the 14 day written notification.
(9VAC5-80-110 and 9VAC5-20-180)

89. General Conditions - Failure/Malfunction Reporting - The emission EUs subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are listed below:

    a. EU ID 4

    b. EU ID 5

    (9 VAC5-80-110, 9VAC5-20-180 C and 9VAC5-50-50)

90. General Conditions - Failure/Malfunction Reporting - Each owner required to install a continuous monitoring system (CMS) or monitoring device subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable subpart in 9 VAC 5-50-410) and either a monitoring systems performance report or a summary report form, or both, to the board quarterly. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. All reports shall include the following information:

a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B.6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

All malfunctions of emission EUs not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C require written reports within 14 days of the discovery of the malfunction.
(9 VAC 5-80-110, 9 VAC 5-20-180 C, and 9 VAC 5-50-50)

91. General Conditions - Severability – The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110)

92. General Conditions - Duty to Comply – The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110)

93. General Conditions - Need to Halt or Reduce Activity not a Defense – It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110)

94. General Conditions - Permit Modification – A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-110, 9 VAC 5-80-190, and 9 VAC 5-80-260)

95. General Conditions - Property Rights – The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110)

96. General Conditions - Duty to Submit Information – The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110)

97. General Conditions - Duty to Submit Information – Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110)

98. General Conditions - Duty to Pay Permit Fees – The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.
(9 VAC 5-80-110, 9 VAC 5-80-310 et seq., and 9 VAC 5-80-2310 et seq.)

99. General Conditions - Fugitive Dust Emission Standards – During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and

e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-80-110 and 9 VAC 5-50-90)

100. General Conditions - Startup, Shutdown, and Malfunction – At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E and 9 VAC 5-50-20 E)

101. General Conditions - Alternative Operating Scenarios – Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110)

102. General Conditions - Inspection and Entry Requirements – The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

d. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110)

103. General Conditions - Reopening For Cause – The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

    a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

    (9 VAC 5-80-110)

104. General Conditions - Permit Availability – Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request. (9 VAC 5-80-110 and 9 VAC 5-80-150)

105. General Conditions - Transfer of Permits –

    a. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.

    b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.

    c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.

    (9 VAC 5-80-110 and 9 VAC 5-80-160)

106. General Conditions - Permit Revocation or Termination for Cause – A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-110, 9 VAC 5-80-190 C and 9 VAC 5-80-260)

107. General Conditions - Duty to Supplement or Correct Application – Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed, but prior to release of a draft permit.
(9 VAC 5-80-110 and 9 VAC 5-80-80 E)

108. General Conditions - Stratospheric Ozone Protection – If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9 AVC 5-80-110 and 40 CFR Part 82)

109. General Conditions - Asbestos Requirements – The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110)

110. General Conditions - Accidental Release Prevention – If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9 VAC 5-80-110 and 40 CFR Part 68)

111. General Conditions - Changes to Permits for Emissions Trading – No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110)

112. General Conditions - Emissions Trading – Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to

the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110)

SOURCE TESTING REPORT FORMAT

Report Cover
1. Plant name and location
2. EUs tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

Certification
1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. *Signed by reviewer

Copy of approved test protocol

Summary
1. Reason for testing
2. Test dates
3. Identification of EU tested & the maximum rated capacity
4. *For each emission EU, a table showing:
   a. Operating rate
   b. Test Methods
   c. Pollutants tested
   d. Test results for each run and the run average
   e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

Source Operation
1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results
1. Detailed test results for each run
2. *Sample calculations
3. *Description of collected samples, to include audits when applicable

Appendix
1. *Raw production data
2. *Raw field data
3. *Laboratory reports
4. *Chain of custody records for lab samples
5. *Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures _____

* Not applicable to visible emission evaluations