



PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 7-3558-00084/00003
Effective Date: 07/08/2016 Expiration Date: 07/07/2026

Permit Issued To: Sunoco Retail LLC
3801 W Chester Pike
Newtown Square, PA 19073

Contact: JENNIFER JORDAN
FULTON ETHANOL PLANT
376 OWEN RD
FULTON, NY 13069
(315) 593-0509

Facility: FULTON ETHANOL PLANT
376 OWEN RD
FULTON, NY 13069

Contact: JENNIFER JORDAN
FULTON ETHANOL PLANT
376 OWEN RD
FULTON, NY 13069
(315) 593-0509

Description:

Permit modification to add barley hops production.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator: ELIZABETH A TRACY
615 ERIE BLVD WEST
SYRACUSE, NY 13204-2400

Authorized Signature: _____ Date: ____ / ____ / ____



Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



LIST OF CONDITIONS

DEC GENERAL CONDITIONS

General Provisions

- Facility Inspection by the Department
- Relationship of this Permit to Other Department Orders and Determinations
- Applications for permit renewals, modifications and transfers
- Permit modifications, suspensions or revocations by the Department

Facility Level

- Submission of application for permit modification or renewal-REGION 7 HEADQUARTERS



DEC GENERAL CONDITIONS
****** General Provisions ******
GENERAL CONDITIONS - Apply to ALL Authorized Permits.

Condition 1: Facility Inspection by the Department

Applicable State Requirement: ECL 19-0305

Item 1.1:

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 2: Relationship of this Permit to Other Department Orders and Determinations

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Condition 3: Applications for permit renewals, modifications and transfers

Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

The permittee must submit a renewal application at least 180 days before expiration of permits for both Title V and State Facility Permits.

Item 3.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Condition 4: Permit modifications, suspensions or revocations by the Department

Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification,



suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

****** Facility Level ******

Condition 5: Submission of application for permit modification or renewal-REGION 7 HEADQUARTERS

Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator
Region 7 Headquarters
Division of Environmental Permits
615 Erie Blvd West
Syracuse, NY 13204-2400
(315) 426-7400

New York State Department of Environmental Conservation

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Facility DEC ID: 7355800084



Permit Under the Environmental Conservation Law (ECL)

**ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY
PERMIT**

IDENTIFICATION INFORMATION

Permit Issued To: Sunoco Retail LLC
3801 W Chester Pike
Newtown Square, PA 19073

Facility: FULTON ETHANOL PLANT
376 OWEN RD
FULTON, NY 13069

Authorized Activity By Standard Industrial Classification Code:
2869 - INDUSTRIAL ORGANIC CHEMICALS, NEC

Permit Effective Date: 07/08/2016

Permit Expiration Date: 07/07/2026



LIST OF CONDITIONS

FEDERALLY ENFORCEABLE CONDITIONS

Facility Level

- 1 6 NYCRR 200.7: Maintenance of Equipment
- 2 6 NYCRR 200.7: Compliance Demonstration
- 3 6 NYCRR 200.7: Compliance Demonstration
- 4 6 NYCRR Subpart 201-7: Facility Permissible Emissions
- *5 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *6 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *7 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *8 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- 9 6 NYCRR 211.1: Air pollution prohibited
- 10 6 NYCRR 212-1.5 (g): Maintain all process emission sources,
including the associated air pollution control and monitoring equipment
- 11 6 NYCRR 212-1.6 (a): Compliance Demonstration
- 12 6 NYCRR 212-2.4 (b): Compliance Demonstration
- 13 6 NYCRR Part 229: Compliance Demonstration
- 14 6 NYCRR 236.3: Compliance Demonstration
- 15 6 NYCRR 236.4: Compliance Demonstration
- 16 6 NYCRR 236.5: Compliance Demonstration
- 17 6 NYCRR 236.7: Monitoring of leaks of VOC
- 18 40CFR 60.4, NSPS Subpart A: EPA Region 2 address.
- 19 40CFR 60.7(b), NSPS Subpart A: Recordkeeping requirements.
- 20 40CFR 60.7(c), NSPS Subpart A: Compliance Demonstration
- 21 40CFR 60.7(d), NSPS Subpart A: Excess emissions report.
- 22 40CFR 60.7(e), NSPS Subpart A: Monitoring frequency waiver.
- 23 40CFR 60.7(f), NSPS Subpart A: Facility files for subject sources.
- 24 40CFR 60.7(g), NSPS Subpart A: Notification Similar to State or
Local Agency
- 25 40CFR 60.8(b), NSPS Subpart A: Performance Test Methods - Waiver
- 26 40CFR 60.8(c), NSPS Subpart A: Required performance test information.
- 27 40CFR 60.8(e), NSPS Subpart A: Performance testing facilities.
- 28 40CFR 60.8(f), NSPS Subpart A: Number of required tests.
- 29 40CFR 60.12, NSPS Subpart A: Circumvention.
- 30 40CFR 60.13, NSPS Subpart A: Monitoring requirements.
- 31 40CFR 60.14, NSPS Subpart A: Modifications.
- 32 40CFR 60.44b(h), NSPS Subpart Db: Applicability of oxides of
nitrogen standard
- 33 40CFR 60.44b(i), NSPS Subpart Db: Averaging period
- 34 40CFR 60.46b(e)(1), NSPS Subpart Db: Compliance and performance
requirements.
- 35 40CFR 60.112b, NSPS Subpart Kb: Compliance Demonstration
- 36 40CFR 60.113b(a), NSPS Subpart Kb: Compliance Demonstration
- 37 40CFR 60.115b(a), NSPS Subpart Kb: Compliance Demonstration
- 38 40CFR 60.116b, NSPS Subpart Kb: Compliance Demonstration
- 39 40CFR 60.482-1, NSPS Subpart VV: Compliance Demonstration
- 40 40CFR 60.482-2, NSPS Subpart VV: Compliance Demonstration
- 41 40CFR 60.482-3, NSPS Subpart VV: Compliance Demonstration
- 42 40CFR 60.482-4, NSPS Subpart VV: Compliance Demonstration



- 43 40CFR 60.482-5, NSPS Subpart VV: Compliance Demonstration
- 44 40CFR 60.482-6, NSPS Subpart VV: Compliance Demonstration
- 45 40CFR 60.482-7, NSPS Subpart VV: Compliance Demonstration
- 46 40CFR 60.482-8, NSPS Subpart VV: Compliance Demonstration
- 47 40CFR 60.482-9, NSPS Subpart VV: Compliance Demonstration
- 48 40CFR 60.485, NSPS Subpart VV: Compliance Demonstration
- 49 40CFR 60.486, NSPS Subpart VV: Compliance Demonstration
- 50 40CFR 60.487, NSPS Subpart VV: Compliance Demonstration

Emission Unit Level

EU=1-BOILS

- 51 40CFR 60.44b(a)(1), NSPS Subpart Db: Compliance Demonstration

STATE ONLY ENFORCEABLE CONDITIONS

Facility Level

- 52 ECL 19-0301: Contaminant List
- 53 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
- 54 6 NYCRR Subpart 201-5: Emission Unit Definition
- 55 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits
- 56 6 NYCRR 201-5.3 (c): Compliance Demonstration
- 57 6 NYCRR 201-5.4 (e): Compliance Demonstration
- 58 6 NYCRR 211.2: Visible Emissions Limited
- 59 6 NYCRR 212-2.1: Compliance Demonstration

Emission Unit Level

- 60 6 NYCRR Subpart 201-5: Emission Point Definition By Emission Unit
- 61 6 NYCRR Subpart 201-5: Process Definition By Emission Unit

NOTE: * preceding the condition number indicates capping.



FEDERALLY ENFORCEABLE CONDITIONS
****** Facility Level ******

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Sealing - 6 NYCRR 200.5

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation.

Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

No person shall operate any air contamination source sealed by the Commissioner in accordance with this section unless a modification has been made which enables such source to comply with all requirements applicable to such modification.

Unless authorized by the Commissioner, no person shall remove or alter any seal affixed to any contamination source in accordance with this section.

Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Item C: Maintenance of Equipment - 6 NYCRR 200.7

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications,



required to operate such device effectively.

Item D: Unpermitted Emission Sources - 6 NYCRR 201-1.2

If an existing emission source was subject to the permitting requirements of 6 NYCRR Part 201 at the time of construction or modification, and the owner and/or operator failed to apply for a permit for such emission source then the following provisions apply:

(a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.

(b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

Item E: Recycling and Salvage - 6 NYCRR 201-1.7

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of 6 NYCRR.

Item F: Prohibition of Reintroduction of Collected Contaminants to the Air - 6 NYCRR 201-1.8

No person shall unnecessarily remove, handle, or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

Item G: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR 201-3.2 (a)

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

Item H: Proof of Eligibility for Sources Defined as Trivial



Activities - 6 NYCRR 201-3.3 (a)

The owner and/or operator of an emission source or unit that is listed as being trivial in 6 NYCRR Part 201 may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

Item I: Required Emission Tests - 6 NYCRR 202-1.1

An acceptable report of measured emissions shall be submitted, as may be required by the Commissioner, to ascertain compliance or noncompliance with any air pollution code, rule, or regulation. Failure to submit a report acceptable to the Commissioner within the time stated shall be sufficient reason for the Commissioner to suspend or deny an operating permit. Notification and acceptable procedures are specified in 6 NYCRR Subpart 202-1.

Item J: Open Fires Prohibitions - 6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

Item K: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item L: Federally Enforceable Requirements - 40 CFR 70.6 (b)



All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

FEDERAL APPLICABLE REQUIREMENTS
The following conditions are federally enforceable.

Condition 1: Maintenance of Equipment
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 200.7

Item 1.1:

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 2: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 200.7

Item 2.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Information submitted in support of the permit application indicates that certain operational practices involved in the fermentation process are needed for acceptable fermentations. In addition, following these operational practices resulting in acceptable fermentations has been shown to minimize the formation of acrolein leading to lower acrolein emissions.

Emissions from the facility are also required to be reduced by the use of a control device(s). Two



regenerative thermal oxidizers (RTOs) are to be used at the facility.

In order to ensure these operational practices are followed consistently and the RTOs are operated appropriately, the Department is requiring the permittee to operate in accordance with its existing Operation, Monitoring, and Maintenance (OM&M) plan. The plan must contain the following information:

- (1) identification of operating practices, process parameters, and control parameters to be monitored, along with established operating levels or ranges, as applicable;
- (2) a monitoring schedule for each process and control parameter;
- (3) procedures for the proper operation and maintenance of each process and control unit;
- (4) procedures for the proper operation and maintenance of monitoring devices or systems used, including: the calibration and certification of accuracy of each monitoring device, at least as frequent as the manufacturer's recommendations;
- (5) procedures for monitoring process and control parameters;
- (6) corrective actions to be taken when operating practices are not followed or process and control parameters deviate from the value or range established in paragraph (1), including:
 - (i) procedures to determine and record the cause of any deviation, and the time the deviation began and ended; and
 - (ii) procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed; and
- (7) A maintenance schedule for each process and control unit that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the Department, unless and until the plan is revised in accordance with the following procedures. If the



Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary, the owner or operator must promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the owner or operator submits to the Department a description of the changes and a revised plan incorporating them.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 3: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 200.7

Item 3.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 3.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The combustion temperature for each of the regenerative thermal oxidizers (RTOs) must be continuously monitored and recorded during operation of any sources controlled by the RTOs. The temperature monitoring and recording system must have an accuracy of +/- 1 percent of the temperature being monitored or +/- 0.9 degrees F, whichever is greater.

One hour averages must be recorded using at least 4 evenly spaced data points for each hour. Three-hour block averages must also be recorded and compared with the averages recorded during the most recent stack test.

If any of the three-hour block averages fall more than 10 degrees F below the average determined during the most recent stack test then VOC, HAP, and individual HAP emissions, in regard to any emissions cap, must be calculated using an emission factor corresponding to the percent control efficiency as evidenced by stack testing and otherwise compliant with applicable emission standards and emission rate potential.

Any three hour block averages above the average determined

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during the most recent stack test must have an accounting of additional fuel burned when calculating the data in support of the emissions caps.

Hourly and three hour combustion temperature data must be kept on site for a period of at least five years.

The annual capping report must indicate cap calculation adjustments made based on incinerator combustion chamber temperature data.

RTO operation, monitoring, and maintenance must be conducted in accordance with the established O&M plan required elsewhere in this permit.

Monitoring Frequency: CONTINUOUS
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2017.
Subsequent reports are due every 12 calendar month(s).

Condition 4: Facility Permissible Emissions
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4.1:

The sum of emissions from the emission units specified in this permit shall not equal or exceed the following

Potential To Emit (PTE) rate for each regulated contaminant:

CAS No: 000050-00-0 PTE: 19,800 pounds per year
Name: FORMALDEHYDE

CAS No: 000067-56-1 PTE: 19,800 pounds per year
Name: METHYL ALCOHOL

CAS No: 000075-07-0 PTE: 19,800 pounds per year
Name: ACETALDEHYDE

CAS No: 000107-02-8 PTE: 19,800 pounds per year
Name: ACROLEIN

CAS No: 0NY075-00-0 PTE: 199,800 pounds per year
Name: PARTICULATES

CAS No: 0NY075-00-5 PTE: 199,800 pounds per year
Name: PM-10

CAS No: 0NY075-02-5 PTE: 199,800 pounds per year
Name: PM 2.5



Emission Unit: 1-BARLY	Emission Point: BAR09
Emission Unit: 1-BARLY	Emission Point: BAR10
Emission Unit: 1-BARLY	Emission Point: BAR11
Emission Unit: 1-BARLY	Emission Point: BAR12
Emission Unit: 1-BOILS	Emission Point: 00008
Emission Unit: 1-BOILS	Emission Point: 00013
Emission Unit: 1-COEXT	Emission Point: 00014
Emission Unit: 1-COEXT	Emission Point: 00015
Emission Unit: 1-COEXT	Emission Point: 00016
Emission Unit: 1-MAINP	Emission Point: 00007
Emission Unit: 1-MAINP	Emission Point: 00011
Emission Unit: 1-MAINP	Emission Point: 08108
Emission Unit: 1-MAINP	Emission Point: 08109
Emission Unit: 1-MAINP	Emission Point: 08112
Emission Unit: 1-MAINP	Emission Point: 08113
Emission Unit: 1-MAINP	Emission Point: 08114

Regulated Contaminant(s):
CAS No: 0NY100-00-0 TOTAL HAP

Item 5.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

1. Total facility-wide emissions of all hazardous air pollutants, summed, shall not equal or exceed 25 tons per year on a 12 month rolling basis. Data for monthly and 12 month rolling totals must be kept for each calendar month.
2. Emissions of HAPS must be calculated using an emission factor based on the most recent stack test or DEC-approved emission factors. Emissions must be computed in accordance with an emission cap calculation and reporting plan approved by the Department. The plan must

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facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 6.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 6.6:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-BARLY	Emission Point: BAR07
Emission Unit: 1-BARLY	Emission Point: BAR08
Emission Unit: 1-BARLY	Emission Point: BAR09
Emission Unit: 1-BARLY	Emission Point: BAR10
Emission Unit: 1-BARLY	Emission Point: BAR11
Emission Unit: 1-BARLY	Emission Point: BAR12
Emission Unit: 1-BOILS	Emission Point: 00008
Emission Unit: 1-BOILS	Emission Point: 00013
Emission Unit: 1-COEXT	Emission Point: 00014
Emission Unit: 1-COEXT	Emission Point: 00015
Emission Unit: 1-COEXT	Emission Point: 00016
Emission Unit: 1-MAINP	Emission Point: 00007
Emission Unit: 1-MAINP	Emission Point: 00011
Emission Unit: 1-MAINP	Emission Point: 08108
Emission Unit: 1-MAINP	Emission Point: 08109
Emission Unit: 1-MAINP	Emission Point: 08112
Emission Unit: 1-MAINP	Emission Point: 08113
Emission Unit: 1-MAINP	Emission Point: 08114

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

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6 NYCRR Subpart 201-6

Item 7.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 7.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 7.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 7.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 7.6:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-BARLY	Emission Point: BAR07
Emission Unit: 1-BARLY	Emission Point: BAR08
Emission Unit: 1-BARLY	Emission Point: BAR09
Emission Unit: 1-BARLY	Emission Point: BAR10
Emission Unit: 1-BARLY	Emission Point: BAR11
Emission Unit: 1-BARLY	Emission Point: BAR12
Emission Unit: 1-BOILS	Emission Point: 00008
Emission Unit: 1-BOILS	Emission Point: 00013
Emission Unit: 1-COEXT	Emission Point: 00014
Emission Unit: 1-COEXT	Emission Point: 00015
Emission Unit: 1-COEXT	Emission Point: 00016

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Emission Unit: 1-MAINP	Emission Point: 00007
Emission Unit: 1-MAINP	Emission Point: 00011
Emission Unit: 1-MAINP	Emission Point: 08108
Emission Unit: 1-MAINP	Emission Point: 08109
Emission Unit: 1-MAINP	Emission Point: 08112
Emission Unit: 1-MAINP	Emission Point: 08113
Emission Unit: 1-MAINP	Emission Point: 08114

Regulated Contaminant(s):

CAS No: 0NY075-00-5	PM-10
CAS No: 0NY075-02-5	PM 2.5
CAS No: 0NY075-00-0	PARTICULATES

Item 7.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

1. Total facility-wide emissions of particulate matter, PM10 and PM2.5 shall not equal or exceed 100 tons per year on a 12 month rolling basis. Data for monthly and 12 month rolling totals must be kept for each calendar month.

2. Emissions of particulate matter must be calculated using an emission factor based on the most recent stack test or DEC-approved emission factors. Emissions must be computed in accordance with an emission cap calculation and reporting plan approved by the Department. The plan must include:

(a) identification of emission sources whose emissions will be calculated using site-specific test values;

(b) identification of emission sources whose emissions will be computed using emission factors; and

(c) support for the factors.

3. The owner or operator must submit, on a calendar year basis, a report of monthly and 12 month rolling emissions.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 99.9 tons per year

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Reference Test Method: EPA Methods 5, 201, 202, or as approved by DEC
Monitoring Frequency: MONTHLY
Averaging Method: 12-MONTH TOTAL, ROLLED MONTHLY
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2017.
Subsequent reports are due every 12 calendar month(s).

Condition 8: Capping Monitoring Condition
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement: 6 NYCRR Subpart 201-7

Item 8.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 201-6

Item 8.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 8.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 8.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 8.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 8.6:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-BARLY Emission Point: BAR07

Emission Unit: 1-BARLY Emission Point: BAR08



Emission Unit: 1-BARLY	Emission Point: BAR09
Emission Unit: 1-BARLY	Emission Point: BAR10
Emission Unit: 1-BARLY	Emission Point: BAR11
Emission Unit: 1-BARLY	Emission Point: BAR12
Emission Unit: 1-BOILS	Emission Point: 00008
Emission Unit: 1-BOILS	Emission Point: 00013
Emission Unit: 1-COEXT	Emission Point: 00014
Emission Unit: 1-COEXT	Emission Point: 00015
Emission Unit: 1-COEXT	Emission Point: 00016
Emission Unit: 1-MAINP	Emission Point: 00007
Emission Unit: 1-MAINP	Emission Point: 00011
Emission Unit: 1-MAINP	Emission Point: 08108
Emission Unit: 1-MAINP	Emission Point: 08109
Emission Unit: 1-MAINP	Emission Point: 08112
Emission Unit: 1-MAINP	Emission Point: 08113
Emission Unit: 1-MAINP	Emission Point: 08114

Regulated Contaminant(s):

CAS No: 000067-56-1	METHYL ALCOHOL
CAS No: 000075-07-0	ACETALDEHYDE
CAS No: 000107-02-8	ACROLEIN
CAS No: 000050-00-0	FORMALDEHYDE

Item 8.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

1. Total facility-wide emissions of each individual hazardous air pollutant shall not equal or exceed 10 tons per year on a 12 month rolling basis. Data for monthly and 12 month rolling totals must be kept for each calendar month.

2. Emissions of HAPS must be calculated using an emission

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factor based on the most recent stack test or DEC-approved emission factors. Emissions must be computed in accordance with an emission cap calculation and reporting plan approved by the Department. The plan must include:

- (a) identification of emission sources whose emissions will be calculated using site-specific test values;
- (b) identification of emission sources whose emissions will be computed using emission factors; and
- (c) support for the factors.

3. The owner or operator must submit, on a calendar year basis, a report of monthly and 12 month rolling emissions.

Parameter Monitored: FORMALDEHYDE

Upper Permit Limit: 9.9 tons per year

Reference Test Method: EPA Method 320 or other as approved by DEC

Monitoring Frequency: MONTHLY

Averaging Method: 12-MONTH TOTAL, ROLLED MONTHLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

Subsequent reports are due every 12 calendar month(s).

Condition 9: Air pollution prohibited
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 211.1

Item 9.1:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

Condition 10: Maintain all process emission sources, including the associated air pollution control and monitoring equipment
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 212-1.5 (g)

Item 10.1:

At all times, the facility owner or operator must operate and maintain all process emission

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Item 13.1:

The Compliance Demonstration activity will be performed for the facility:

The Compliance Demonstration applies to:

Emission Unit: 1-MAINP

Process: ESL

Emission Source: 200D1

Emission Unit: 1-MAINP

Process: ESL

Emission Source: 200D2

Emission Unit: 1-MAINP

Process: ESL

Emission Source: 200ST

Emission Unit: 1-MAINP

Process: ESL

Emission Source: DETK1

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 13.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Compliance with applicable sections of 40CFR 60 Subpart Kb constitutes compliance with the 6NYCRR Part 229 storage tank control and recordkeeping requirements for these sources.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 14: Compliance Demonstration

Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement: 6 NYCRR 236.3

Item 14.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 14.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

a) Any owner or operator of a synthetic organic chemical manufacturing facility must monitor each of the following



process unit components for leaks, on a quarterly schedule:

- (1) each pump in light liquid service;
- (2) each compressor in gas/vapor service;
- (3) each pressure relief valve in gas/vapor service;
- (4) each valve in light liquid service; and
- (5) each valve in gas/vapor service.

(b) Leaks detected in any of the monitored components must be repaired in accordance with the provisions set forth in section 236.4 of this Part.

(c) Any owner or operator of a synthetic organic chemical manufacturing facility must also comply with the following component standards:

(1) Pumps in light liquid service must be visually inspected each calendar week for evidence of liquids dripping. Any leaks detected during visual inspection must be repaired in accordance with section 236.4 of this Part.

(2) Pressure relief devices in gas/vapor service must be monitored for leaks within five days of an over-pressure release. Any leaks detected during monitoring must be repaired in accordance with section 236.4 of this Part.

(3) Open-ended valves or lines in gas/vapor or light liquid service must be sealed with either a second valve, blind flange, cap, or plug. The sealing device may only be removed while a sample is being taken or during maintenance operations.

(i) When a second valve is used, each open-ended line or valve equipped with a second valve shall be operated in such a manner that the valve on the process fluid end is closed before the second valve is closed.

(ii) When a double block-and-bleed system is used, the bleed valve or line may remain open only during operations that require venting of the line between the block valves, but shall be closed at all other times.



Reporting as per section 236.5 of this part.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 15: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 236.4

Item 15.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 15.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

(a) Any owner or operator of a synthetic organic chemical manufacturing facility shall repair leaking components in accordance with this section.

(b) Once a leaking component is identified, any owner or operator subject to this Part must:

(1) affix a weatherproof and readily visible tag to the leaking component bearing an identification number and the date the leak was detected. This tag must not be removed until the component is repaired and passes reinspection;

(2) make an initial attempt to repair the leaking component within five days;

(3) repair the leaking component as soon as practicable, but not later than 15 calendar days after the leak is detected; and

(4) remonitor all leaking components within 48 hours after repairs have been completed.

(c) Delay of repair of components as described in subdivision (b) of this section will be allowed by the department provided that an initial attempt to repair is made after which a decision is made by a duly authorized representative of the facility that replacement parts necessary to complete the repair are not available in



time, or that repair of the leaking component is technically infeasible without a process unit shutdown. Repair of such a component must be completed during the next process unit shutdown and before subsequent start-up.

(d) The department may require the rescheduling of a planned process unit shutdown to an earlier date based on the number and severity of tagged leaks awaiting repair at shutdown. Before requiring a rescheduled shutdown, the department shall consider the effect of the shutdown on production, the availability of needed repair equipment, and the time required for contracting outside labor and/or rescheduling facility personnel and shall so direct the source owner in writing to comply with the rescheduled shutdown. The source owner shall comply with the department's directive, or shall request that a directed rescheduling of a planned process unit shutdown be reconsidered according to the following procedure:

(1) A request for reconsideration must be filed in writing with the department within 20 days of the receipt of the department's directed rescheduling, and must be signed by a duly authorized representative of the facility.

(2) Such request must include a statement supporting the source owner's claims of misapplication of laws or regulations in the department's directive, and a statement specifying the relief sought by the source owner.

Reporting as per section 236.5 of this part.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 16: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 236.5

Item 16.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 16.2:

Compliance Demonstration shall include the following monitoring:



Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner or operator of a synthetic organic chemical manufacturing facility subject to this Part must do the following:

(a) develop and conduct a leak detection and repair plan consistent with the provisions of this Part;

(b) within 180 days after the effective date of this Part, implement a leak detection and repair plan. The plan must contain as a minimum a list of process components subject to the provisions of this Part, a copy of the log book format, and the make and model of the monitoring equipment to be used;

(c) record the following information in an inspection log for each leaking component found:

(1) name of process unit where the component is located;

(2) tag identification number;

(3) type of component;

(4) date on which the leak was detected for the component;

(5) date on which the component was repaired;

(6) identification of those components which cannot be repaired until process unit shutdown, the reason repair must be delayed, and the signature of a duly authorized representative of the facility whose decision was that the leaking component could not be repaired without a process unit shutdown;

(7) the date of each calibration of the monitoring instrument;

(8) date and monitor instrument reading detected after the component is repaired; and

(9) total number of components monitored and the total number of components found leaking;

(d) a copy of the inspection log must be retained at the plant for a minimum of two years after the date on which the report for the inspection period was prepared, and must be made available to the department upon request; and



(e) commencing 180 days after this Part becomes effective, submit quarterly reports to the department for the preceding quarterly monitoring period. These reports must be submitted within 15 days from the close of the quarter, and shall consist of:

(1) number and type of leaking components located, but not repaired within 15 days;

(2) number and type of leaking components awaiting process unit shutdown for repair;

(3) number and type of components inspected;

(4) number and type of components repaired;

(5) elapsed time to repair each leaking component; and

(6) a signed statement by a duly authorized representative of the facility attesting to the fact that, with the exception of those components listed in paragraphs 236.6 (e)(1) and (2) of this Part, all inspections and repairs were performed in accordance with the leak detection and repair plan.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 15 days after the reporting period.

The initial report is due 10/15/2016.

Subsequent reports are due every 3 calendar month(s).

Condition 17: Monitoring of leaks of VOC
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:6 NYCRR 236.7

Item 17.1:

Any person subject to this Part shall determine whether leaks of volatile organic compounds exist by using method 21 of 40 CFR Part 60 Appendix A.

Condition 18: EPA Region 2 address.
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.4, NSPS Subpart A

Item 18.1:

All requests, reports, applications, submittals, and other communications to the Administrator

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pursuant to this part shall be submitted in duplicate to the following address:

Director, Division of Enforcement and Compliance Assistance
USEPA Region 2
290 Broadway, 21st Floor
New York, NY 10007-1886

Copies of all correspondence to the administrator pursuant to this part shall also be submitted to the NYSDEC Regional Office issuing this permit (see address at the beginning of this permit) and to the following address:

NYSDEC
Bureau of Quality Assurance
625 Broadway
Albany, NY 12233-3258

Condition 19: Recordkeeping requirements.
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.7(b), NSPS Subpart A

Item 19.1:

Affected owners or operators shall maintain records of occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

Condition 20: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.7(c), NSPS Subpart A

Item 20.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 20.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Affected owners or operators shall submit an excess emissions report and/or a summary report form (as defined in 40 CFR 60.7(d)) semi-annually (or more frequently as required by the applicable Subpart or the Administrator), to the Administrator. These reports shall be post marked no later than 30 days after each six (6) month period (or as appropriate), and shall contain the following information:

- 1) the magnitude of excess emissions computed, any

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conversion factors used, the date and time of each occurrence, and the process operating time during the reporting period;

2) specific identification of each period of excess emissions that occur during startup, shutdown, or malfunction, where the nature, cause, and corrective action are provided for a malfunction;

3) 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

4) when no excess emissions have occurred or when the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be provided in the report.

Monitoring Frequency: CONTINUOUS

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

Subsequent reports are due every 6 calendar month(s).

Condition 21: Excess emissions report.

Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.7(d), NSPS Subpart A

Item 21.1:

A summary report form, for each pollutant monitored, shall be sent to the Administrator in the form prescribed in Figure 1 of 40 CFR Part 60.7(d).

Condition 22: Monitoring frequency waiver.

Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.7(e), NSPS Subpart A

Item 22.1: Notwithstanding the frequency of reporting requirements specified in

paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the conditions in 40 CFR 60.7(e) are met.

Condition 23: Facility files for subject sources.

Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.7(f), NSPS Subpart A

Item 23.1:

The following files shall be maintained at the facility for all affected sources: all measurements,



Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection



below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

Records indicating compliance with the provisions of this condition must be kept at the facility and made available for inspection upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 36: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement: 40CFR 60.113b(a), NSPS Subpart Kb

Item 36.1:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-MAINP
Process: ESL

Emission Source: 200D1

Emission Unit: 1-MAINP

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Process: ESL Emission Source: 200D2

Emission Unit: 1-MAINP
Process: ESL Emission Source: 200ST

Emission Unit: 1-MAINP
Process: ESL Emission Source: DETK1

Emission Unit: 1-MAINP
Process: ESL Emission Source: DNTNK

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 36.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

(a) After installing the control equipment required to meet Sec. 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in Sec. 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.



(3) For vessels equipped with a double-seal system as specified in Sec. 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 37: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026



Applicable Federal Requirement:40CFR 60.115b(a), NSPS Subpart Kb

Item 37.1:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-MAINP Process: ESL	Emission Source: 200D1
Emission Unit: 1-MAINP Process: ESL	Emission Source: 200D2
Emission Unit: 1-MAINP Process: ESL	Emission Source: 200ST
Emission Unit: 1-MAINP Process: ESL	Emission Source: DETK1
Emission Unit: 1-MAINP Process: ESL	Emission Source: DNTNK
Regulated Contaminant(s): CAS No: 0NY998-00-0	VOC

Item 37.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner or operator shall keep copies of all reports and records required by this section for at least 2 years.

(a) After installing control equipment in accordance with Sec. 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of Sec. 60.112b(a)(1) and Sec. 60.113b(a)(1). This report shall be an attachment to the notification required by Sec. 60.7(a)(3).

(2) Keep a record of each inspection performed as required by Sec. 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in Sec. 60.113b(a)(2) are detected during the annual visual

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inspection required by Sec. 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by Sec. 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Sec. 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of Sec. 61.112b(a)(1) or Sec. 60.113b(a)(3) and list each repair made.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 38: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.116b, NSPS Subpart Kb

Item 38.1:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 1-MAINP Process: ESL	Emission Source: 200D1
Emission Unit: 1-MAINP Process: ESL	Emission Source: 200D2
Emission Unit: 1-MAINP Process: ESL	Emission Source: 200ST
Emission Unit: 1-MAINP Process: ESL	Emission Source: DETK1
Emission Unit: 1-MAINP Process: ESL	Emission Source: DNTNK
Regulated Contaminant(s): CAS No: 0NY998-00-0	VOC

Item 38.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:



performance test results, and inspection using the methods and procedures specified in Sec. 60.485.

3. Equipment that is in vacuum service is excluded from the requirements of Secs. 60.482-2 to 60.482-10 if it is identified as required in Sec. 60.486(e)(5).

4. Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 40: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.482-2, NSPS Subpart VV

Item 40.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 40.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-2 Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Sec. 60.485(b), except as provided in Sec. 60.482-1(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from



the requirements of paragraph (a), Provided the following requirements are met:

- (1) Each dual mechanical seal system is--
 - (i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
 - (ii) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Sec. 60.482-10; or
 - (iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
- (2) The barrier fluid system is in heavy liquid service or is not in VOC service.
- (3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
- (4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.
- (5)
 - (i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm, and
 - (ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
- (6)
 - (i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii), a leak is detected.
 - (ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9.
 - (iii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (e) Any pump that is designated, as described in Sec. 60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:
 - (1) Has no externally actuated shaft penetrating the pump housing,
 - (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Sec. 60.485(c), and

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(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of Sec. 60.482-10, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in Sec. 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

(i) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 41: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.482-3, NSPS Subpart VV

Item 41.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC



Item 41.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-3 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in Sec. 60.482-1(c) and paragraph (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Sec. 60.482-10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9.

(2) A first attempt at repair shall be made no later



determined by the methods specified in Sec. 60.485(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in Sec. 60.482-9.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in Sec. 60.485(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in Sec. 60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Sec. 60.482-9.

(e) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 43: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.482-5, NSPS Subpart VV

Item 43.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC



Item 43.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-5 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in Sec. 60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of Sec. 60.482-10; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

(d) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 44: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026



Applicable Federal Requirement: 40CFR 60.482-6, NSPS Subpart VV

Item 44.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 44.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-6 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in Sec. 60.482-1(c).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

(f) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING



DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 45: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.482-7, NSPS Subpart VV

Item 45.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 45.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Sec. 60.482-7 Standards: Valves in gas/vapor service and in light liquid service.

(a) Each valve shall be monitored monthly to detect leaks by the methods specified in Sec. 60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), Sec. 60.483-1, 2, and Sec. 60.482-1(c).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Sec. 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

- (1) Tightening of bonnet bolts;
- (2) Replacement of bonnet bolts;
- (3) Tightening of packing gland nuts;
- (4) Injection of lubricant into lubricated packing.



(f) Any valve that is designated, as described in Sec. 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

- (1) Has no external actuating mechanism in contact with the process fluid,
- (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Sec. 60.485(c), and
- (3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in Sec. 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

- (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and
- (2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in Sec. 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

- (1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.
- (2) The process unit within which the valve is located either becomes an affected facility through Sec. 60.14 or Sec. 60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and
- (3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(i) Reporting as required by Sec. 60.487.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: VOC's

Parameter Monitored: VOC

Upper Permit Limit: 10000 parts per million (by volume)

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION



Condition 46: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement: 40CFR 60.482-8, NSPS Subpart VV

Item 46.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 46.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Sec. 60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in Sec. 60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under Sec. 60.482-7(e).

(e) Reporting as required by Sec. 60.487.

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Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: VOC's

Parameter Monitored: VOC

Upper Permit Limit: 10000 parts per million (by volume)

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 47: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.482-9, NSPS Subpart VV

Item 47.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 47.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-9 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:
(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Sec. 60.482-10.

(d) Delay of repair for pumps will be allowed if:
(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown



will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(f) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 48: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.485, NSPS Subpart VV

Item 48.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 48.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.485 Test methods and procedures.

(a) In conducting the performance tests required in Sec. 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in Sec. 60.8(b).

(b) The owner or operator shall determine compliance with the standards in Secs. 60.482, 60.483, and 60.484 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air);
and

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.



(c) The owner or operator shall determine compliance with the no detectable emission standards in Secs. 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference--see Sec. 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d) (1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 deg.C (1.2 in. H₂O at 68 deg.F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference--see Sec. 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 deg.C (1.2 in. H₂O at 68 deg.F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d),



(e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K1 + K2(HT)$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec)
 HT = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

$K1 = 8.706 \text{ m/sec (metric units) = } 28.56 \text{ ft/sec (English units)}$

$K2 = 0.7084 \text{ m}^4\sqrt{\text{(MJ-sec) (metric units)= } 0.087 \text{ ft}^4\sqrt{\text{(Btu-sec) (English units)}}$

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$HT = K\{\text{SUM}(i=1 \text{ to } n)C_iH_i\}$$

Where:

$K = \text{Conversion constant, } 1.740 \times 10^7 \text{ (g-mole)(MJ)/ (ppm-scm-kcal) (metric units)= } 4.674 \times 10^8 \text{ [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)}$

$C_i = \text{Concentration of sample component ``i," ppm}$

$H_i = \text{net heat of combustion of sample component ``i" at } 25 \text{ deg.C and } 760 \text{ mm Hg (} 77 \text{ deg.F and } 14.7 \text{ psi), kcal/g-mole}$

(5) Method 18 and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference--see Sec. 60.17) shall be used to determine the concentration of sample component ``i."

(6) ASTM D2382-76 or 88 or D4809-95 (incorporated by reference--see Sec. 60.17) shall be used to determine the net heat of combustion of component ``i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If



needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

(h) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 49: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.486, NSPS Subpart VV

Item 49.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 49.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.486 Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(b) When each leak is detected as specified in Secs. 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Sec. 60.482-7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(c) When each leak is detected as specified in Secs. 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall



be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) ``Above 10,000" if the maximum instrument reading measured by the methods specified in Sec. 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) ``Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in Sec. 60.482-10 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in Sec. 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in Secs. 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in Secs. 60.482-2, 60.482-3, 60.482-4, and 60.482-5.

(e) The following information pertaining to all equipment subject to the requirements in Secs. 60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment



that are designated for no detectable emissions under the provisions of Secs. 60.482-2(e), 60.482-3(i) and 60.482-7(f).

(ii) The designation of equipment as subject to the requirements of Sec. 60.482-2(e), Sec. 60.482-3(i), or Sec. 60.482-7(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with Sec. 60.482-4.

(4)(i) The dates of each compliance test as required in Secs. 60.482-2(e), 60.482-3(i), 60.482-4, and 60.482-7(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(f) The following information pertaining to all valves subject to the requirements of Sec. 60.482-7(g) and (h) and to all pumps subject to the requirements of Sec. 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with Sec. 60.483-2:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in Secs. 60.482-2(d)(5) and 60.482-3(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in Sec. 60.480(d):



- (1) An analysis demonstrating the design capacity of the affected facility,
- (2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
- (3) An analysis demonstrating that equipment is not in VOC service.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of Sec. 60.7 (b) and (d) do not apply to affected facilities subject to this subpart.

(l) Reporting as required by Sec. 60.487.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 50: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement: 40CFR 60.487, NSPS Subpart VV

Item 50.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 50.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:
Sec. 60.487 Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

- (1) Process unit identification.
- (2) Number of valves subject to the requirements of Sec. 60.482-7, excluding those valves designated for no detectable emissions under the provisions of Sec.



60.482-7(f).

(3) Number of pumps subject to the requirements of Sec. 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of Sec. 60.482-2(e) and those pumps complying with Sec. 60.482-2(f).

(4) Number of compressors subject to the requirements of Sec. 60.482-3, excluding those compressors designated for no detectable emissions under the provisions of Sec. 60.482-3(i) and those compressors complying with Sec. 60.482-3(h).

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in Sec. 60.486:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in Sec. 60.482(7)(b) or Sec. 60.483-2,

(ii) Number of valves for which leaks were not repaired as required in Sec. 60.482-7(d)(1),

(iii) Number of pumps for which leaks were detected as described in Sec. 60.482-2(b) and (d)(6)(i),

(iv) Number of pumps for which leaks were not repaired as required in Sec. 60.482-2(c)(1) and (d)(6)(ii),

(v) Number of compressors for which leaks were detected as described in Sec. 60.482-3(f),

(vi) Number of compressors for which leaks were not repaired as required in Sec. 60.482-3(g)(1), and

(vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of Secs. 60.483-1 or 60.483-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with Sec. 60.8 of the General Provisions. The provisions of Sec. 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.



(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the State.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

****** Emission Unit Level ******

Condition 51: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable Federal Requirement:40CFR 60.44b(a)(1), NSPS Subpart Db

Item 51.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-BOILS

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

Item 51.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

This facility operates two 148 mmbtu/hr boilers with calculated High Heat Release Rate by definition.

On and after the date on which the initial performance test is completed or is required to be completed under Sec. 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO₂) in excess of 0.20 lb/mmbtu.

A stack test protocol must be submitted at least 60 days

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prior to the stack test date. The stack test date must be coordinated with the department such that a Department representative has the opportunity to witness the test.

Unless otherwise stated above, these tests must be conducted in accordance with the provisions of 6NYCRR Part 202-1 and 40 CFR 60.8.

Manufacturer Name/Model Number: NOx Continuous Emission Monitor
Upper Permit Limit: 0.20 pounds per million Btus
Reference Test Method: 40 CFR 60 Appendix B&F
Monitoring Frequency: CONTINUOUS
Averaging Method: 30-DAY ROLLING AVERAGE
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2017.
Subsequent reports are due every 6 calendar month(s).



STATE ONLY ENFORCEABLE CONDITIONS
****** Facility Level ******

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS
This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;

(2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;

(3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item B: Public Access to Recordkeeping for Facilities With State Facility Permits - 6 NYCRR 201-1.10 (a)

Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records.



Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.

Item C: **General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5**

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state only enforceable.

Condition 52: Contaminant List
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:ECL 19-0301

Item 52.1:

Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 000050-00-0
Name: FORMALDEHYDE

CAS No: 000067-56-1
Name: METHYL ALCOHOL

CAS No: 000075-07-0
Name: ACETALDEHYDE

CAS No: 000107-02-8

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Name: ACROLEIN

CAS No: 0NY075-00-0

Name: PARTICULATES

CAS No: 0NY075-00-5

Name: PM-10

CAS No: 0NY075-02-5

Name: PM 2.5

CAS No: 0NY100-00-0

Name: TOTAL HAP

CAS No: 0NY210-00-0

Name: OXIDES OF NITROGEN

CAS No: 0NY998-00-0

Name: VOC

**Condition 53: Malfunctions and start-up/shutdown activities
Effective between the dates of 07/08/2016 and 07/07/2026**

Applicable State Requirement:6 NYCRR 201-1.4

Item 53.1:

(a) The facility owner or operator shall take all necessary and appropriate actions to prevent the emission of air pollutants that result in contravention of any applicable emission standard during periods of start-up, shutdown, or malfunction.

(b) The facility owner or operator shall compile and maintain records of all equipment malfunctions, maintenance, or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when requested to do so, or when so required by a condition of a permit issued for the corresponding air contamination source. Such reports shall state whether any violations occurred and, if so, whether they were unavoidable, include the time, frequency and duration of the maintenance and/or start-up/shutdown activities, and an estimate of the emission rates of any air contaminants released. Such records shall be maintained for a period of at least five years and made available for review to department representatives upon request. Facility owners or operators subject to continuous stack monitoring and quarterly reporting requirements need not submit additional reports for equipment maintenance or start-up/shutdown activities for the facility to the department.

(c) In the event that emissions of air contaminants in excess of any emission standard in this Subchapter occur due to a malfunction, the facility owner or operator shall compile and maintain records of the malfunction and notify the department as soon as possible during normal working hours, but not later than two working days after becoming aware that the malfunction occurred. When requested by the department, the facility owner or operator shall submit a written report to the department describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates.

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(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.

(e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

Condition 54: Emission Unit Definition
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement: 6 NYCRR Subpart 201-5

Item 54.1:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: 1-BARLY

Emission Unit Description:

This emission unit consists of operations associated with the production of barley malt. (Some barley malt operations are exempt from permitting under 6 NYCRR 201-3.2(c)(8), including grain unloading, conveying and storage, grain screening, weighing, debearding and packaging. The operations are not included in this emission unit.)

Building(s): MAIN

Item 54.2:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: 1-BOILS

Emission Unit Description:

This emission unit consists of two 148 MMBtu/hr natural gas fired boilers.

Building(s): OUTSIDE

Item 54.3:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: 1-COEXT

Emission Unit Description:

This emission unit consists of a corn oil extraction system.

Building(s): MAIN

Item 54.4:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: 1-MAINP

Emission Unit Description:

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This emission unit consists of the main process operations at the facility. The operations including mash preparation, fermentation, CO2 recovery and collection, separation, evaporation, dehydration, distillation, drying operations, DDGS storage and loadout and ethanol loadout operations.

Building(s): MAIN

Condition 55: Renewal deadlines for state facility permits
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR 201-5.2 (c)

Item 55.1:

The owner or operator of a facility having an issued state facility permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Condition 56: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR 201-5.3 (c)

Item 56.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 56.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Any reports or submissions required by this permit shall be submitted to the Regional Air Pollution Control Engineer (RAPCE) at the following address:

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 7
615 Erie Blvd West
Syracuse, NY 13204

Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2017.
Subsequent reports are due every 12 calendar month(s).

Condition 57: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR 201-5.4 (e)



Item 57.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 57.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Operational Flexibility Protocol - New Construction of general process emission sources; modifications to existing sources

The owner or operator may install a new general process air contamination source, provided that criteria pollutants, hazardous air pollutants, and pollutants emitted from such device for which an annual guideline concentration (AGC) and/or short term guideline concentration (SGC) exist, meet all of the following conditions:

1. The device will not result in the emission of any A-rated contaminant with an emission rate potential equal to or greater than 0.1 pound/hr.
2. The device will not result in the emission of any non-VOC contaminant, not given an A-rating, with an emission rate potential equal to or greater than 10 pounds/hr.
3. The device shall not emit particulate matter in excess of 0.05 gr/dscf. The owner or operator shall conduct emissions testing upon written request of the DEC in accordance with 6 NYCRR 202.
4. The device shall not cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater, except only the emission of uncombined water. The owner or operator shall conduct emissions testing upon written request of the DEC in accordance with 6 NYCRR 202.
5. The owner or operator must identify all potential pollutants that could be emitted, including A-rated contaminants, hazardous air pollutants, High Toxicity Air Contaminants, VOCs, and non-VOC pollutants. For this facility, A-rated contaminants are those contaminants listed with a "high" toxicity in the Department's most recent DAR-1 (Air Guide 1) guidance document, and any other contaminants that may be A-rated by the Department. All other pollutants are B-rated, unless otherwise rated by the Department.



6. A facility-wide DAR-1 analysis must show that there are no predicted off-site ambient concentrations in excess of the AGC or SGC for each contaminant. This analysis shall include all emissions of such pollutant, facility-wide. The owner or operator shall maintain the results of all DAR-1 analyses on-site for a period of at least five years.

7. If the installation results in the emission of any pollutant not previously authorized or emitted at this site in accordance with this permit, the owner or operator shall submit to the DEC a notice of the intention to install the new air contamination source. Such notice shall be submitted no later than 30 days prior to the proposed installation.

8. When a new emission point, emission source and/or process is proposed to be added, the owner or operator must submit to DEC an application using the format prescribed by DEC (on forms available from the DEC).

9. The DEC reserves the right to require a permit modification to impose special conditions if DEC determines the proposed change may have a significant air quality impact. In such cases, upon receipt of any notice submitted by the owner or operator to the DEC as required in this permit, the DEC will respond within 15 days of receipt of such notice, and may require that the owner not undertake the proposed change without a permit modification.

10. No facility-wide emissions cap, stated in this permit, shall be exceeded;

11. The installation does not render the facility subject to any additional regulations or requirements; and

12. A summary of all activities conducted under this operational flexibility condition shall be reported to the DEC in the facility's annual capping report required pursuant to 6 NYCRR 201-7. The annual compliance certifications shall also (1) include compliance certifications for all devices added pursuant to this condition since permit issuance; (2) include a statement that records are maintained on site documenting that exempt and trivial emissions sources continue to satisfy the criteria of 6 NYCRR 201-3.2 and 3.3, and (3) identify any new equipment that was installed without a permit that was not exempt pursuant to 6 NYCRR 201-3.2 or 3.3 and did not comply with the operational flexibility terms of this



condition.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

Subsequent reports are due every 12 calendar month(s).

Condition 58: Visible Emissions Limited
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR 211.2

Item 58.1:

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

Condition 59: Compliance Demonstration
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 59.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 59.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

This facility is subject to 6 NYCRR Part 212. This condition is applicable to non-criteria air contaminants as defined in 6 NYCRR 212-1.2(b), emitted from all process sources at the facility.

1. No later than 180 days after the effective date of this permit, the owner or operator shall submit to the Department a list of all emission sources (that are not trivial or exempt under 6 NYCRR 201-3) and, for each contaminant emitted from each emission source,

i. the actual emission rate, in pounds per hour;

ii. the emission rate potential, as defined in 6 NYCRR 200.1, in pounds per hour;

iii. a proposed environmental rating. The initial environmental rating for each contaminant will be based on



the Department's most recent AGC/SGC Tables, where high toxicity contaminants will be considered "A" rated, moderate toxicity contaminants "B" rated, and low toxicity contaminants "C" rated. Those contaminants without a toxicity classification in the AGC/SGC table will be assigned a B rating.

iv. any annual or short-term air dispersion modeling analysis done to predict off-site air concentrations to further support the proposed air contaminants' environmental rating;

v. for each High Toxicity Air Contaminant listed in 6 NYCRR 212-2.2 Table 2, the actual emissions, in pounds per year, so that facility-wide actual emissions are determined; and

vi. supporting calculations.

2. For each HTAC with a facility-wide actual emission rate less than the corresponding mass emission limit stated in 6 NYCRR 212-2.2, Table 2, no further review is required.

3. For those contaminants with a facility-wide actual emission rate in excess of the mass emission limit stated in 6 NYCRR 212-2.2, Table 2, and for all other non-criteria air contaminants, the facility shall comply with the emission reductions specified in 6 NYCRR 212-2.3(b), Table 4, except as provided by Item 5 of this condition (regarding contaminants subject to a federal standard under 40 CFR Parts 60, 61 and 63) and Item 6 (regarding process emissions sources that are exempt).

i. For those contaminants identified in Item 1 of this condition, except those that satisfy Item 2 (HTACs with actual emissions less than the mass emission thresholds in 6 NYCRR 212-2.2 Table 2), the owner or operator shall state, for each process source with a contaminant(s) having an emission rate potential equal to or greater than 0.1 lb/hr for A-rated contaminants or 10 lb/hr for all other contaminants, whether the emission rate is compliant with 6 NYCRR 212-2.3(b), Table 4. The owner shall state the method of control and the method used to determine compliance.

ii. The contaminants identified in Item 1 of this condition with an emission rate potential from a process emission source that is less than 0.1 lb/hr, except those that satisfy Item 2, shall not be emitted at a rate that results in a predicted ambient concentration in excess of



the Annual Guideline Concentration or Short term Guideline Concentration, or any interim AGC or SGC.

(a) A facility-wide toxic impact assessment must be completed using Department-approved modeling procedures. No later than 180 days after the effective date of this permit, the owner or operator must submit to the Department a modeling protocol for the impact assessment. No later than 90 days after the Department's approval of the protocol, the owner or operator shall submit to the Department a report describing the results of this impact assessment.

(b) No later than 90 days after submission of the impact assessment, for each contaminant for which the impact assessment predicts ambient impacts in excess of the AGC or SGC, the owner or operator shall submit to the Department a plan to reduce emissions (or otherwise reduce predicted ambient impacts) from one or more process emission sources such that predicted ambient impacts of facility-wide emissions are below the AGC and SGC.

4.i. For each contaminant with an emission rate potential from a process emission source greater than or equal to 0.1 lb/hr that does not comply with the specified emission reductions in 6 NYCRR 212-2.3(b), the owner or operator shall submit to the Department, no later than 180 days after the effective date of this permit:

(a) a plan to meet the emission reduction specified in 6 NYCRR 212-2.3(b), or

(b) a toxic BACT (T-BACT) analysis, as described in 6 NYCRR 212-1.2.

ii. Not later than one year after the effective date of this permit, the owner or operator shall comply with 6 NYCRR 212-2.3(b) or install T-BACT.

iii. Not later than one year after the effective date of this permit, the owner or operator shall submit to the Department an air permit application that proposes emission rates for each modeled contaminant.

5.i. A process emission source subject to a standard under 40 CFR Part 60 satisfies the requirements of this condition for the respective air contaminant if the facility demonstrates that it is in compliance with that relevant 40 CFR Part 60 standard.

ii. A process emission source subject to a standard under 40 CFR Part 61 or Part 63 satisfies the requirements of



this condition for the respective air contaminant if the facility demonstrates that it is in compliance with that relevant 40 CFR Part 61 or Part 63 standard and, for those federal standards regulating HTACs, provides a Toxic Impact Assessment (TIA) demonstrating that the predicted maximum off-site ambient concentration is less than the AGC and SGC and that emissions are less than the Persistent and Bioaccumulative Trigger as defined in 6 NYCRR 212.

6. The Department assigns final Environmental Ratings to contaminants, and reserves the right to change any initial environmental rating proposed by the facility owner or operator. Process emission sources that meet the exemptions in 6 NYCRR 212-1.4 are not subject to this condition. Process emission sources that emit VOCs that would be exempt if not A-rated must conduct an ambient impact analysis as directed in Item 3.ii of this condition to support the proposed environmental rating.

7. On an annual basis, the owner or operator shall submit to the Department a report stating whether any changes were made to the operation of these emission sources, or the air pollution control equipment, that could result in increases in emissions or increases in predicted ambient concentrations.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**** Emission Unit Level ****

Condition 60: Emission Point Definition By Emission Unit Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 60.1:

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-BARLY

Emission Point: BAR07

Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.845 NYTME (km.): 387.954 Building: MAIN

Emission Point: BAR08

Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.849 NYTME (km.): 387.96 Building: MAIN

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Emission Point: BAR09
Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.856 NYTME (km.): 387.97 Building: MAIN

Emission Point: BAR10
Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.864 NYTME (km.): 387.981 Building: MAIN

Emission Point: BAR11
Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.868 NYTME (km.): 387.986 Building: MAIN

Emission Point: BAR12
Height (ft.): 35 Diameter (in.): 16
NYTMN (km.): 4794.872 NYTME (km.): 387.922 Building: MAIN

Item 60.2:

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-BOILS

Emission Point: 00008
Height (ft.): 50 Diameter (in.): 75
NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: OUTSIDE

Emission Point: 00013
Height (ft.): 50 Diameter (in.): 75
NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: OUTSIDE

Item 60.3:

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-COEXT

Emission Point: 00014
Height (ft.): 40 Diameter (in.): 4
NYTMN (km.): 4794.849 NYTME (km.): 387.96 Building: MAIN

Emission Point: 00015
Height (ft.): 4 Diameter (in.): 4
NYTMN (km.): 4794.849 NYTME (km.): 387.96 Building: MAIN

Emission Point: 00016
Height (ft.): 4 Diameter (in.): 4
NYTMN (km.): 4794.849 NYTME (km.): 387.96 Building: MAIN

Item 60.4:

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-MAINP



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Emission Point: 00007
 Height (ft.): 100 Diameter (in.): 96
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 00011
 Height (ft.): 20 Diameter (in.): 10
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 08108
 Height (ft.): 33 Diameter (in.): 6
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 08109
 Height (ft.): 33 Diameter (in.): 6
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 08112
 Height (ft.): 20 Diameter (in.): 6
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 08113
 Height (ft.): 48 Diameter (in.): 6
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Emission Point: 08114
 Height (ft.): 48 Diameter (in.): 6
 NYTMN (km.): 4795.194 NYTME (km.): 387.88 Building: MAIN

Condition 61: Process Definition By Emission Unit
Effective between the dates of 07/08/2016 and 07/07/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 61.1:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-BARLY
 Process: MDR Source Classification Code: 3-02-009-04
 Process Description:
 This process consists of six malting drums used to germinate and dry steeped barley. VOC and CO2 emissions are generated during this process.

Emission Source/Control: MLT01 - Process

Emission Source/Control: MLT02 - Process

Emission Source/Control: MLT03 - Process

Emission Source/Control: MLT04 - Process

Emission Source/Control: MLT05 - Process



Emission Source/Control: MLT06 - Process

Item 61.2:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-BOILS
Process: B01 Source Classification Code: 1-02-006-01

Emission Source/Control: BLR01 - Combustion
Design Capacity: 148 million Btu per hour

Emission Source/Control: BLR02 - Combustion
Design Capacity: 148 million Btu per hour

Item 61.3:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-COEXT
Process: COE Source Classification Code: 3-02-019-16
Process Description:

Corn Oil extraction. This process consists of a corn oil extraction system to remove corn oil from the syrup stream that exits the Finishing Evaporator (1-MAINP, Process SED, ES FEVAP) and heads to the syrup product tank (1-MAINP, Process SED, ES SRPTK). The feed to the corn oil extraction unit is heated from 135 degrees F to 205 degrees F using a series of steam-driven heat exchangers. Once the feed stream is heated, it is sent to the retention tank (RTSTK) where it remains for several hours prior to being routed to two oil separators (OSEP1 and OSEP2) to separate corn oil from stillage material. The defatted solids are returned to two defatted syrup/CIP tanks (DFCT1 and DFCT2). This process also includes two storage tanks, an oil settling tank (OSTNK), CIP tank (CIPTK), and two oil storage tanks (OSTR1 and OSTR2).

Emission Source/Control: CIPTK - Process

Emission Source/Control: DFCT1 - Process

Emission Source/Control: DFCT2 - Process

Emission Source/Control: OESP1 - Process

Emission Source/Control: OSEP2 - Process

Emission Source/Control: OSTNK - Process

Emission Source/Control: OSTR1 - Process

Emission Source/Control: OSTR2 - Process



Emission Source/Control: RTSTK - Process

Item 61.4:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP

Process: DIS

Source Classification Code: 3-01-840-01

Process Description:

The beer formed in the fermentation process is preheated using one of two beer/mash exchangers and is further heated in the beer/stillage exchanger. The heated beer stream is flashed in the CO2 Flash Tank (CO2FT) to remove the majority of the dissolved CO2. Removal of the CO2 reduces inerts in the system, enhancing the distillation efficiency. The collected vapors pass through a vents condenser and are combined with other vents to go to the process scrubber. The flashed beer stream is fed to the beer column (BRCLN) where it is concentrated to a vapor of approximately 100 proof. The beer column bottoms, or whole stillage, is sent to the separation process after exchanging heat with the beer in the beer/stillage exchangers (see process SED).

The beer column overhead is condensed in the first stage evaporator exchanger to provide heat for evaporation and then sent to the rectifier column (RCTFR) to be concentrated to 190 proof (190VC). A portion of the rectifier column overheads is sent to a steam superheater (SSHTR) prior to being fed to the dehydration system. A side stream from the rectifier column is drawn off and sent to the fusel oil decanter. Water is added to the decanter to enhance separation of the fusel oils. The fusel oils are added to the 200 proof product (200VC) and the ethanol/water mixture are returned to the rectifier column.

Emission Source/Control: 190VC - Process

Emission Source/Control: 200VC - Process

Emission Source/Control: BRCLN - Process

Emission Source/Control: RCBFT - Process

Emission Source/Control: RCBLR - Process

Emission Source/Control: RCTFR - Process

Emission Source/Control: RFXTK - Process

Emission Source/Control: SSHTR - Process



Item 61.5:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP

Process: DRY

Source Classification Code: 3-01-250-10

Process Description:

The wet cake from the centrifuges and the syrup from the syrup storage tank (see process SED) are conveyed to one of two parallel processing lines. The materials are first conveyed to the disintegrators, or ring type drying systems (DRYRA and DRYRB). A portion of the dryer exhaust gases are recycled back to the air heaters (AHTRA and AHTRB). The outlet from the dryers goes through a manifold classifier, where the material is either recycled back to the dryers or is sent to a series of cyclones (CYC1A to CYC4A and CYC1B to CYC4B). The exit vapors from the dryers are controlled by two regenerative thermal oxidizers (RTOs) that exhaust to emission point 00007 (EP00007). The dried DDGS from the cyclones are conveyed to the fluidized bed coolers (FBCRA and FBCRB). Air from the fluidized bed cooler is first directed to the cooler cyclones (BFLTA and BFLTR) and then to the RTOs. The material captured by the cyclone is directed to the mechanical conveying system that takes the discharge from the cooler and transfers it to the DDGS storage facility or directly to the conveying system that takes the DDGS to the DDGS loadout facility (see process SRS).

Emission Source/Control: BFLTA - Control
Control Type: SINGLE CYCLONE

Emission Source/Control: BFLTB - Control
Control Type: FABRIC FILTER

Emission Source/Control: RTO0A - Control
Control Type: THERMAL OXIDATION

Emission Source/Control: RTO0B - Control
Control Type: THERMAL OXIDATION

Emission Source/Control: AHTRA - Process

Emission Source/Control: AHTRB - Process

Emission Source/Control: CYC1A - Process

Emission Source/Control: CYC1B - Process

Emission Source/Control: CYC2A - Process

Emission Source/Control: CYC2B - Process

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Emission Source/Control: CYC3A - Process

Emission Source/Control: CYC3B - Process

Emission Source/Control: CYC4A - Process

Emission Source/Control: CYC4B - Process

Emission Source/Control: DRYRA - Process

Emission Source/Control: DRYRB - Process

Emission Source/Control: FBCLR - Process

Emission Source/Control: FBCRB - Process

Item 61.6:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP

Process: ESL

Source Classification Code: 4-08-999-99

Process Description:

200 proof ethanol is pumped from the 200 proof day tanks (200D1 and 200D2) and 200 proof storage tank (200ST) to the denatured ethanol tank (DETK1), where it is mixed with gasoline from the denaturant tank (DNTKN). After ethanol is mixed with a fuel additive from the fuel additive tank, it is pumped to the loadout arms. Emissions from ethanol loadout are controlled by the ethanol loadout flare (ELFLR).

Emission Source/Control: ELFLR - Control
Control Type: FLARING

Emission Source/Control: 200D1 - Process

Emission Source/Control: 200D2 - Process

Emission Source/Control: 200ST - Process

Emission Source/Control: DETK1 - Process

Emission Source/Control: DNTNK - Process

Item 61.7:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP

Process: FRM

Source Classification Code: 3-01-250-10

Process Description:

The fermentation process will consist of two, parallel



fermentation trains, lines A and B, two yeast propagator and 12 batch fermenters. The cooled liquefied mash, from the mash coolers in the final step of the mash preparation process (see process MSH), is split into 2 different fermentation feed lines. Each feed line goes to the yeast propagators (YPTKA, YPTKB) and one to each of the main batch fermentation lines (FR01A through 12A and FR13B through FR24B).

Air is critical to the growth phase of yeast propagation, therefore, air eductors are used to pull air into the yeast propagators during the preparation of a batch. In addition, there is a yeast mix tank (YMSTK) that can provide vitamins, minerals and other additives to any of the 2 fermentation lines, if necessary, to strengthen the fermentation. Urea can also be added from the urea tanks (URTNK and URTK2).

Since temperature is vital to the proper operation of the fermentation lines, the temperature of the yeast propagators is maintained by the yeast propagation coolers. Similarly, the temperature of each line A batch fermenter is maintained by a fermentation cooler and the temperature of each line B batch fermenter is maintained by a fermentation cooler. The yeast from yeast propagator A and yeast propagator B are combined with the liquefied mash slurry going to the line A and B batch fermenters, respectively. Line A and B batch fermenters are pumped to the beer wells (BWELL and BWLL2) prior to entering the distillation process (see process DIS).

The vapors from the A and B yeast propagation tanks are exhausted to the A and B regenerative thermal oxidizers (see process DRY). The CO₂ evolved during the fermentation process is collected from the batch fermenters and finishing fermenter, and routed to a common header system going to the beer well. From the beer well, the carbon dioxide (CO₂) is routed to the CO₂ scrubber (CO2SB). The overhead from the CO₂ scrubber is routed as a raw material to a neighboring CO₂ plant (under separate ownership). This exhaust system is equipped with an emergency vent that exhausts to one of the two RTOs in the event of excess pressure within the system, or if the neighboring CO₂ plant is non-operational.

Emission Source/Control: CO2SB - Control
Control Type: GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: PRCSB - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)



- Emission Source/Control: BWELL - Process
- Emission Source/Control: BWLL2 - Process
- Emission Source/Control: FR01A - Process
- Emission Source/Control: FR02A - Process
- Emission Source/Control: FR03A - Process
- Emission Source/Control: FR04A - Process
- Emission Source/Control: FR05A - Process
- Emission Source/Control: FR06A - Process
- Emission Source/Control: FR07A - Process
- Emission Source/Control: FR08A - Process
- Emission Source/Control: FR09A - Process
- Emission Source/Control: FR10A - Process
- Emission Source/Control: FR11A - Process
- Emission Source/Control: FR12A - Process
- Emission Source/Control: FR13B - Process
- Emission Source/Control: FR14B - Process
- Emission Source/Control: FR15B - Process
- Emission Source/Control: FR16B - Process
- Emission Source/Control: FR17B - Process
- Emission Source/Control: FR18B - Process
- Emission Source/Control: FR19B - Process
- Emission Source/Control: FR20B - Process
- Emission Source/Control: FR21B - Process
- Emission Source/Control: FR22B - Process
- Emission Source/Control: FR23B - Process
- Emission Source/Control: FR24B - Process



- Emission Source/Control: MXTNK - Process
- Emission Source/Control: PCNDR - Process
- Emission Source/Control: PFLTR - Process
- Emission Source/Control: URTK2 - Process
- Emission Source/Control: URTNK - Process
- Emission Source/Control: YPTKA - Process
- Emission Source/Control: YPTKB - Process
- Emission Source/Control: YPTKC - Process
- Emission Source/Control: YPTKD - Process

Item 61.8:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP
Process: MSH Source Classification Code: 3-01-250-10
Process Description:

The mash preparation process begins by blending the corn meal from the milling area with fresh water, steam and various recycled process liquids via the blend feed screw (BFSRW) in the mash slurry tank (SBTNK) to form a slurry. The recycled process liquids, CO2 scrubber and rectifier bottoms are fed from the cook water tanks (CWTKA, CWTKB, CWTKC) to the cook water preheater prior to entering the mash slurry tank. The vapors from the mash slurry tanks are directed to the regenerative thermal oxidizers (see Process DRY). This warm mash slurry is then passed through a hydroheater, both to heat the slurry and provide some mechanical shearing of the starch molecules. Next, the slurry enters the liquefaction step, which is carried out in four stages. (LFT1A, LFT2A, LFT3A, and LFT3B). The liquefied mash is then pumped through one of two beer/mash exchangers, used not only to cool the liquefied mash, but also to recapture hydrolysis area energy and preheat the beer feed prior to distillation. The liquefied mash is then sent through either mash cooler 1 or mash cooler 2 which serves to cool the liquefied mash even further. The beer/mash exchangers and the mash coolers operate with one online and the other a full-service spare. The cooling steps provide optimum conditions for enzyme additions prior to entering the fermentation stage (see process FRM).

Emission Source/Control: BFSRW - Process

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- Emission Source/Control: CWTk1 - Process
- Emission Source/Control: CWTk2 - Process
- Emission Source/Control: CWTkA - Process
- Emission Source/Control: CWTkB - Process
- Emission Source/Control: CWTkC - Process
- Emission Source/Control: LAMIX - Process
- Emission Source/Control: LFT1A - Process
- Emission Source/Control: LFT2A - Process
- Emission Source/Control: LFT3A - Process
- Emission Source/Control: LFT3B - Process
- Emission Source/Control: SBTnk - Process

Item 61.9:

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-MAINP

Process: SED

Source Classification Code: 3-01-250-10

Process Description:

This is the separation, evaporation and dehydration process. The beer column bottoms, or whole stillage, are pumped to the whole stillage tank (WSTNK) and then to a series of 5 decanter centrifuges (CENT1 through CENT5). The centrifuges remove the thin stillage from the solids prior to the drying step. The thin stillage is sent to the centrate tank (CNTTK), the vapors from which exhaust to the regenerative thermal oxidizers (see process DRY). The thin stillage from the centrate tank is then directed to the thin stillage tank (TSTNK) to be used as feed for the evaporation process. The solids, or cake, from the centrifuges is conveyed to the drying process (see process DRY). The thin stillage enters a two-stage evaporation process. The first stage utilizes two falling film evaporators (FFEF1, north and FFEF2, south) and the second stage, which is driven by the flash steam from the first stage utilizes, two additional falling film evaporators (FFES1, north and FFES2, south). The flash steam from the second stage is condensed and pumped to the cook water tank (CWTk1) for use in the mash process (see process MSH). A process condensate receiver (PCR01) is used to collect the condensate from the second stage evaporation process, which is then used in the cook water preheater (see process MSH).



The mid-stillage, or syrup, is sent to the finish evaporator flash tank (FEVAP). The overhead is sent to the beer column (see process DIS) and the bottom is pumped to COES for oil separation then to the syrup tank (SRPTK) to be used in the drying process (see process DRY). The 190 proof ethanol from distillation (see process DIS) is further processed in a dehydration unit in order to meet the fuel ethanol specifications. The superheated 190 proof vapor is sent through one of two sieve beds (SBED1 or SBED2). The dehydrated 200 proof ethanol vapor is then condensed in a reboiler. The condensed 200 proof ethanol has the fusel oils added, then it is cooled and sent to the 200 proof storage tanks (see process ESL). The regeneration process for the molecular sieve beds consists of a regeneration condenser, a vacuum system and one collection vessel (RGNT1). The vapors are condensed and returned to the rectifier column feed. The eductor vent is sent to the area vent header which is directed to the process scrubber.

Emission Source/Control: 200RV - Process

Emission Source/Control: CENT1 - Process

Emission Source/Control: CENT2 - Process

Emission Source/Control: CENT3 - Process

Emission Source/Control: CENT4 - Process

Emission Source/Control: CENT5 - Process

Emission Source/Control: CNTTK - Process

Emission Source/Control: EVSP1 - Process

Emission Source/Control: EVSP2 - Process

Emission Source/Control: EVSP3 - Process

Emission Source/Control: EVSP4 - Process

Emission Source/Control: FEVAP - Process

Emission Source/Control: FFEF1 - Process

Emission Source/Control: FFEF2 - Process

Emission Source/Control: FFES1 - Process

Emission Source/Control: FFES2 - Process

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Emission Source/Control: PCR01 - Process

Emission Source/Control: RGNT1 - Process

Emission Source/Control: SBED1 - Process

Emission Source/Control: SBED2 - Process

Emission Source/Control: SRPTK - Process

Emission Source/Control: TSTNK - Process

Emission Source/Control: WSTNK - Process

