



PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 6-3013-00305/00001
Effective Date: 06/30/2008 Expiration Date: No expiration date

Permit Issued To: MASCOMA CORPORATION
1380 SOLDIERS FIELD RD 2ND FL
BRIGHTON, MA 02135

Facility: MASCOMA CORP CELLULOSIC ETHANOL DEMONSTRATION FACILITY
679 ELLSWORTH RD
ROME, NY 13440

Contact: JOHN ELLERSICK
MASCOMA CORPORATION
1380 SOLDIERS FIELD RD 2ND FL
BRIGHTON, MA 02135
(617) 234-0099

Description:

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: PATRICK M CLEAREY
NYSDEC - REG 6
207 GENESEE ST
UTICA, NY 13501

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 6
SUBOFFICE - UTICA



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: 6NYCRR 621.11

Item 3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 3.2:

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for 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: 6NYCRR 621.13

Item 4.1:

The Department reserves the right 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 6
SUBOFFICE - UTICA**

Applicable State Requirement: 6NYCRR 621.6(a)

Item 5.1:

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

NYSDEC Regional Permit Administrator
Region 6 Sub-office
Division of Environmental Permits
State Office Building, 207 Genesee Street
Utica, NY 13501-2885
(315) 793-2555

New York State Department of Environmental Conservation

Permit ID: 6-3013-00305/00001

Facility DEC ID: 6301300305



Permit Under the Environmental Conservation Law (ECL)

ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT

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1380 SOLDIERS FIELD RD 2ND FL
BRIGHTON, MA 02135

Facility: MASCOMA CORP CELLULOSIC ETHANOL DEMONSTRATION FACILITY
679 ELLSWORTH RD
ROME, NY 13440

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

Permit Effective Date: 06/30/2008

Permit Expiration Date: No expiration date.



LIST OF CONDITIONS

DEC GENERAL CONDITIONS

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Facility Inspection by the Department
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Facility Level

Submission of application for permit modification or renewal-REGION 6
SUBOFFICE - UTICA

FEDERALLY ENFORCEABLE CONDITIONS

Facility Level

- 1 6NYCRR 202-1.1: Required Emissions Tests
- 3 6NYCRR 201-7.2: Facility Permissible Emissions
- *2 6NYCRR 201-7.2: Capping Monitoring Condition
- *4 6NYCRR 201-7.2: Capping Monitoring Condition
- 5 6NYCRR 202-1.2: Notification
- 6 6NYCRR 202-1.3: Acceptable procedures
- 7 6NYCRR 202-1.3: Acceptable procedures - Stack test report submittal
- 8 6NYCRR 202-1.3: Alternate test methods
- 9 6NYCRR 212.4(b): Compliance Demonstration
- 10 6NYCRR 212.4(c): Compliance Demonstration
- 11 6NYCRR 212.6(a): Compliance Demonstration
- 12 6NYCRR 212.6(a): Compliance Demonstration
- 13 6NYCRR 236.3: Compliance Demonstration
- 14 6NYCRR 236.4: Compliance Demonstration
- 15 6NYCRR 236.5: Compliance Demonstration
- 16 6NYCRR 236.7: Monitoring of leaks of VOC
- 17 40CFR 60.4, NSPS Subpart A: EPA Region 2 address.
- 18 40CFR 60.7(a), NSPS Subpart A: Date of construction notification -
If a COM is not used.
- 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(a), NSPS Subpart A: Performance testing timeline.
- 26 40CFR 60.8(b), NSPS Subpart A: Performance Test Methods - Waiver
- 27 40CFR 60.8(c), NSPS Subpart A: Required performance test information.
- 28 40CFR 60.8(d), NSPS Subpart A: Prior notice.
- 29 40CFR 60.8(e), NSPS Subpart A: Performance testing facilities.
- 30 40CFR 60.8(f), NSPS Subpart A: Number of required tests.
- 31 40CFR 60.9, NSPS Subpart A: Availability of information.
- 32 40CFR 60.12, NSPS Subpart A: Circumvention.
- 33 40CFR 60.13, NSPS Subpart A: Monitoring requirements.
- 34 40CFR 60.14, NSPS Subpart A: Modifications.



- 35 40CFR 60.15, NSPS Subpart A: Reconstruction
- 36 40CFR 60.482-1a, NSPS Subpart VVa: Compliance Demonstration
- 37 40CFR 60.482-2a, NSPS Subpart VVa: Compliance Demonstration
- 38 40CFR 60.482-3a, NSPS Subpart VVa: Compliance Demonstration
- 39 40CFR 60.482-4a, NSPS Subpart VVa: Compliance Demonstration
- 40 40CFR 60.482-5a, NSPS Subpart VVa: Compliance Demonstration
- 41 40CFR 60.482-6a, NSPS Subpart VVa: Compliance Demonstration
- 42 40CFR 60.482-7a, NSPS Subpart VVa: Compliance Demonstration
- 43 40CFR 60.482-8a, NSPS Subpart VVa: Compliance Demonstration
- 44 40CFR 60.482-9a, NSPS Subpart VVa: Compliance Demonstration
- 45 40CFR 60.485a, NSPS Subpart VVa: Test methods and procedures
- 46 40CFR 60.486a, NSPS Subpart VVa: Compliance Demonstration
- 47 40CFR 60.487a, NSPS Subpart VVa: Compliance Demonstration

Emission Unit Level

EU=E-APROD,EP=00008

- *48 6NYCRR 201-7.2: Capping Monitoring Condition
- *49 6NYCRR 201-7.2: Capping Monitoring Condition
- *50 6NYCRR 201-7.2: Capping Monitoring Condition

EU=E-FIBER,EP=00003,Proc=STM

- *51 6NYCRR 201-7.2: Capping Monitoring Condition

EU=E-FIBER,EP=00005

- *52 6NYCRR 201-7.2: Capping Monitoring Condition
- *53 6NYCRR 201-7.2: Capping Monitoring Condition

STATE ONLY ENFORCEABLE CONDITIONS

Facility Level

- 54 ECL 19-0301: Contaminant List
- 55 6NYCRR 201-1.4: Unavoidable noncompliance and violations
- 56 6NYCRR 201-5: Emission Unit Definition
- 57 6NYCRR 211.2: Air pollution prohibited

Emission Unit Level

- 58 6NYCRR 201-5: Emission Point Definition By Emission Unit
- 59 6NYCRR 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 - 6NYCRR Part 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 - 6NYCRR Part 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 - 6NYCRR Part 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 - 6NYCRR Part 201-1.2

If an existing emission source was subject to the permitting requirements of 6NYCRR 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: Emergency Defense - 6NYCRR Part 201-1.5

An emergency constitutes an affirmative defense to an action brought 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 and/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;

(3) During the period of the emergency the facility owner and/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 and/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 and/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 F: Recycling and Salvage - 6NYCRR Part 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 G: Prohibition of Reintroduction of Collected Contaminants to the Air - 6NYCRR Part 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 H: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR Part 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 I: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR Part 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 J: Required Emission Tests - 6 NYCRR Part 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 6NYCRR Part 202-1.

Item K: Visible Emissions Limited - 6 NYCRR Part 211.3

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.

Item L: Open Fires - 6 NYCRR Part 215

No person shall burn, cause, suffer, allow or permit the burning in an open fire of garbage, rubbish for salvage, or rubbish generated by industrial or commercial activities.

Item M: 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 N: 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



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 control parameters;

(6) corrective actions to be taken when operating practices are not followed or 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 control unit that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

The initial OM&M plan must be submitted with the stack test protocol at least 60 days prior to the initial stack test date.

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 4: Capping Monitoring Condition
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 201-7.2

Item 4.1:



period were below 39 tons. The annual reports must include information that documents the VOC emissions from each emission source at the facility, excluding combustion sources. Emission calculations must be conducted using the most recent stack test data and/or Department approved emission factors.

Any noncompliance with the VOC emission limit in this condition must be reported by sending a copy of such record to the NYSDEC, Region 6, within 30 days of the occurrence.

Monitoring Frequency: MONTHLY
Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2009.
Subsequent reports are due every 12 calendar month(s).

Condition 5: Notification
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 202-1.2

Item 5.1:

A person who is required by the commissioner to submit a stack test report shall notify the commissioner, in writing, not less than 30 days prior to the test, of the time and date of the test. Such notification shall also include the acceptable procedures to be used to stack test including sampling and analytical procedures. Such person shall allow the commissioner, or his representative, free access to observe stack testing being conducted by such person.

Condition 6: Acceptable procedures
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 202-1.3

Item 6.1:

Emission testing, sampling, and analytical determinations to ascertain compliance with this Subpart shall be conducted in accordance with test methods acceptable to the commissioner.

Condition 7: Acceptable procedures - Stack test report submittal
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 202-1.3

Item 7.1:

Emission test reports must be submitted in triplicate to the commissioner within 60 days after the completion of the tests, unless additional time is requested in writing.

Condition 8: Alternate test methods
Effective between the dates of 06/30/2008 and Permit Expiration Date



Applicable Federal Requirement:6NYCRR 202-1.3

Item 8.1:

Alternate emission test methods or deviations from acceptable test methods may be utilized if it is impractical to utilize the acceptable test methods or where no applicable test method is available, if prior acceptance of the proposed alternate method is granted by the commissioner.

**Condition 9: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date**

Applicable Federal Requirement:6NYCRR 212.4(b)

Item 9.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 000091-20-3	NAPHTHALENE
CAS No: 000100-41-4	ETHYLBENZENE
CAS No: 000108-88-3	TOLUENE
CAS No: 000110-54-3	HEXANE
CAS No: 000067-56-1	METHYL ALCOHOL

Item 9.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility plug screw feeder, chip steaming vessel and cyclone #1 all eventually vent to a vent condensor. The fermenters, distillation feed tank, the ferment purge tank, beer columns bottom tank, and beer columns filter press tank all vent to a molecular sieve scrubber.

Emissions of methyl alcohol, naphthalene, ethyl benzene, toluene, n-hexane were estimated using data from Aspen Plus Process simulation software. A stack test or alternative test method to verify emissions of these chemicals will be conducted within 180 days of start-up. Should significant evidence of emissions of other chemicals of concern arise from the research and development operations at the facility, these will also be included in the testing. Changes to the protocol may be made by request to the Department. The department may also require changes to the plan.

Stack test procedures must be performed in accordance with requirements of 6NYCRR Part 202-1 as listed elsewhere in this permit. If alternative methodology is requested then the Department will be notified 60 days prior to the test.



Monitoring Frequency: SINGLE OCCURRENCE

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 10: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 212.4(c)

Item 10.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Emissions of solid particulates are limited to less than 0.050 grains of particulates per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis. The Department reserves the right to perform or require the performance of a Method 5 emissions evaluation at any time.

The permittee will conduct compliance verifications at the monitoring frequency stated below. These verifications include review of pertinent information relating to particulate emissions of the source, including but not limited to production rate, process material, air flow rate, control equipment parameters, visible emissions, etc. The permittee will confirm that during source operation all pertinent parameters (whether used to directly calculate particulate emission rate, or as surrogates) are within ranges that ensure compliance with the particulate emission rate.

Additionally, the permittee will investigate, in a timely manner, any instance where there is cause to believe that particulate emissions above 0.050 gr/dscf are occurring or have occurred. These instances include but are not limited to process upsets, control device malfunctions or problems, abnormal visible emissions, complaints, etc. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected.

Records of these verifications, investigations and corrective actions will be kept on-site.

Should the Department determine that permittee's record keeping format is inadequate to demonstrate compliance with this condition, it shall provide written notice to the permittee stating the inadequacies, and permittee



shall have 90 days to revise its prospective record keeping format in a manner acceptable to the Department.

Parameter Monitored: PARTICULATES
Upper Permit Limit: 0.050 grains per dscf
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 7/30/2008.
Subsequent reports are due every 6 calendar month(s).

Condition 11: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 212.6(a)

Item 11.1:

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

Emission Unit: E-FIBER Emission Point: 00001

Emission Unit: E-FIBER Emission Point: 00003

Regulated Contaminant(s):
CAS No: 0NY075-00-0 PARTICULATES

Item 11.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

No person shall allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water. A visible emission test must be conducted to verify the opacity of the emission points during operation.

These tests must be performed within the same time frames as the required NSPS testing, unless otherwise specified by the Department.

A visual emission test protocol must be submitted at least 60 days prior to the visual test date. The visual emission 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.



Additional tests may be required at the discretion of the Department.

Parameter Monitored: OPACITY
Upper Permit Limit: 20 percent
Reference Test Method: epa method 9
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

Averaging Method: 6 MINUTE AVERAGE
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 7/30/2008.
Subsequent reports are due every 6 calendar month(s).

Condition 12: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 212.6(a)

Item 12.1:

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

Emission Unit: E-APROD

Emission Unit: E-BOILR

Emission Unit: E-FIBER

Emission Unit: E-STORE

Emission Unit: E-WWEQT

Item 12.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water. The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation at any time during facility operation.

The permittee will conduct observations of visible emissions from the emission unit, process, etc. to which this condition applies at the monitoring frequency stated below while the process is in operation. The permittee will investigate, in a timely manner, any instance where there is cause to believe that visible emissions have the



potential to exceed the opacity standard.

The permittee shall investigate the cause, make any necessary corrections, and verify that the excess visible emissions problem has been corrected. If visible emissions with the potential to exceed the standard continue, the permittee will conduct a Method 9 assessment within the next operating day of the sources associated with the potential noncompliance to determine the degree of opacity and will notify the NYSDEC if the method 9 test indicates that the opacity standard is not met.

Records of visible emissions observations (or any follow-up method 9 tests), investigations and corrective actions will be kept on-site. Should the Department determine that permittee's record keeping format is inadequate to demonstrate compliance with this condition, it shall provide written notice to the permittee stating the inadequacies, and permittee shall have 90 days to revise its prospective record keeping format in a manner acceptable to the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2008.

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

Condition 13: Compliance Demonstration

Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 236.3

Item 13.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY100-00-0 HAP

CAS No: 0NY998-00-0 VOC

Item 13.2:

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 14: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 236.4

Item 14.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY100-00-0 HAP

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 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 15: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 236.5

Item 15.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY100-00-0	HAP
CAS No: 0NY998-00-0	VOC

Item 15.2:

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: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 16: Monitoring of leaks of VOC
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 236.7

Item 16.1:

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 17: EPA Region 2 address.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.4, NSPS Subpart A

Item 17.1:

All requests, reports, applications, submittals, and other communications to the Administrator 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 18: Date of construction notification - If a COM is not used.
Effective between the dates of 06/30/2008 and Permit Expiration Date**

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

Item 18.1:

Any owner or operator subject to this part shall furnish the Administrator with the following information:

- 1) a notification of the date construction or reconstruction commenced, post marked no later than 30 days after such date;
- 3) a notification of the actual date of initial start up, post marked within 15 days after such date;
- 4) a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless the change is specifically exempted under this part. The notice shall be post marked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capability of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional information regarding the change;
- 5) a notification of the date upon which the demonstration of continuous monitoring system performance commences, post marked not less than 30 days prior to such date;
- 6) a notification of the anticipated date for conducting the opacity observations, post marked not less than 30 days prior to such date.

**Condition 19: Recordkeeping requirements.
Effective between the dates of 06/30/2008 and Permit Expiration Date**

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 06/30/2008 and Permit Expiration Date**



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 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 7/30/2008.

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

Condition 21: Excess emissions report.

Effective between the dates of 06/30/2008 and Permit Expiration Date

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 06/30/2008 and Permit Expiration Date

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 06/30/2008 and Permit Expiration Date

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, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part, recorded in permanent form suitable for inspections. The file shall be maintained for at least two years following the date of such measurements, reports, and records.

Condition 24: Notification Similar to State or Local Agency
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

Item 24.1:

If notification substantially similar to that in 40 CFR Part 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR Part 60.7(a).

Condition 25: Performance testing timeline.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.8(a), NSPS Subpart A

Item 25.1:

Within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the facility, the owner or operator of the facility shall conduct performance testing and provide the results of such tests, in a written report, to the Administrator.

Condition 26: Performance Test Methods - Waiver
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.8(b), NSPS Subpart A



Item 26.1:

Performance testing shall be conducted in accordance with the methods and procedures prescribed in 40 CFR Part 60 unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternate method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors.

Condition 27: Required performance test information.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 40CFR 60.8(c), NSPS Subpart A

Item 27.1:

Performance tests shall be conducted under such conditions specified by the Administrator, based upon representative performance data supplied by the owner or operator of the facility.

Condition 28: Prior notice.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 40CFR 60.8(d), NSPS Subpart A

Item 28.1:

The owner or operator shall provide the Administrator with prior notice of any performance test at least 30 days in advance of testing.

Condition 29: Performance testing facilities.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 40CFR 60.8(e), NSPS Subpart A

Item 29.1:

The following performance testing facilities shall be provided during all tests:

- 1) sampling ports adequate for tests methods applicable to such facility;
- 2) a safe sampling platform;
- 3) a safe access to the sampling platform; and
- 4) utilities for sampling and testing equipment.

Condition 30: Number of required tests.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 40CFR 60.8(f), NSPS Subpart A

Item 30.1:



Each performance test shall consist of three separate runs, at the specified duration required in the applicable test method. Compliance with all applicable standards shall be determined by using the arithmetic means of the results of the three runs.

Condition 31: Availability of information.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.9, NSPS Subpart A

Item 31.1:

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by 40 CFR Part 2.

Condition 32: Circumvention.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.12, NSPS Subpart A

Item 32.1:

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

Condition 33: Monitoring requirements.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.13, NSPS Subpart A

Item 33.1:

All continuous monitoring systems and devices shall be installed, calibrated, maintained, and operated in accordance with the requirements of section 60.13.

Condition 34: Modifications.
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.14, NSPS Subpart A

Item 34.1:

Within 180 days of the completion of any physical or operational change (as defined in section 60.14), compliance with the applicable standards must be achieved.

Condition 35: Reconstruction
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.15, NSPS Subpart A

Item 35.1:



The following shall be submitted to the Administrator prior to reconstruction (as defined in section 60.15):

- 1) a notice of intent to reconstruct 60 days prior to the action;
- 2) name and address of the owner or operator;
- 3) the location of the existing facility;
- 4) a brief description of the existing facility and the components to be replaced;
- 5) a description of the existing air pollution control equipment and the proposed air pollution control equipment;
- 6) an estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility;
- 7) the estimated life of the facility after the replacements; and
- 8) a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

Condition 36: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date
Applicable Federal Requirement:40CFR 60.482-1a, NSPS Subpart VVa

Item 36.1:
The Compliance Demonstration activity will be performed for the Facility.

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:
Sec. 60.482-1 Standards: General.

1. Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of Secs. 60.482-1a through 60.482-10a or 60.480a(e) for all equipment within 180 days of initial startup.
2. Compliance with Secs. 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in Sec. 60.485a.
3. Equipment that is in vacuum service is excluded from the requirements of Secs. 60.482-2a to 60.482-10a if



it is identified as required in Sec. 60.486a(e)(5).

4. Reporting as required by Sec. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 37: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

Item 37.1:

The Compliance Demonstration activity will be performed for the Facility.

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:

Sec. 60.482-2a 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. 60.485a(b), except as provided in Sec. 60.482-1a(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 5,000 ppm or greater for handling polymerizing monomers or 20000ppm or greater for all other pumps 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. 60.482-9a.

(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. 60.482-10a; 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. 60.482-9a.
 - (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. 60.486a(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. 60.485a(c), and
 - (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. 60.482-10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in Sec. 60.486a(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. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 38: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

Item 38.1:

The Compliance Demonstration activity will be performed for the Facility.

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:

Sec. 60.482-3a 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. 60.482-1a(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. 60.482-10a; 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. 60.482-9a.

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

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage



from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of Sec. 60.482-10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in Sec. 60.486a(e) (1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a)-(h) if the compressor:

(1) 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. 60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Reporting as required by Sec. 60.487a

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 39: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:40CFR 60.482-4a, NSPS Subpart VVa

Item 39.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 39.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Sec. 60.482-4a Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in Sec. 60.485a(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. 60.482-9a.

(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. 60.485a(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. 60.482-10a 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. 60.482-9a.

(e) Reporting as required by Sec. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 40: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

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. 60.482-5a 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. 60.482-1a(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. 60.482-10a; 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. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 41: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

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. 60.482-6a 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. 60.482-1a(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. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 42: Compliance Demonstration

Effective between the dates of 06/30/2008 and Permit Expiration Date

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



- (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. 60.485a(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. 60.486a(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. 60.486a(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. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 43: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

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. 60.482-8a 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. 60.485a(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. 60.482-9a.

(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. 60.482-7a(e).

(e) Reporting as required by Sec. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 44: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date

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

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. 60.482-9a 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. 60.482-10a.

(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. 60.487a.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 45: Test methods and procedures

Effective between the dates of 06/30/2008 and Permit Expiration Date



Applicable Federal Requirement: 40CFR 60.485a, NSPS Subpart VVa

Item 45.1:

(a) In conducting the performance tests required in §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 §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482–1a through 60.482–11a, 60.483a, and 60.484a 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 of appendix A–7 of this part. 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 no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A–7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

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

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

(2) Method 21 of appendix A–7 of this part 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 §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 a piece of equipment is in light liquid service by showing that all the following conditions apply:

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

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °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 of appendix A–7 of this part 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:

$$V_{\max} = K_1 + K_2 H_T$$

Where:

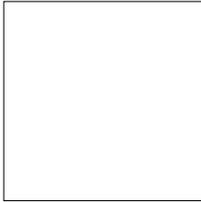
V_{\max} = Maximum permitted velocity, m/sec (ft/sec).

H_T = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K_1 = 8.706 m/sec (metric units) = 28.56 ft/sec (English units).

K_2 = 0.7084 m⁴/(MJ-sec) (metric units) = 0.087 ft⁴/(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:



Where:

K = Conversion constant, 1.740×10^{-7} (g-mole)(MJ)/(ppm-scm-kcal) (metric units) = 4.674×10^{-6} [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).

C_i = Concentration of sample component “i,” ppm

H_i = net heat of combustion of sample component “i” at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.

(5) Method 18 of appendix A-6 of this part or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference-see §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 §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 of appendix A-7 of this part, 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) The owner or operator shall determine compliance with §60.483-1a or §60.483-2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$$\%V_L = (V_L / V_T) * 100$$

Where:

$\%V_L$ = Percent leaking valves.

V_L = Number of valves found leaking.

V_T = The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.



(5) If the process unit has been subdivided in accordance with §60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

Condition 46: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date
Applicable Federal Requirement:40CFR 60.486a, NSPS Subpart VVa

Item 46.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 46.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

(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.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, 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 §60.482-7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in §60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.

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

(c) When each leak is detected as specified in §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, 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, except when indications of liquids dripping from a pump are designated as a leak.

(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) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

(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 §60.482–10a 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 §60.482–10a(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 §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a 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 §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1a to 60.482–11a 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 §§60.482–2a(e), 60.482–3a(i), and 60.482–7a(f).

(ii) The designation of equipment as subject to the requirements of §60.482–2a(e), §60.482–3a(i), or §60.482–7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

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

(4)(i) The dates of each compliance test as required in §§60.482–2a(e), 60.482–3a(i), 60.482–4a, and 60.482–7a(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.
- (6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with §60.482–1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.
- (7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.
- (8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A–7 of this part and §60.485a(b).
 - (i) Date of calibration and initials of operator performing the calibration.
 - (ii) Calibration gas cylinder identification, certification date, and certified concentration.
 - (iii) Instrument scale(s) used.
 - (iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A–7 of this part.
 - (v) Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).
 - (vi) If an owner or operator makes their own calibration gas, a description of the procedure used.
- (9) The connector monitoring schedule for each process unit as specified in §60.482–11a(b)(3)(v).
- (10) Records of each release from a pressure relief device subject to §60.482–4a.
- (f) The following information pertaining to all valves



subject to the requirements of §60.482–7a(g) and (h), all pumps subject to the requirements of §60.482–2a(g), and all connectors subject to the requirements of §60.482–11a(e) shall be recorded in a log that is kept in a readily accessible location:

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

(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 §60.483–2a:

(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 §§60.482–2a(d)(5) and 60.482–3a(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 §60.480a(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 §60.7(b) and (d) do not apply to affected facilities subject to this subpart.

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 7/30/2008.
Subsequent reports are due every 6 calendar month(s).

Condition 47: Compliance Demonstration
Effective between the dates of 06/30/2008 and Permit Expiration Date
Applicable Federal Requirement:40CFR 60.487a, NSPS Subpart VVa

Item 47.1:
The Compliance Demonstration activity will be performed for the Facility.

Item 47.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

- (a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 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 §60.482-7a, excluding those valves designated for no detectable emissions under the provisions of §60.482-7a(f).
 - (3) Number of pumps subject to the requirements of §60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of §60.482-2a(e) and those pumps complying with §60.482-2a(f).
 - (4) Number of compressors subject to the requirements of §60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of §60.482-3a(i) and those compressors complying with §60.482-3a(h).
 - (5) Number of connectors subject to the requirements of §60.482-11a.
- (c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486a:



- (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 §60.482–7a(b) or §60.483–2a,
 - (ii) Number of valves for which leaks were not repaired as required in §60.482–7a(d)(1),
 - (iii) Number of pumps for which leaks were detected as described in §60.482–2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),
 - (iv) Number of pumps for which leaks were not repaired as required in §60.482–2a(c)(1) and (d)(6),
 - (v) Number of compressors for which leaks were detected as described in §60.482–3a(f),
 - (vi) Number of compressors for which leaks were not repaired as required in §60.482–3a(g)(1),
 - (vii) Number of connectors for which leaks were detected as described in §60.482–11a(b)
 - (viii) Number of connectors for which leaks were not repaired as required in §60.482–11a(d), and
 - (xi) 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) of this section 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 §§60.483–1a or 60.483–2a 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 §60.8 of the General Provisions. The provisions of §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 CAA, 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.

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2008.

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

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

Condition 48: Capping Monitoring Condition

Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 201-7.2

Item 48.1:

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:

6NYCRR 201-6.1(a)
6NYCRR 231-1.2

Item 48.2:

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

Item 48.3:

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 48.4:

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



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:

6NYCRR 201-6.1(a)
6NYCRR 231-1.2

Item 49.2:

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

Item 49.3:

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 49.4:

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 49.5:

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 49.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: E-APROD Emission Point: 00008

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

Item 49.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: MONITORING OF PROCESS OR CONTROL
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The facility shall limit the amount of VOC emitted from the facility to no more than 39 tons during any consecutive 12 month period by maintaining scrubber VOC control efficiency of 90%. To demonstrate compliance with the control efficiency of the scrubber the facility shall perform the following:

The scrubber outlet temperature will be maintained at or



below 81 deg F or alternatively, the temperature at which emission testing demonstrating 90% VOC control is performed. Compliance with this requirement will be demonstrated by monitoring scrubber outlet temperature continuously.

Parameter Monitored: VOC

Upper Permit Limit: 81 degrees Fahrenheit

Monitoring Frequency: CONTINUOUS

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB)

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2009.

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

Condition 50: Capping Monitoring Condition
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 201-7.2

Item 50.1:

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:

6NYCRR 201-6.1(a)

6NYCRR 231-1.2

Item 50.2:

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

Item 50.3:

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 50.4:

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 50.5:

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 50.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: E-APROD Emission Point: 00008

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

Item 50.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The molecular sieve scrubber must be tested for VOC in order to establish site specific emission factors and in order to verify 90 % control efficiency of the scrubber in support of emission cap calculations. These tests shall be conducted within 180 days of start up, which is the same as the NSPS performance test time frames. This testing will also determine control parameters for the continuous operation of the scrubber. The parameters include the outlet temperature and water flow rate. If these numbers are different than what is currently stated elsewhere in the permit, the permit will be modified to reflect the appropriate parameters.

A Stack test protocol must be submitted at least 60 days prior to the stack test date. The stack test date must be coordinated with the department such that a department representative has then opportunity to witness the test.

Unless otherwise stated above , these tests must be conducted in accordance with the provisions of 6NNYCRR Part 202-1

Additional tests may be required at the discretion of the Department

Lower Permit Limit: 90 percent

Reference Test Method: EPA Method 25A

Monitoring Frequency: SINGLE OCCURRENCE

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

Condition 51: Capping Monitoring Condition

Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 201-7.2

Item 51.1:

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:

6NYCRR 201-6.1(a)

6NYCRR 231-1.2(a)

Item 51.2:

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

Item 51.3:

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 51.4:

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 51.5:

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 51.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: E-FIBER
Process: STM

Emission Point: 00003

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

Item 51.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility shall limit the amount of VOC emitted from the facility to no more than 39 tons per 12 consecutive month period. To demonstrate compliance with the facility CAP, the facility shall operate the start-up cyclone when the pre-treatment unit is being started up or when there is a process upset condition. The time required for start-up shall not exceed 30 minutes per event. The owner or operator shall develop and maintain procedures for start-up, and process upsets, defining



operating parameters for directing pretreated material from the start-up cyclone to the process cyclone and fermenters, acceptable to the department. Records of start-up, upsets, and operating parameters shall be maintained demonstrating compliance with this requirement

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2008.

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

Condition 52: Capping Monitoring Condition
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement: 6NYCRR 201-7.2

Item 52.1:

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:

6NYCRR 201-6.1(a)

6NYCRR 231-1.2(a)

Item 52.2:

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

Item 52.3:

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 52.4:

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 52.5:

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 52.6:

The Compliance Demonstration activity will be performed for:



Emission Unit: E-FIBER

Emission Point: 00005

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

Item 52.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: MONITORING OF PROCESS OR CONTROL
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The facility shall limit the amount of VOC emitted from the facility to no more than 39 tons during any consecutive 12 month period by maintaining condenser VOC control efficiency of 90%. To demonstrate compliance with the control efficiency of the scrubber the facility shall perform the following:

The condenser outlet temperature will be maintained at or below 120 deg F or alternatively, the temperature at which emission testing demonstrating 90% VOC control is performed. Compliance with this requirement will be demonstrated by monitoring condenser outlet temperature continuously.

Parameter Monitored: VOC

Upper Permit Limit: 120 degrees Fahrenheit

Monitoring Frequency: CONTINUOUS

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY
TIME (INSTANTANEOUS/DISCRETE OR GRAB)

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2009.

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

Condition 53: Capping Monitoring Condition

Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable Federal Requirement:6NYCRR 201-7.2

Item 53.1:

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:

6NYCRR 201-6.1(a)

6NYCRR 231-1.2(a)

Item 53.2:

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



Item 53.3:

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 53.4:

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 53.5:

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 53.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: E-FIBER Emission Point: 00005

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

Item 53.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The cyclone exhaust vent condenser must be tested for VOC in order to establish site specific emission factors and in order to verify 90 % control efficiency of the condenser in support of emission cap calculations. These tests shall be conducted within 180 days of start up, which is the same as the NSPS performance test time frames. This testing will also determine operational parameters for the continuous operation of the condenser. The parameter shall include the outlet temperature. If this number is different than what is currently stated elsewhere in the permit, the permit will be modified to reflect the appropriate parameters.

A Stack test protocol must be submitted at least 60 days prior to the stack test date. The stack test date must be coordinated with the department such that a department representative has then opportunity to witness the test.

Unless otherwise stated above , these tests must be



conducted in accordance with the provisions of 6NNYCRR
Part 202-1

Additional tests may be required at the discretion of the
Department

Lower Permit Limit: 90 percent

Reference Test Method: EPA Method 25A

Monitoring Frequency: SINGLE OCCURRENCE

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION



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

Where emission source owners and/or operators keep records pursuant to compliance with the operational flexibility requirements of 6 NYCRR Subpart 201-5.4(b)(1), and/or the emission capping requirements of 6 NYCRR Subparts 201-7.2(d), 201-7.3(f), 201-7.3(g), 201-7.3(h)(5), 201-7.3(i) and 201-7.3(j), the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records. Emission source owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department of receipt of the request.

Item B: 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 54: Contaminant List
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable State Requirement:ECL 19-0301

Item 54.1:

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

CAS No: 000100-41-4
Name: ETHYLBENZENE

CAS No: 0NY100-00-0
Name: HAP

CAS No: 000110-54-3
Name: HEXANE

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

CAS No: 000091-20-3
Name: NAPHTHALENE

CAS No: 0NY075-00-0
Name: PARTICULATES

CAS No: 000108-88-3
Name: TOLUENE

CAS No: 0NY998-00-0
Name: VOC

Condition 55: Unavoidable noncompliance and violations
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable State Requirement:6NYCRR 201-1.4

Item 55.1:

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

- (a) The facility owner and/or operator shall compile and maintain records of all equipment 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 commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where conditions elsewhere in this permit which contain more stringent reporting and notification provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable



and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superceded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.

(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.

(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

Condition 56: Emission Unit Definition
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable State Requirement:6NYCRR 201-5

Item 56.1:

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

Emission Unit: E-APROD

Emission Unit Description:

ALCOHOL FERMENTATION, PRODUCTION AND
DISTILLATION UNITS.

Building(s): MAIN

Item 56.2:

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

Emission Unit: E-BOILR

Emission Unit Description:

NATURAL GAS FIRED BOILER WITH PROPANE



BACK-UP. THIS BOILER IS USED TO SUPPLY STEAM TO THE PROCESS.

Building(s): MAIN

Item 56.3:

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

Emission Unit: E-FIBER

Emission Unit Description:

WOOD CHIP RECEIVING, PRE-STEAMING/STEAMING TO PREPARE FIBER FOR ETHANOL PRODUCTION.

Building(s): MAIN

Item 56.4:

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

Emission Unit: E-STORE

Emission Unit Description:

VARIOUS SIZES OF STORAGE TANKS WHICH HOLD PRODUCT AND DENATURANT PRIOR TO SHIPPING. THE LOADING OF PRODUCT FOR SHIPPING IS ALSO CONTAINED WITHIN THIS UNIT. SEVERAL TANKS, INCLUDING THE DENATURANT STORAGE TANK, ARE EXEMPT ACTIVITIES.

Building(s): TFRM

Item 56.5:

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

Emission Unit: E-WWEQT

Emission Unit Description:

THE WASTEWATER EQUALIZATION TANK RECEIVES PROCESS WATER AND ADJUSTS THE PH PRIOR TO DISCHARGE TO THE SEWER.

Building(s): MAIN

Condition 57: Air pollution prohibited
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable State Requirement:6NYCRR 211.2

Item 57.1:

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.



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

Condition 58: Emission Point Definition By Emission Unit
Effective between the dates of 06/30/2008 and Permit Expiration Date

Applicable State Requirement:6NYCRR 201-5

Item 58.1:

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

Emission Unit: E-APROD

Emission Point: 00006

Height (ft.): 18	Length (in.): 48	Width (in.): 48
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Emission Point: 00007

Height (ft.): 3	Diameter (in.): 36	
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Emission Point: 00008

Height (ft.): 18	Diameter (in.): 4	
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Item 58.2:

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

Emission Unit: E-BOILR

Emission Point: 00012

Height (ft.): 18	Diameter (in.): 20	
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Item 58.3:

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

Emission Unit: E-FIBER

Emission Point: 00001

Height (ft.): 18	Length (in.): 144	Width (in.): 120
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Emission Point: 00002

Height (ft.): 18	Length (in.): 60	Width (in.): 60
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Emission Point: 00003

Height (ft.): 18	Diameter (in.): 10	
NYTMN (km.): 4785.	NYTME (km.): 466.8	Building: MAIN

Emission Point: 00004

Height (ft.): 18	Diameter (in.): 36	
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NYTMN (km.): 4785. NYTME (km.): 466.8 Building: MAIN

Emission Point: 00005

Height (ft.): 18 Diameter (in.): 10
NYTMN (km.): 4785. NYTME (km.): 466.8 Building: MAIN

Item 58.4:

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

Emission Unit: E-STORE

Emission Point: 00009

Height (ft.): 6 Diameter (in.): 3
NYTMN (km.): 4785. NYTME (km.): 466.8 Building: TFRM

Emission Point: 00010

Height (ft.): 32 Diameter (in.): 3
NYTMN (km.): 4785. NYTME (km.): 466.8 Building: TFRM

Emission Point: 00011

Height (ft.): 10 Diameter (in.): 5
NYTMN (km.): 4785. NYTME (km.): 466.8 Building: TFRM

Item 58.5:

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

Emission Unit: E-WWEQT

Emission Point: 00013

Height (ft.): 18 Diameter (in.): 6
NYTMN (km.): 4785. NYTME (km.): 466.8 Building: MAIN

Condition 59:

**Process Definition By Emission Unit
Effective between the dates of 06/30/2008 and Permit Expiration Date**

Applicable State Requirement:6NYCRR 201-5

Item 59.1:

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

Emission Unit: E-APROD

Process: APR Source Classification Code: 3-01-250-10

Process Description:

ETHANOL PRODUCTION PROCESSES WHICH INCLUDE BIOMASS FERMENTATION AND PRODUCT ISOLATION VIA DISTILLATION. PRETREATED MATERIAL FROM CYCLONE 1 IS CONVEYED AND METERED INTO ONE OF THREE FERMENTATION VESSELS. ENZYMES, YEAST AND NUTRIENTS ARE ADDED TO AID FERMENTATION. CARBON DIOXIDE GAS AND ETHANOL VAPOR EVOLVED DURING FERMENTATION WILL FOLLOW TO THE DISTILLATION SYSTEM SCRUBBERS, WHICH UTILIZE WATER TO REMOVE



ETHANOL FROM THE VAPOR STREAM. SCRUBBED CARBON DIOXIDE GAS WILL BE VENTED, AND THE RESULTING SCRUBBER WATER BEARING ETHANOL IS RECYCLED BACK INTO THE PROCESS. THE LIQUID PHASE FROM THE FERMENTERS(THE BEER) IS TRANSFERRED TO THE DISTILLATION PROCESS WHICH CONSISTS OF A RECTIFYING COLUMN AND A BEER COLUMN. THE RECTIFYING COLUMN REMOVES THE THE ETHANOL FROM THE LIQUID AND THE BEER COLUMN REMOVES THE SOLIDS. THE ETHANOL STEAM IS TRANSFERRED TO THE MOLECULAR SIEVE DRYER, WHERE THE REST OF THE WATER TO PRODUCE THE ETHANOL [PRODUCT. THE COLUMN MATERIAL IS PUMPED TO A PLATE AND FRAME FILTER PRESS FOR DEWATERING. THE DEWATER SOLIDS WILL BE DISCHARGED TO A DUMPSTER. EMISSIONS FROM ALL SOURCES EXCEPT THE DUMPSTER AND THE BEER COLUMN FILTER PRESS, WILL BE DIRECTED TO A MOLECULAR SIEVE SCRUBBER.

Emission Source/Control: 0MSSC - Control
Control Type: WET SCRUBBER

Emission Source/Control: 0BCLM - Process
Design Capacity: 5,000 gallons

Emission Source/Control: 0BFTN - Process
Design Capacity: 2,000 gallons

Emission Source/Control: 0BPRE - Process
Design Capacity: 30,655 pounds per day

Emission Source/Control: 0DIST - Process
Design Capacity: 1.3 gallons per minute

Emission Source/Control: 0DTAN - Process
Design Capacity: 20,000 gallons

Emission Source/Control: 0DUM2 - Process

Emission Source/Control: 0FEM1 - Process
Design Capacity: 20,000 gallons

Emission Source/Control: 0FEM2 - Process
Design Capacity: 20,000 gallons

Emission Source/Control: 0FEM3 - Process
Design Capacity: 20,000 gallons

Emission Source/Control: 0FPTK - Process
Design Capacity: 20,000 gallons



Emission Source/Control: OMSIV - Process
Design Capacity: 1.3 gallons per minute

Item 59.2:

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

Emission Unit: E-APROD
Process: BCP
Process Description:

FILTER PRESS OPERATION AND THE STORAGE OF FILTER CAKE. BOTTOMS FROM THE SEER COLUMN TANKS WILL BE PUMPED TO A PLATE-AND-FRAME FILTER PRESS FOR DEWATERING. THE DEWATER SOLIDS GO TO DUMPTER FOR DISPOASAL OR TO BE SOLD.

Emission Source/Control: 0BPRE - Process
Design Capacity: 30,655 pounds per day

Emission Source/Control: 0DUM2 - Process

Item 59.3:

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

Emission Unit: E-BOILR
Process: NTG Source Classification Code: 1-02-006-02
Process Description:

17.6 MMBTU/HR BOILER FIRING NATURAL GAS. THIS BOILER WILL PROVIDE HIGH PRESSURE PROCESS STEAM FOR THE FACILITY.

Emission Source/Control: 0BOIL - Combustion
Design Capacity: 17.6 million Btu per hour

Item 59.4:

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

Emission Unit: E-BOILR
Process: PRO Source Classification Code: 1-02-010-02
Process Description:

17.6 MMBTU/HR BOILER FIRING PROPANE. tHIS UNIT WILL PROVIDE HIGH PRESUURE PROCESS STAEM FOR THE FACILITY.

Emission Source/Control: 0BOIL - Combustion
Design Capacity: 17.6 million Btu per hour

Item 59.5:

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

Emission Unit: E-FIBER
Process: CHP Source Classification Code: 3-07-040-03
Process Description:



WOOD CHIPS RECEIVING AND HANDLING. THE CHIPS AND OTHER CELLULOSE-BASED FEEDSTOCK WILL BE STORED IN PILES WITHIN AND EXISTING BUILDING OR POSSIBLY A TRUCK RECEIVING BUILDING. MATERIAL WILL BE LOADED INTO CONVEYOR AND SENT TO PRE-STEAMING BIN. PARTICULATE EMISSIONS WILL BE FROM DELIVERY AND MOVEMENT OF MATERIAL.

Emission Source/Control: 0CHIP - Process
Design Capacity: 20 tons per day

Item 59.6:

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

Emission Unit: E-FIBER
Process: STM
Process Description:

THE EQUIPMENT IN THIS GROUP PROCESSES AND PREPARES THE WOOD CHIPS FOR THE FERMENTATION. IN THE PRE-STEAMING BIN, STEAM IS ADDED FOR AIR REMOVAL AND MOISTURE EQUALIZATION. THE CHIPS ARE FURTHER PRETREATED IN A DIGESTOR STEAMING VESSEL THROUGH THE MOVEMENT USING A PLUG SCREW FEEDER. AFTER STEAMING THE TREATED MATERIAL IS DIRECTED TO A ROTARY DISCHARGE DEVICE, AND EITHER THROUGH ONE CYCLONE WITH A DUMPSTER DURING START-UP, OR TO A CYCLONE TO THE FIBER BINS DURING PRODUCTION. THE PRESTEAMING-BIN(PSTM) VENTS DIRECTLY TO THE ATMOSPHERE. THE FOLLOWING EMISSION SOURCES VENT TO THE CYCLONE VENT CONDENSER WHICH VENTS TO THE ATMOSPHERE: PLUG SCREW FEEDER(PSFD), CHIP STEAMING VESSELS (STE1), AND CYCLONE #1 (CYC1). THE FOLLOWING EMISSION SOURCES VENT DIRECTLY TO THE ATMOSPHERE AND ARE USED ONLY FOR START-UP: CYCLONE #2(CYC2) AND DUMPSTER (DUM1). THE ROTARY DISCHARGE DEVICE (RFNR) IS A CLOSED SYSTEM.

Emission Source/Control: 0CYCC - Control
Control Type: TUBE AND SHELL CONDENSER

Emission Source/Control: 0CYC1 - Process
Design Capacity: 5,200 pounds per hour

Emission Source/Control: 0CYC2 - Process
Design Capacity: 2,600 pounds per hour

Emission Source/Control: 0DUM1 - Process



Emission Source/Control: 0PSFD - Process
Design Capacity: 32,650 pounds per hour

Emission Source/Control: 0PSTM - Process
Design Capacity: 4,000 pounds per hour

Emission Source/Control: 0RFNR - Process
Design Capacity: 4,450 pounds per hour

Emission Source/Control: 0STE1 - Process
Design Capacity: 4,450 pounds per hour

Item 59.7:

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

Emission Unit: E-STORE

Process: STO

Source Classification Code: 4-07-008-10

Process Description:

STORAGE AND SHIPPING OF PRODUC. ETHANOL PRODUCT FROM THE MOLECULAR SIEVE DRYING OPERATION IS TRANFEERED TO THE ETHANOL SHIFT TANK. IF ETHANOL IS DETERMINED TO BE OF FUEL GARDE THEN IT IS TRANSFEERED TO THE ETHANOL PRODUCT TANKS WHERE IT EILL BE DENATURED. ONCE IT IS DENATURED IT WILL THEN GO TO PRODUCT SHIPPING TANK. EMISSION WILL COME FROM THE TANKS LOSSES.

Emission Source/Control: 0EPDS - Process
Design Capacity: 575,000 gallons per year

Emission Source/Control: 0EPTK - Process
Design Capacity: 15,000 gallons

Emission Source/Control: 0ESTK - Process
Design Capacity: 1,000 gallons

Item 59.8:

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

Emission Unit: E-WWEQT

Process: WWT

Source Classification Code: 3-01-820-02

Process Description:

RECEIVES FACILITY PROCESS WASTEWATER AND BALANCES PH PRIOR TO DISPOSAL.

Emission Source/Control: 0WWEQ - Process
Design Capacity: 20,000 gallons

New York State Department of Environmental Conservation

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