



**PERMIT**  
**Under the Environmental Conservation Law (ECL)**

**IDENTIFICATION INFORMATION**

Permit Type: Air State Facility  
Permit ID: 9-2911-00348/00002  
Mod 0 Effective Date: 06/14/2011 Expiration Date: 06/30/2014  
Mod 1 Effective Date: 02/07/2012 Expiration Date: 06/30/2014  
Mod 2 Effective Date: 03/16/2012 Expiration Date: 06/30/2014  
Mod 4 Effective Date: 06/27/2013 Expiration Date: 06/30/2014

Permit Issued To: JBI RE #1 INC  
20 IROQUOIS ST  
NIAGARA FALLS, NY 14303

Contact: THOMAS WILSON  
JBI RE#1 INC  
20 IROQUOIS ST  
NIAGARA FALLS, NY 14303  
(716) 278-0015

Facility: JBI RE #1 INC  
20 IROQUOIS ST  
NIAGARA FALLS, NY 14303

Description:

JBI has requested modifications to the existing Air State Facility Permit to reflect changes being made at JBI's Plastic2Oil facility located at 20 Iroquois Street, Niagara Falls, N.Y. This permit action combines changes associated with the Modification 3 and Modification 4 permit applications as follows:

1. Due to space limitations in the original building (779337) the third processor and its associated emission point EP-30006 which are already part of the existing permit are now being constructed in a new building (P2002).
2. For ease of reference, Processes P01 and GB1 have been revised to address only unit #1, and Processes P02 and GB2 have been created to address only unit #2. Unit #1 does not currently have a preheater vessel but has the flexibility to add one. Unit #2 has a preheater vessel and a reactor vessel. Processes P03 and GB3 have been added to address only Unit #3. Process Unit #3, in addition to having a preheater vessel and a reactor vessel, includes a third vessel – a carbon removal tank to facilitate continuous operation of the reactor system.



3. The number and sizes of heating units used for the preheaters, reactors, and carbon removal tank have been updated.
4. A dust collector (EP-30007) is being added to collect dirt and dust from the plastic in the charging of the reactors during the dry summer weather. This process is subject to the opacity and particulate emission limitations of 6 NYCRR Part 212.
5. The list of allowable plastic feeds is being modified to allow the processing of off-grade non-toxic Crayola products which may contain paper and clay as a filler.
6. The facility will be allowed to co-feed Used Oil (Waste Fuel A) along with the plastic to act as a heat transfer medium to increase the dissolution rate of the plastic. This oil will meet the contaminant and heating value limitations of 6 NYCRR Parts 225-1 and 225-2. Under 6 NYCRR Part 212 a limit is being placed on the allowable ratio of used oil to plastic feed.
7. The 150 hp emergency back-up generator and its associated regulatory requirements are being removed from the permit because this source was removed from the facility on September 14, 2012.

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: DOUGLAS E BORSCHER  
270 MICHIGAN AVE  
BUFFALO, NY 14203-2915

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
  - Permit modifications, suspensions or revocations by the Department

**Facility Level**

- Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS



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

**Condition 1: Facility Inspection by the Department**

**Applicable State Requirement: ECL 19-0305**

**Item 1.1:**

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

**Item 1.2:**

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

**Item 1.3:**

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

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

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

**Item 2.1:**

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

**Condition 3: Applications for permit renewals, modifications and transfers**

**Applicable State Requirement: 6 NYCRR 621.11**

**Item 3.1:**

The permittee must submit a 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.



**Department**

**Applicable State Requirement: 6 NYCRR 621.13**

**Item 1-1.1:**

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

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

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

**Applicable State Requirement: 6 NYCRR 621.13**

**Item 4.1:**

The Department reserves the right to 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 9 HEADQUARTERS**

**Applicable State Requirement: 6 NYCRR 621.6 (a)**

**Item 5.1:**

Submission of applications for permit modification or renewal are to be submitted to:  
NYSDEC Regional Permit Administrator  
Region 9 Headquarters  
Division of Environmental Permits  
270 Michigan Avenue  
Buffalo, NY 14203-2915  
(716) 851-7165



**Permit Under the Environmental Conservation Law (ECL)**

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

**IDENTIFICATION INFORMATION**

Permit Issued To: JBI RE #1 INC  
20 IROQUOIS ST  
NIAGARA FALLS, NY 14303

Facility: JBI RE #1 INC  
20 IROQUOIS ST  
NIAGARA FALLS, NY 14303

Authorized Activity By Standard Industrial Classification Code:  
2999 - PETROLEUM AND COAL PRODUCTS, NEC

Mod 0 Permit Effective Date: 06/14/2011	Permit Expiration Date: 06/30/2014
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## LIST OF CONDITIONS

### FEDERALLY ENFORCEABLE CONDITIONS

#### Facility Level

- 1 6 NYCRR 200.6: Acceptable Ambient Air Quality
- 2 6 NYCRR 200.7: Maintenance of Equipment
- 3 6 NYCRR 202-1.1: Required Emissions Tests
- 1-1 6 NYCRR 211.1: Air pollution prohibited
- 4-1 6 NYCRR 212.4 (a): Compliance Demonstration
- 4-2 6 NYCRR 212.4 (a): Compliance Demonstration
- 1-2 6 NYCRR 212.4 (a): Compliance Demonstration
- 4-3 6 NYCRR 212.4 (c): Compliance Demonstration
- 4-4 6 NYCRR Subpart 225-2: Compliance Demonstration

#### Emission Unit Level

#### EU=3-P2OIL

- 4-5 6 NYCRR 212.4 (a): Compliance Demonstration
- 1-6 6 NYCRR 212.4 (a): Compliance Demonstration
- 9 6 NYCRR 212.4 (a): Compliance Demonstration
- 10 6 NYCRR 212.6 (a): Compliance Demonstration

### STATE ONLY ENFORCEABLE CONDITIONS

#### Facility Level

- 18 ECL 19-0301: Contaminant List
- 4-6 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
- 20 6 NYCRR Subpart 201-5: Emission Unit Definition
- 4-7 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits
- 4-8 6 NYCRR 201-5.3 (c): Compliance Demonstration
- 21 6 NYCRR 211.2: Visible Emissions Limited

#### Emission Unit Level

- 22 6 NYCRR Subpart 201-5: Emission Point Definition By Emission Unit
- 23 6 NYCRR Subpart 201-5: Process Definition By Emission Unit

#### EU=3-P2OIL,EP=30007

- 4-9 6 NYCRR 212.4 (c): Compliance Demonstration



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

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

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

**Item A: Sealing - 6 NYCRR 200.5**

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

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

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

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

**Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6**

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

**Item C: Maintenance of Equipment - 6 NYCRR 200.7**

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



required to operate such device effectively.

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

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

- (a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.
- (b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

**Item E: Emergency Defense - 6 NYCRR 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 - 6 NYCRR 201-1.7**

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

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

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

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

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

**Item I: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR 201-3.3 (a)**

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

**Item J: Required Emission Tests - 6 NYCRR 202-1.1**





**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 200.6**

**Item 1.1:**

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.

**Condition 2: Maintenance of Equipment**

**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 200.7**

**Item 2.1:**

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

**Condition 3: Required Emissions Tests**

**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 202-1.1**

**Item 3.1:**

For the purpose of ascertaining compliance or non-compliance with any air pollution control code, rule or regulation, the commissioner may require the person who owns such air contamination source to submit an acceptable report of measured emissions within a stated time.

**Condition 1-1: Air pollution prohibited**

**Effective between the dates of 02/07/2012 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 211.1**

**Item 1-1.1:**

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

**Condition 4-1: Compliance Demonstration**

**Effective between the dates of 06/27/2013 and 06/30/2014**



**Applicable Federal Requirement:6 NYCRR 212.4 (a)**

**Replaces Condition(s) 1-3**

**Item 4-1.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 000110-54-3	HEXANE
CAS No: 000630-08-0	CARBON MONOXIDE
CAS No: 007446-09-5	SULFUR DIOXIDE
CAS No: 0NY210-00-0	OXIDES OF NITROGEN
CAS No: 0NY998-00-0	VOC

**Item 4-1.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Preliminary stack emissions testing of the exhaust from the first rotary kiln combustor, which combusts a combination of natural gas and low-boiling, non-condensable byproducts from the pyrolysis process to provide energy for the process, was carried out in August 2010. The purpose of the testing was to determine baseline emissions from the unit for use in the application for the facility's NYS Air State Facility Permit. Two test runs were performed at a process feed rate of about 1,000 pounds/hour using virgin polypropylene plastic for Run 1 and a mixture of virgin high density and low density polyethylene plastics for Run 2.

Two additional rotary kiln process units are in the process of being installed.

Additional testing using approved EPA methods was required by the original Air State Facility permit at the maximum nominal operating rate of 2000 lbs/hour (within 10% of 100% peak load) using typical procured feedstock material.

Since the initial test, modifications were made to the feed system which were anticipated to increase the maximum possible feed rate. Testing was carried out on December 6, 2011, with the initial goal of testing at a feed rate of 3000 lbs/hour. Three test runs were completed with feed rates of 3259, 3284, and 3932 lbs/hour. Test results were within acceptable limits. Based on these results the facility applied for an increase in the allowable process feed rate to 4,000 lbs/hour per each of the three units. This increase was allowed as part of Permit Modification 1.

During the second half of 2012 JBI requested and was granted permission by the Department to conduct a trial



test period to obtain operating and emissions data in order to determine the capabilities of used oil as a heat transfer fluid within the P2O Process. Testing was carried out on Unit #2 on December 19, 2012. Three test runs were completed, and test results were within acceptable limits. Based on these results the facility applied for a modification to allow on-spec used oil to be co-fed with plastic. This change to the process is allowed as part of Permit Modification 4.

Additional testing may be requested at the discretion of the Department. If such testing is requested, a written protocol must be submitted a minimum of 30 days prior to the scheduled test date and must be approved by the Department prior to commencement of testing. Written results must be submitted to the Department within 60 days after completion of testing. If all three rotary kiln process units are designed, constructed, and operated in an identical manner, only one unit needs to be tested to represent a typical process. If there is significant variability between the units in as-built construction or in operating parameters, more than one unit may need to be tested.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 4-2: Compliance Demonstration**  
**Effective between the dates of 06/27/2013 and 06/30/2014**

**Applicable Federal Requirement: 6 NYCRR 212.4 (a)**

**Replaces Condition(s) 2-1**

**Item 4-2.1:**

The Compliance Demonstration activity will be performed for the Facility.

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

**Item 4-2.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

All feed stock handling and recordkeeping requirements shall be in accordance with the requirements of the facility's Part 360 Solid Waste Management Facility Permit.

Procured feedstock shall be source separated non-recyclable polyolefins and polyethylenes and a



relatively small quantity of off-spec Crayola products. Used oil, meeting Part 225-1 and 225-2 requirements, will be co-fed with the plastic to act as a heat transfer medium and enhance the dissolution rate of the plastic. Prior to acceptance for processing all feed stocks will be qualified and inspected by plant staff.

#### Detailed Description of the Process for Procurement of the Plastic/Waste Oil Feedstock

JB I will carefully review potential sources of non-recyclable grade plastic for use as a raw material feedstock. This material will be acquired from the industrial market place. Plastic types which have been determined to be acceptable for utilization as feedstock include: Polypropylene (PP), Low Density Polyethylene (LDPE), and High Density Polyethylene (HDPE). No Halogenated plastics such as Polyvinyl Chloride (PVC) will be accepted by JB I.

All sources of plastic and waste oil feed will be prequalified by JB I personnel before agreeing to accept the material. This prequalification procedure will consist of visual inspection by JB I personnel, review of the MSDS for the material where available, and possible test results from material samples when testing is deemed necessary. Typical plastic materials which can be utilized as feedstocks include plastic parts and cuttings, packaging film, shopping bag film, strapping and mixed color regrind. These materials are typically produced by vacuum forming, injection molding, casting, or tooling.

Off-spec Crayola products directly from the manufacturer will also be used as a feedstock in cubic yard containers and staged at the facility and fed into the reactors. Waste oil will be sourced from NOCO, U.S. Steel and other sources meeting the requirements of 6NYCRR Part 225-1 and 225-2. NOCO pre-tests its waste oil shipments and will provide certifications with the waste oil trucks. U.S. Steel does not have an in-house laboratory. Therefore waste oil shipments will be screened/analyzed prior to usage. If a supplier does not supply a certificate of analysis upon arrival, the trailer will be unloaded into a tank and segregated in that tank until the material can be sampled, analyzed and certified that it meets the requirements of 6NYCRR Part 225-1 and 225-2. Unacceptable loads will be either returned to the generator or shipped to an approved waste disposer.

The chemical composition of all plastic materials and waste oil must be compatible with the capabilities of the

New York State Department of Environmental Conservation

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Facility DEC ID: 9291100348



JBI process. It must not be contaminated with materials which could result in detrimental impacts during processing.

All plastic must be shipped in enclosed weather tight box vans. Waste oil must be shipped in appropriate trucks meeting DOT requirements.

Upon receipt a log sheet will be utilized to retain information as follows:

Source of plastic or waste oil

Name of transporter

Date and Time of receipt at JBI site

Amount of plastic or waste oil in each shipment (Weight or Cubic Yards)

Since this information is considered proprietary business information by JBI, an annual report containing the information listed in the preceding paragraph will be generated and maintained on site at the facility at 20 Iroquois Street, Niagara Falls, for review by the Department upon request.

Upon arrival, plastic and waste oil will be inspected to insure that it conforms with the facility's pre-approval documentation generated during the material's acceptability evaluation. If non-conformance is noted, the material will be rejected and either shipped back to the supplier or characterized and disposed of in compliance with all regulatory requirements.

Plastic material which is accepted will be unloaded directly into one of the existing or future storage buildings. These warehouses are enclosed and the stored plastic will not be exposed to the elements. Smaller loads may be unloaded directly into the main production building. All waste oil will be off-loaded into above ground petroleum storage tanks and will not be used in the process until it has been determined that it meets Parts 225-1 and 225-2.

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2014.

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

**Condition 1-2: Compliance Demonstration**  
**Effective between the dates of 02/07/2012 and 06/30/2014**



**Applicable Federal Requirement:6 NYCRR 212.4 (a)**

**Replaces Condition(s) 4**

**Item 1-2.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

**Item 1-2.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

1. This source must be operated in such a manner that the gases produced in the reactor(s) are not bypassed directly to the atmosphere except under an extreme malfunction situation. Any bypass events that do occur must be electronically monitored and recorded by the facility's computer system. The Department shall be notified the next business day if a bypass event occurs. Malfunctions resulting in a bypass event must be resolved before production may resume. At the discretion of the Department, JBI may be required to submit a corrective action plan to address bypass events and install control equipment if such action is deemed appropriate.
2. During a malfunction event, JBI shall immediately shut down the plastic feed to the reactor(s) and the reactor(s) heat sources to minimize further generation of production gases.
3. JBI must follow the procedures in their operation and malfunction plan (originally submitted to the Department in July 2011, to be revised as needed) to address proper capture and storage or control of production gases. The operation and malfunction plan shall include procedures, methods, monitoring, recordkeeping and equipment used to ensure a bypass event does not occur.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2013.

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

**Condition 4-3: Compliance Demonstration**  
**Effective between the dates of 06/27/2013 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 212.4 (c)**



**Replaces Condition(s) 1-5**

**Item 4-3.1:**

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

Emission Unit: 3-P2OIL

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

**Item 4-3.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

In the instances where determination of permissible emission rate using process weight is not applicable (see Table 5) and for an environmental rating of B or C, 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.

Preliminary stack emissions testing of the exhaust from the first rotary kiln combustor, which combusts a combination of natural gas and low-boiling, non-condensable byproducts from the pyrolysis process to provide energy for the process, was carried out in August 2010. The purpose of the testing was to determine baseline emissions from the unit for use in the application for the facility's NYS Air State Facility Permit. Two test runs were performed at a process feed rate of about 1,000 pounds/hour using virgin polypropylene plastic for Run 1 and a mixture of virgin high density and low density polyethylene plastics for Run 2.

Two additional rotary kiln process units are in the process of being installed.

Additional testing using approved EPA methods was required by the original Air State Facility permit at the maximum nominal operating rate of 2000 lbs/hour (within 10% of 100% peak load) using typical procured feedstock material. Since the initial test, modifications were made to the feed system which were anticipated to increase the maximum possible feed rate. Testing was carried out on December 6, 2011, with the initial goal of testing at a feed rate of 3000 lbs/hour. Three test runs were completed with feed rates of 3259, 3284, and 3932 lbs/hour. Test results were within acceptable limits. Based on these results the facility applied for an increase in the allowable process



feed rate to 4,000 lbs/hour per each of the three units.  
This increase was allowed as part of Permit Modification 1.

During the second half of 2012 JBI requested and was granted permission by the Department to conduct a trial test period to obtain operating and emissions data in order to determine the capabilities of used oil as a heat transfer fluid within the P2O Process. Testing was carried out on Unit #2 on December 19, 2012. Three test runs were completed, and test results were within acceptable limits. Based on these results the facility applied for a modification to allow on-spec used oil to be co-fed with plastic. This change to the process is allowed as part of Permit Modification 4.

Additional testing may be requested at the discretion of the Department. If such testing is requested, a written protocol must be submitted a minimum of 30 days prior to the scheduled test date and must be approved by the Department prior to commencement of testing. Written results must be submitted to the Department within 60 days after completion of testing. If all three rotary kiln process units are designed, constructed, and operated in an identical manner, only one unit needs to be tested to represent a typical process. If there is significant variability between the units in as-built construction or in operating parameters, more than one unit may need to be tested.

Upper Permit Limit: 0.05 grains per dscf  
Reference Test Method: EPA Method 5  
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION  
Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED  
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 4-4: Compliance Demonstration**  
**Effective between the dates of 06/27/2013 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR Subpart 225-2**

**Item 4-4.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):  
CAS No: 001336-36-3 POLYCHLORINATED BIPHENYL  
CAS No: 007704-34-9 SULFUR  
CAS No: 0NY512-00-0 6 NYCRR PART 225-2 - TOTAL HALOGENS  
CAS No: 007439-92-1 LEAD



**Item 4-4.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The incoming Used Oil (Waste Fuel A) will be tested for the constituents listed in 6 NYCRR Subpart 225-1 (Sulfur Content) and Subpart 225-2 (PCBs, Total Halogens, Sulfur, Lead and Gross Heat Content).

Used Oil must meet the definition of Waste Fuel A; that is, it must meet the limitations of Table 2-1 of Section 225-2.4 and must not contain chemical waste. Table 2-1 limitations for fuel constituents and properties are as follows:

Polychlorinated Biphenyls (PCB): less than 50 parts per million (ppm) by weight (water free basis) of fuel.

Total Halogens (including the total organic and inorganic halides (fluorine, F; chlorine, Cl; bromine, Br; iodine, I) expressed as chloride present in a fuel oil or waste fuel): 1,000 parts per million (ppm) maximum by weight (water free basis) of fuel.

Sulfur (as limited in Subpart 225-1.2(b) and (i)): 1.5 percent sulfur by weight or less through June 30, 2014, and 0.75 percent sulfur by weight or less on or after July 1, 2014.

Lead: 250 parts per million (ppm) maximum by weight (water free basis) of fuel.

Gross Heat Content: 125,000 Btu/gallon minimum.

The Used Oil must also meet the requirements of 6 NYCRR Part 374-2.2(b)(1).

The facility must sample, analyze and measure quantities of all waste oil received per delivery, must monitor operations using the waste oil, must maintain identification and compliance records for three calendar years, and must make such records available for inspection by the commissioner or his representative during normal business hours. An annual report containing a list of the waste oil shipments received, including the source of the waste oil, the name of the transporter, the date and time of receipt at the JBI site, and the amount of waste oil in each shipment will be generated and maintained on site at the facility for review by the Department upon request.

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Sampling and analysis of waste oil samples must be carried out in accordance with methods acceptable to the Commissioner.

Monitoring Frequency: PER DELIVERY  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2014.  
Subsequent reports are due every 12 calendar month(s).

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

**Condition 4-5: Compliance Demonstration**  
**Effective between the dates of 06/27/2013 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 212.4 (a)**

**Item 4-5.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 3-P2OIL

Regulated Contaminant(s):

CAS No: 0NY998-00-0    VOC

**Item 4-5.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Used Oil (Waste Oil) is to be co-fed along with the plastic as a heat transfer media to assist in the melting of the plastic. The oil is to be fed as a maximum of 0.1 gallon per pound of plastic fed on a 1-hour average basis.

Records of oil and plastic feed rates to each unit, including a calculation of the hourly average feed ratio, will be maintained onsite by the facility for three years.

An annual report verifying compliance will be generated and maintained on site at the facility for review by the Department upon request.

Monitoring Frequency: HOURLY

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 1-6: Compliance Demonstration**  
**Effective between the dates of 02/07/2012 and 06/30/2014**



**Applicable Federal Requirement:6 NYCRR 212.4 (a)**

**Replaces Condition(s) 8**

**Item 1-6.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 3-P2OIL

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

**Item 1-6.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Plastic is to be fed to each of the three rotary kiln units at a maximum rate of 4,000 lbs/hour per unit, for a total process maximum rate of 12,000 lbs/hour. Feed rate for each unit is to be monitored electronically by a calibrated digital scale which is linked to the facility's computer system. Records must be maintained in a format acceptable to the Department and an annual statement shall be submitted verifying compliance for the previous twelve month period.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: PLASTIC

Upper Permit Limit: 4000 pounds per hour

Monitoring Frequency: CONTINUOUS

Averaging Method: 1 HOUR MAXIMUM - NOT TO BE EXCEEDED AT  
ANY TIME

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2013.

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

**Condition 9: Compliance Demonstration**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable Federal Requirement:6 NYCRR 212.4 (a)**

**Item 9.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 3-P2OIL

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



**Item 9.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Each of the three process units is equipped with its own Water Seal Tank. Each Water Seal Tank is equipped with a Caustic Addition System and Caustic Spray Column as a back-up to control and neutralize any potential low pH situation. A low pH situation is not expected and would only occur if any halogenated material is fed to the reactor by mistake. Should this occur, then the off gas would become acidic and the pH of the water seal tank would drop.

If the pH of a Water Seal Tank drops below 4.5, then the following corrective action is required:

- #1 – The feed system to the Reactor will automatically shut off.
- #2 – The caustic pump will start and caustic will be pumped to the top of the Spray Tower and through the Spray Nozzles to neutralize the material in the Water Seal Tank to control it at a pH of 7 to 8.

The pH measuring device shall be calibrated monthly using a standard solution, and records documenting calibrations and maintenance shall be maintained in a format acceptable to the Department. Any occurrences of low pH which trigger the corrective action described above shall be documented and reported to the Department within one business day.

Parameter Monitored: ACIDITY/ALKALINITY  
Lower Permit Limit: 4.5 pH (STANDARD) units  
Monitoring Frequency: CONTINUOUS  
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED  
VALUE AT ANY TIME  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2012.  
Subsequent reports are due every 12 calendar month(s).

**Condition 10: Compliance Demonstration**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable Federal Requirement: 6 NYCRR 212.6 (a)**

**Item 10.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 3-P2OIL



**Item 10.2:**

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 immediately investigate any instance where there is cause to believe that visible emissions above those that are normal and in compliance are occurring or have occurred from a process source.

If visible emissions above those that are normal (this may be zero percent opacity for many or all emission sources) and in compliance with section 212.6(a) are detected, the permittee shall determine the cause, make the necessary correction, and verify that the excess visible emissions problem has been corrected.

If visible emissions above those that are normal and in compliance continue to be present after corrections are made, the permittee will immediately notify The Department and conduct a Method 9 assessment within 24 hours to determine the degree of opacity.

Records of these observations, investigations and corrective actions will be kept on-site in a format acceptable to the Department and the semiannual progress report and annual compliance certifications required of all permittees subject to Title V must include a summary of these instances.

Monitoring Frequency: DAILY

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 - 6 NYCRR 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 18: Contaminant List**  
Effective between the dates of 06/14/2011 and 06/30/2014

**Applicable State Requirement:ECL 19-0301**

**Item 18.1:**

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

CAS No: 000110-54-3  
Name: HEXANE

CAS No: 000630-08-0  
Name: CARBON MONOXIDE

CAS No: 001336-36-3  
Name: POLYCHLORINATED BIPHENYL

CAS No: 007439-92-1  
Name: LEAD

CAS No: 007446-09-5  
Name: SULFUR DIOXIDE

CAS No: 007704-34-9  
Name: SULFUR

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

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

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

CAS No: 0NY512-00-0  
Name: 6 NYCRR PART 225-2 - TOTAL HALOGENS

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

**Condition 4-6: Malfunctions and start-up/shutdown activities**  
Effective between the dates of 06/27/2013 and 06/30/2014

**Applicable State Requirement:6 NYCRR 201-1.4**

**Replaces Condition(s) 19**

**Item 4-6.1:**



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

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

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

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

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

**Condition 20: Emission Unit Definition**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 20.1(From Mod 4):**

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

Emission Unit: 3-P2OIL

Emission Unit Description:

The Emission Unit consists of 3 individual Plastic2Oil process units. Generally, each process unit consists of a premelt tank, a reactor and combustion systems to generate the heat to heat the premelt tank and the rotary kiln reactor in which plastic is converted to a diesel-like fuel and lower boiling compounds. These lower boiling compounds are compressed and fed back to the combustion systems as an additional energy source. These gases also



pass through a water seal tank containing a pH control system to catch any acidic materials. The third processing system (P03) also contains a Carbon Removal Tank. The first processing system (P01) was previously operated with a premelt tank but is currently configured without one; flexibility is allowed to add a redesigned premelt tank as required. The primary air emissions from the reactor systems are from the combustion systems. A dust collector has been added to allow for the collection of dirt and dust from the plastic in the charging of the reactors as needed, depending on the specific configuration of each unit's plastic feed system.

Building(s): 779337  
P2002

**Condition 4-7: Renewal deadlines for state facility permits  
Effective between the dates of 06/27/2013 and 06/30/2014**

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

**Item 4-7.1:**

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

**Condition 4-8: Compliance Demonstration  
Effective between the dates of 06/27/2013 and 06/30/2014**

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

**Item 4-8.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 4-8.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

Division of Air Resources  
NYS Dept. of Environmental Conservation  
Region 9  
270 Michigan Ave.  
Buffalo, NY 14203

**New York State Department of Environmental Conservation**

Permit ID: 9-2911-00348/00002

Facility DEC ID: 9291100348



Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2014.  
Subsequent reports are due every 12 calendar month(s).

**Condition 21: Visible Emissions Limited**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable State Requirement:6 NYCRR 211.2**

**Item 21.1:**

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

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

**Condition 22: Emission Point Definition By Emission Unit**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 22.1(From Mod 4):**

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

Emission Unit: 3-P2OIL

Emission Point: 30006

Height (ft.): 40 Diameter (in.): 24  
NYTMN (km.): 4777.458 NYTME (km.): 173.086 Building: P2002

Emission Point: 30007

Height (ft.): 15 Length (in.): 20 Width (in.): 11  
NYTMN (km.): 4777.458 NYTME (km.): 173.086 Building: 779337

Emission Point: 30003

Height (ft.): 40 Diameter (in.): 18  
NYTMN (km.): 4777.458 NYTME (km.): 173.086 Building: 779337

Emission Point: 30005

Height (ft.): 40 Diameter (in.): 12  
NYTMN (km.): 4777.458 NYTME (km.): 173.086 Building: 779337

**Condition 23: Process Definition By Emission Unit**  
**Effective between the dates of 06/14/2011 and 06/30/2014**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 23.1(From Mod 4):**



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

Emission Unit: 3-P2OIL

Process: DC1

Process Description:

The scrap plastic feed materials sometimes come with dirt and dust which can increase worker exposure to dust in the plastic feed areas and can add to the residue collected from the reactors. A dust collector has been added to allow for the collection of dirt and dust from the air above each unit's plastic feed components as needed, depending on the specific configuration of each unit's plastic feed system. The collection points from the units are fed to a single Torit pulse jet dust collector.

Emission Source/Control: 00DC1 - Control

Control Type: HIGH EFFICIENCY PARTICULATE AIR FILTER

Emission Source/Control: 00DD1 - Process

Emission Source/Control: 00DD2 - Process

Emission Source/Control: 00DD3 - Process

**Item 23.2(From Mod 4):**

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

Emission Unit: 3-P2OIL

Process: GB1

Process Description:

The Gas Burner Process defined in Process GB1 applies to processing unit #1. Byproduct uncondensed gases consisting of low molecular weight compounds generated by the reactor are mixed with normal natural gas as required and fed to primary burners to supply the heat for the reactor and the premelt tank in the Plastic2Oil process P01. There are also secondary burners to supply additional heat to the premelt tank and reactor. All of the flue gas from its primary and secondary burners is vented through EP-30003.

Emission Source/Control: 00B1A - Combustion

Emission Source/Control: 00BU1 - Combustion

**Item 23.3(From Mod 4):**

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

Emission Unit: 3-P2OIL

Process: GB2



Process Description:

The Gas Burner Process defined in Process GB2 applies to processing unit #2. Byproduct uncondensed gases consisting of low molecular weight compounds generated by the reactor are mixed with normal natural gas as required and fed to primary burners to supply the heat for the reactor and the premelt tank in the Plastic2Oil process P02. There are also secondary burners to supply additional heat to the premelt tank and reactor. All of the flue gas from its primary and secondary burners is vented through EP-30005.

Emission Source/Control: 00B2A - Combustion  
Design Capacity: 4 million Btu per hour

Emission Source/Control: 00B5A - Combustion  
Design Capacity: 4 million Btu per hour

Emission Source/Control: 00BU2 - Combustion  
Design Capacity: 4 million Btu per hour

Emission Source/Control: 00BU5 - Combustion  
Design Capacity: 4 million Btu per hour

**Item 23.4(From Mod 4):**

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

Emission Unit: 3-P2OIL

Process: GB3

Process Description:

The Gas Burner Process defined in Process GB3 applies to processing unit #3. Byproduct uncondensed gases consisting of low molecular weight compounds generated by the reactor are mixed with normal natural gas as required and fed to primary burners to supply the heat for the Reactor, the Premelt Tank, and the Carbon Removal Tank in the Plastic2 Oil process P03. There are also secondary burners to supply additional heat to the Premelt Tank and the Reactor. All of the flue gas from the primary and secondary burners is vented through Emission Point 30006.

Emission Source/Control: 00B3A - Combustion  
Design Capacity: 3.5 million BTUs per hour

Emission Source/Control: 00B6A - Combustion  
Design Capacity: 3.5 million BTUs per hour

Emission Source/Control: 00BU3 - Combustion  
Design Capacity: 3.5 million Btu per hour

Emission Source/Control: 00BU6 - Combustion  
Design Capacity: 3.5 million Btu per hour



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Design Capacity: 4 million Btu per hour

Emission Source/Control: 00BU2 - Combustion

Design Capacity: 4 million Btu per hour

Emission Source/Control: 00CS2 - Control

Control Type: SPRAY TOWER

**Item 23.7(From Mod 4):**

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

Emission Unit: 3-P2OIL

Process: P03

Process Description:

The Plastic2Oil Process defined in Process P03 applies to processing unit #3, which is limited to a maximum feed rate of 4000 lbs/hour of plastic materials. Plastic materials are first melted in a premelt tank and then gasified in a rotary kiln reactor. Part of the time oil (meeting Parts 225-1 and 225-2) will be co-fed with the plastic. Most of the gasified material is condensed forming a diesel-like fuel. The byproduct uncondensed gases contain lower molecular weight materials which are used as an energy source for the process. This process also contains a Carbon Removal Tank. Residue is intermittently removed for disposal.

Emission Source/Control: 00B3A - Combustion

Design Capacity: 3.5 million BTUs per hour

Emission Source/Control: 00BU3 - Combustion

Design Capacity: 3.5 million Btu per hour

Emission Source/Control: 00CS3 - Control

Control Type: SPRAY TOWER

**Condition 4-9: Compliance Demonstration**

**Effective between the dates of 06/27/2013 and 06/30/2014**

**Applicable State Requirement:6 NYCRR 212.4 (c)**

**Item 4-9.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 3-P2OIL

Emission Point: 30007

**Item 4-9.2:**

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  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2014.  
Subsequent reports are due every 12 calendar month(s).

