



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR RESOURCES**

**OPERATING PERMIT**

*TORAY PLASTICS (AMERICA), INC.*

**PERMIT NO. RI-28-20**

(Renewal date: February 5, 2020)  
(Expiration date: February 5, 2025)

**Pursuant to the provisions of Operating Permits, 250-RICR-120-05-29, this operating permit is issued to:**

Toray Plastics (America), Inc.  
50 Belver Ave.  
North Kingstown, RI 02852-7520

**This permit shall be effective from the date of its issuance. All terms and conditions of the permit are enforceable by USEPA and citizens under the federal Clean Air Act, 42 U.S.C. 7401, et seq., unless specifically designated as not federally enforceable.**

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**Laurie Grandchamp, P.E., Chief  
Office of Air Resources  
Date of issuance: 02/05/2020**

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## SECTION I. SOURCE SPECIFIC CONDITIONS

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### A. Boilers

#### 1. Requirements for Emissions Units B002 and B003

The following requirements are applicable to:

- Emission unit B002, which is a 40.4 MMBTU/hr Nebraska boiler, Model No. NS-C-46, equipped with a Coen DAF low NO<sub>x</sub> burner, which burns natural gas. [Approval No. 1209]
- Emission unit B003, which is a 93.6 MMBTU/hr (oil) / 98.5 MMBTU/hr (natural gas) Nebraska boiler, Model No. NS-E-68, equipped with a Coen low NO<sub>x</sub> burner with flue gas recirculation. B003 is capable of burning natural gas and diesel oil. [Approval No. 1363]

#### a. **Emission Limitations**

##### (1) Natural Gas Firing

##### (a) Nitrogen oxides (as nitrogen dioxide (NO<sub>2</sub>))

- (i) The emission rate of nitrogen oxides discharged to the atmosphere from the exhaust flue of B002 shall not exceed 0.08 lbs. per million BTU heat input or 3.23 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(1)(a)]
- (ii) The emission rate of nitrogen oxides discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.034 lbs. per million BTU heat input or 3.35 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(a)(1)]

##### (b) Carbon Monoxide (CO)

- (i) The emission rate of carbon monoxide discharged to the atmosphere from the exhaust flue of B002 shall not exceed 0.4 lbs. per million BTU heat input or 16.20 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(1)(b)]
- (ii) The emission rate of carbon monoxide discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.073 lbs per million BTU heat input or 7.19 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(a)(2)]

(c) Total Non-methane Hydrocarbons (NMHC)

(i) The emission rate of non-methane hydrocarbons discharged to the atmosphere from the exhaust flue of B002 shall not exceed 0.02 lbs. per million BTU heat input or 0.81 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(1)(c)]

(ii) The emission rate of non-methane hydrocarbons discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.0042 lbs. per million BTU heat input or 0.41 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(a)(3)]

(d) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the exhaust flue of B002 and B003 shall not exceed 0.10 lbs. per million BTU heat input per unit. [250-RICR-120-05-13.6(A)]

(2) Oil Firing

(a) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))

The emission rate of nitrogen oxides discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.076 lbs. per million BTU heat input or 7.10 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(b)(1)]

(b) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.078 lbs. per million BTU heat input or 7.29 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(b)(2)]

(c) Sulfur Dioxide (SO<sub>2</sub>)

(i) All fuel burned in B003 shall contain no more than 0.0015 percent sulfur by weight (15 ppm). [250-RICR-120-05-8.6(A), Approval Nos. 1209 & 1363(A)(2)(b)(3)(a), 40 CFR 60.42c(d)]

(ii) The emission rate of sulfur dioxide discharged to the atmosphere from the exhaust flue of B003 shall not exceed 4.77 lbs/hr. [Approval Nos. 1209 & 1363(A)(2)(b)(3)(b)]

(d) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.04 lbs. per million BTU heat input or 3.74

lbs/hr, whichever is more stringent. [250-RICR-120-05-13.6(A), Approval Nos. 1209 & 1363(A)(2)(b)(4)]

(e) Total Non-methane Hydrocarbons (NMHC)

The emission rate of total non-methane hydrocarbons discharged to the atmosphere from the exhaust flue of B003 shall not exceed 0.0067 lbs. per million BTU heat input or 0.63 lbs/hr, whichever is more stringent. [Approval Nos. 1209 & 1363(A)(2)(b)(5)]

(3) Opacity

Visible emissions from the exhaust flue of B002 and B003 shall not exceed 10% opacity (six-minute average). [Approval Nos. 1209 & 1363(A)(3), 250-RICR-120-05-1.6, 40 CFR 60.43c(d)] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

**b. Operating Requirements**

(1) The maximum firing rate of B002, shall not exceed 40,423 ft<sup>3</sup>/hr of natural gas. [Approval Nos. 1209 & 1363(B)(1)]

(2) The maximum firing rate of B003, shall not exceed 98,134 ft<sup>3</sup>/hr of natural gas or 668 gal/hr of diesel fuel oil. [Approval Nos. 1209 & 1363(B)(2)]

(3) The flue gas recirculation system for B003 shall be in full operation whenever B003 is in operation. [Approval Nos. 1209 & 1363(B)(3)]

(4) The permittee shall conduct a performance tune-up of B003 every five years as specified in Conditions (4)(a-f) of this subsection and keep records as required in Condition I.A.1.e(12) of this permit to demonstrate continuous compliance. The permittee shall conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the boiler over the last 12 months prior to the tune-up. Each five-year tune-up shall be conducted no more than 61 months after the previous tune-up. The permittee shall set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. [40 CFR 63.11201(b), 40 CFR 63.11223(c), 40 CFR 63.11214(b), 40 CFR 63 Subpart JJJJJ Table 2(4), Approval Nos. 1209 & 1363(B)(5)]

(a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. [40 CFR 63.11223(b)(1), Approval Nos. 1209 & 1363(B)(5)(a)]

(b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. [40 CFR 63.11223(b)(2), Approval Nos. 1209 & 1363(B)(5)(b)]

- (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. [40 CFR 63.11223(b)(3), Approval Nos. 1209 & 1363(B)(5)(c)]
  - (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the boiler is subject. [40 CFR 63.11223(b)(4), Approval Nos. 1209 & 1363(B)(5)(d)]
  - (e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR 63.11223(b)(5), Approval Nos. 1209 & 1363(B)(5)(e)]
  - (f) If the boiler is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup. [40 CFR 63.11223(b)(6), Approval Nos. 1209 & 1363(B)(5)(f)]
  - (g) The permittee may delay the burner inspection specified in Condition (4)(a) of this subsection and the inspection of the system controlling the air-to-fuel ratio specified in Condition (4)(c) of this subsection until the next scheduled unit shutdown, but the owner/operator shall inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. [40 CFR 63.11223(b)(7), Approval Nos. 1209 & 1363(B)(5)(g)]
- (5) B002 shall be tuned at least once every two (2) years in accordance with the procedure described in "Control of Nitrogen Oxides" 250-RICR-120-05-27.11. [Approval Nos. 1209 & 1363(B)(6), 250-RICR-120-05-29.10(C)(1)(b)]
  - (6) Any fuel oil burned in B002 shall be only during periods of gas curtailment, gas supply interruption, startups or for periodic testing, maintenance or operator training on fuel oil. Periodic testing, maintenance or operator training on fuel oil shall not exceed a combined total of 48 hours during any calendar year. [Approval Nos. 1209 & 1363(B)(7)]

**c. Testing Requirements**

- (1) Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.A.1.a(3) of this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [250-RICR-120-05-1.7(A-B), 40 CFR 60.45c(a)(8)]

(2) Sulfur Oxides

- (a) Compliance with fuel oil sulfur limits contained in Condition I.A.1.a.(2)(c)(i) of this permit may be determined based on a certification from the fuel supplier. [Approval Nos. 1209 and 1363(E)(1), 250-RICR-120-05-29.10(C)(1)(b)]
- (b) Fuel supplier certification shall include the following information: [40 CFR 60.48c(f)]
  - (i) The name of the supplier. [Approval Nos. 1209 and 1363(E)(1)(a), 40 CFR 60.48c(f)(1)(i)]
  - (ii) A statement that the oil complies with the specification for fuel oil number 1 or 2, as defined by the American Society for Testing and Materials in the most recent version of ASTM D396 "Standard Specification for Fuel Oils". Diesel fuel oil numbers 1 or 2, as defined by the most recent version of ASTM D975 "Standard Specification for Diesel Fuel" [Approval Nos. 1209 and 1363(E)(1)(b), 40 CFR 60.48c(f)(1)(ii)]
  - (iii) The sulfur content of the fuel oil; and [Approval Nos. 1209 and 1363(E)(1)(c), 40 CFR 60.48c(f)(1)(iii)]
  - (iv) The method used to determine the sulfur content of the oil. [Approval Nos. 1209 and 1363(E)(1)(d)]
- (c) As an alternative to fuel supplier certification, the permittee may elect to sample the fuel prior to combustion. Sampling and analysis shall be conducted for the oil in the initial tank of oil to be fired in emission units listed in this section and after each new shipment of oil is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. [Approval Nos. 1209 and 1363(E)(2), 40 CFR 60.46c(d)(2)]
- (d) Each fuel supplier certification or each fuel oil analysis must demonstrate that the fuel oil contains 0.0015 percent sulfur by weight (15 ppm) or less. [Approval Nos. 1209 and 1363(E)(3)]

(3) Particulates

Compliance with the particulate emissions limitations contained in Conditions I.A.1.a(1)(d) and I.A.1.a(2)(d) of this permit, shall be determined by emission testing conducted by the permittee according to 40 CFR Appendix A-3 §60, Method 5, incorporated in 250-RICR-120-05-13.4, or another method approved by the Office of Air Resources and the USEPA, shall be used. [250-RICR-120-05-13.7(A)]

The requirements of particulate emissions testing may be waived if the Director and the USEPA: [250-RICR-120-05-13.7(C)]

- (a) Specifies or approves, in a specific case, the use of a reference method with minor changes in methodology; or [250-RICR-120-05-13.7(C)(1)]



- (b) Approves the use of an equivalent or alternative method the results of which he has determined to be adequate for indicating whether the permittee is in compliance; or [250-RICR-120-05-13.7(C)(2)]
- (c) Finds that the permittee has demonstrated by other means to the Director's and the USEPA's satisfaction that the source is in compliance with the relevant emissions standards. [250-RICR-120-05-13.7(C)(3)]

In the absence of data from particulate emissions testing, the Director and the USEPA may determine that an emissions unit is or is not in compliance with the emissions limitations contained in Conditions I.A.1.a(1)(d) and I.A.1.a(2)(d) of this permit based on available information including, but not limited to, type of fuel burned, design of unit, efficiency of air pollution control systems, operating and maintenance procedures, and emission test results on similar units. [250-RICR-120-05-13.7(B)]

(4) Nitrogen Oxides (NO<sub>x</sub>)

Emissions testing for B003 shall be conducted every five (5) years to determine compliance with the nitrogen oxide emission limitation for natural gas and fuel oil firing. Emission testing shall comply with the following requirements. [Approval Nos. 1209 and 1363(D)(1), 40 CFR 60.8(a)]

- (a) A stack testing protocol shall be submitted to the Office of Air Resources for review at least 60 days prior to the performance of any stack tests. The permittee shall provide the Office of Air Resources at least 60 days prior notice of any performance test. [Approval Nos. 1209 and 1363(D)(2)]
- (b) All test procedures used for stack testing shall be approved by the Office of Air Resources prior to the performance of any stack test. [Approval Nos. 1209 and 1363(D)(3)]
- (c) The permittee shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [Approval Nos. 1209 and 1363(D)(4), 40 CFR 60.8(c)]
- (d) All stack testing shall be observed by a representative of the Office of Air Resources to be considered acceptable, unless the Office of Air Resources provides written authorization to the permittee to conduct the testing without an observer present. [Approval Nos. 1209 and 1363(D)(6)]
- (e) A final report of the results of emission testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing. [Approval Nos. 1209 and 1363(D)(7)]
- (f) Compliance with the emission limitations shall be based on one-hour average concentrations. Emissions testing shall consist of 3 – one-hour test runs. Compliance with the emission limitation shall be demonstrated utilizing the

arithmetic mean of the test runs. [Approval Nos. 1209 and 1363(D)(8), 40 CFR 60.8(f)]

**d. Monitoring Requirements**

- (1) Continuous emissions monitoring equipment shall be maintained for opacity when the B003 is operating on fuel oil. The device shall be calibrated to sound an audio alarm at 10% opacity. The audio alarm shall be located in an area where it will be heard by the operator or another person responsible for the boiler. [250-RICR-120-05-6.6(B), Approval Nos. 1209 & 1363(C)(1)]
- (2) A measuring device shall be installed, operated and maintained to measure the percent flue gas recirculated in B003 at any given boiler load. [Approval Nos. 1209 & 1363(C)(2)]
- (3) Natural gas and fuel oil flows to all of the emission units listed in this section shall be continuously measured. [Approval Nos. 1209 & 1363(C)(3)]
- (4) The oxygen content of the flue gas (%) shall be monitored continuously for B003. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (5) The Flue Gas Recirculation (FGR) damper position (% open) shall be monitored continuously for B003. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]

**e. Recordkeeping Requirements**

- (1) Natural gas and fuel oil flows to each of the boilers listed in this section shall be continuously recorded. [Approval Nos. 1209 & 1363(C)(3)]
- (2) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of natural gas or fuel oil combusted in the boilers listed in this section. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1209 & 1363(F)(1)]
- (3) Compliance with the fuel oil sulfur limit under Condition I.A.1.a(2)(c)(i) of this permit shall be determined based on each fuel oil analysis or fuel oil certification. [Approval Nos. 1209 & 1363(F)(2)]
- (4) The permittee shall retain copies of all fuel oil analyses or fuel oil certification for each calendar quarter. These records shall be made accessible for review by the Office of Air Resources or USEPA. [Approval Nos. 1209 & 1363(F)(3)]
- (5) The permittee shall maintain records of the hours of operation and the quantity of fuel combusted during each day for each of the emission units listed in this section. [Approval Nos. 1209 & 1363(G)(4), 40 CFR 60.48c(g)]
- (6) The oxygen content of the flue gas (%) of B003 shall be recorded continuously. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]

- (7) The permittee shall record the oxygen content of the flue gas, the fuel flow rate, and the damper position (% open) of the FGR of B003 a minimum of once per day. The date, time and measurement shall be recorded. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (8) Natural gas and fuel oil flows, the oxygen content of the flue gas (%) and the FGR damper position (% open) of B003 shall be recorded during each stack test conducted pursuant to Condition I.A.1.c(4). [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (9) The permittee shall maintain a record of the boiler load and corresponding FGR damper position based on the most recent adjustment/calibration of the FGR damper control system. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (10) The permittee shall maintain records verifying that a tune-up has been performed on B002 in accordance with the procedure described in 250-RICR-120-05-27.11 that includes the following information:
  - (a) The date the tune-up was performed.
  - (b) The name of the person who performed the tune-up.
  - (c) The final excess oxygen setting.
  - (d) The O<sub>2</sub>/CO curve or O<sub>2</sub>/smoke curve that has been developed as part of the procedure. [Approval Nos. 1209 & 1363(F)(4), 250-RICR-120-05-27.10(H)(1-4), 250-RICR-120-05-29.10(C)(1)(b)]
- (11) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of each of the boilers listed in this section. [40 CFR 60.7(b)]
- (12) The permittee shall maintain the following records for Boiler B003: [Approval Nos. 1209 & 1363(F)(5), 40 CFR 63.11225(c)]
  - (a) As required in §63.10(b)(2)(xiv), the permittee shall maintain a copy of each notification and report that is submitted to comply with this permit and all documentation supporting any Initial Notification or Notification of Compliance Status that is submitted. [Approval Nos. 1209 & 1363(F)(5)(a), 40 CFR 63.11225(c)(1)]
  - (b) Records shall identify the boiler, the date of tune-up was conducted, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. [Approval Nos. 1209 & 1363(F)(5)(b), 40 CFR 63.11225(c)(2)(i)]
  - (c) A copy of the energy assessment report for B003. [Approval Nos. 1209 & 1363(F)(5)(c), 40 CFR 63.11225(c)(2)(iii)]

- (d) Records of the occurrence and duration of each malfunction of the boiler and monitoring equipment. [Approval Nos. 1209 & 1363(F)(5)(d), 40 CFR 63.11225(c)(4)]
  - (e) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Condition I.A.1.g(4) of this permit, including corrective actions to restore the malfunctioning boiler or monitoring equipment to its normal or usual manner of operation. [Approval Nos. 1209 & 1363(F)(5)(e), 40 CFR 63.11225(c)(5)]
- (13) If the permittee of B003 switched fuels or made a physical change to the B003 and the fuel switch or change resulted in the applicability of a different subcategory within 40 CFR 63 Subpart JJJJJ, the permittee shall provide notice of the date upon which fuel was switched, made the physical change within 30 days of the change. The notification shall identify: [Approval Nos. 1209 & 1363(F)(8), 40 CFR 63.11225(g)]
- (a) The name of the permittee of the affected source, the location of the source, notification of which fuel B003 has switched to or made the physically changed and the date of the notice. [Approval Nos. 1209 & 1363(F)(8)(a), 40 CFR 63.11225(g)(1)]
  - (b) The date upon which the fuel switch, or physical change occurred. [Approval Nos. 1209 & 1363(F)(8)(b), 40 CFR 63.11225(g)(2)]

**f. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.A.1 of this permit or any other applicable air pollution control rules and regulations. [Approval Nos. 1209 and 1363(F)(11)]
- (2) The permittee shall submit copies of all fuel supplier certifications or fuel oil analyses to the Office of Air Resources for each six-month period. This six-month period submittal shall include a certified statement, signed by the permittee, that the records of fuel supplier certifications or fuel oil analyses submitted represent all of the fuel combusted during the reporting period. Each report shall be postmarked by the 30<sup>th</sup> day following the end of the six-month period. [40 CFR 60.48c(e)(11), 40 CFR 60.48c(j)]
- (3) The permittee shall notify the Office of Air Resources whenever the oxygen content of the flue gas from B003 is less than 1.9% or greater than 10%. when B003 is burning natural gas. This notification shall be provided in the semi-annual monitoring report required by condition II.CC.2. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (4) The permittee shall notify the Office of Air Resources whenever the oxygen content of the flue gas from B003 is less than 3.0% or greater than 7.0%. when B003 is burning fuel oil. This notification shall be provided in the semi-annual monitoring report required by condition II.CC.2. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (5) The permittee shall notify the Office of Air Resources whenever the damper position of the FGR fan for B003 is not in the correct position for the corresponding boiler load.

This notification shall be provided in the semi-annual monitoring report required by condition II.CC.2. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]

- (6) The permittee shall maintain on-site and submit, if requested by the Office of Air Resources or the USEPA, a report containing the information in Conditions (6)(a-c) of this subsection for B003: [Approval Nos. 1209 & 1363(F)(6), 40 CFR 63.11223(b)(6)]
  - (a) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. [Approval Nos. 1209 & 1363(F)(6)(a), 40 CFR 63.11223(b)(6)(i)]
  - (b) A description of any corrective actions taken as a part of the tune-up of the boiler. [Approval Nos. 1209 & 1363(F)(6)(b), 40 CFR 63.11223(b)(6)(ii)]
  - (c) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [Approval Nos. 1209 & 1363(F)(6)(c), 40 CFR 63.11223(b)(6)(iii)]
- (7) The permittee shall prepare a 5-year Compliance Certification Report by March 1<sup>st</sup> for the previous 5 calendar years containing the information specified in Conditions (7)(a-b) of this subsection for Boiler B003. The report shall be made available to the Office of Air Resources and the USEPA upon request. The permittee shall submit the report by March 15<sup>th</sup> if there were any instances described in (7)(c) of this subsection. [Approval Nos. 1209 & 1363(F)(7), 40 CFR 63.11225(b)]
  - (a) Company name and address. [Approval Nos. 1209 & 1363(F)(7)(a), 40 CFR 63.11225(b)(1)]
  - (b) Statement by responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of §40 CFR Part 63 Subpart JJJJJ. The notification shall include the following certification of compliance, and signed by the responsible official: [Approval Nos. 1209 & 1363(F)(7)(b), 40 CFR 63.11225(b)(2)]
    - (i) "This facility complies with the requirements in §40 CFR 63.11223 to conduct a five-year performance tune-up of the boiler." [Approval Nos. 1209 & 1363(F)(7)(b)(1), 40 CFR 63.11225(b)(2)(i)]
  - (c) If there are any deviations from the applicable requirements during the reporting period. Include a description of the deviations, the time periods during which the deviations occurred, and the corrective actions taken. [Approval Nos. 1209 & 1363(F)(7)(c), 40 CFR 63.11225(b)(3)]

**g. Other Requirements**

- (1) To the extent consistent with the requirements of Section I.A.1 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval Nos. 1209 & 1363(G)(1)]
- (2) The sulfur dioxide emission limits and fuel oil sulfur limits in Section I.A.1.a(2)(c) of this permit shall apply at all times, including periods of startup, shutdown and malfunction. [40 CFR 60.42c(i)]
- (3) The particulate matter and opacity standards in Sections I.A.1.a(1)(d), I.A.1.a(2)(d), I.A.1.a(3) of this permit shall apply at all times, except during periods of startup, shutdown and malfunction. [40 CFR 60.43c(d)]
- (4) At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this permit have been achieved. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. [Approval Nos. 1209 & 1363(G)(3)]
- (5) B002 and B003 are subject to the requirements of the Federal New Source Performance Standards §40 CFR 60, Subparts A (General Provisions), Dc (Small Industrial-Commercial-Institutional Steam Generating Units). Compliance with all applicable provisions therein is required. [Approval Nos. 1209 & 1363(G)(4)]
- (6) Boiler B003 is subject to the requirements of §40 CFR 63, Subparts A (General Provisions), JJJJJ (National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources). Compliance with all applicable provisions therein is required. [Approval Nos. 1209 & 1363(G)(5)]

**2. Requirements for Emission Units B004, B005, B006, B007, B008 and B009**

The following requirements are applicable to:

- Emission units B004 and B005, each of which is a 4.31 MMBTU/Hr., First Thermal Systems furnace, Model No. 200-4-HHC-NA-G-FM. B004 and B005 are capable of burning propane and natural gas.
- Emission units B006 and B007, each of which is a 4.8 MMBTU/Hr., First Thermal Systems furnace, Model No. 200-4-HHC-NA-6-FM. B006 and B007 are capable of burning propane and natural gas.

- Emission unit B008, which is a 4.39 MMBTU/Hr., First Thermal Systems furnace, Model No. 300-5-2-HEHC-NA-LONOX-G-F-M-N4. B008 is capable of burning propane and natural gas.
- Emission unit B009, which is a 5.77 MMBTU/Hr., First Thermal Systems furnace, Model No. 300-3-2-HEHC-NA-LONOX-G-F-M-N4. B009 is capable of burning propane and natural gas.

There are no specific applicable requirements for B004-B009. This does not relieve the permittee from compliance with the provisions of the General Conditions, outlined in Section II of this permit, as they apply to for B004-B009.

## **B. Generators/Fire Pumps**

### **1. Requirements for Emission Units B010, B011, B012 and B045**

The following requirements are applicable to:

- Emission unit B010, which is a 250 HP John Deere Internal Combustion Engine, Model No. 6076A, which burn #2 fuel oil. B010 is an emergency/standby unit.
- Emission unit B011, which is a 568 HP Detroit Diesel Internal Combustion Engine, Model No. 80837405, which burn #2 fuel oil. B011 is an emergency/standby unit.
- Emission unit B012, which is a 643 HP Detroit Diesel Internal Combustion Engine, Model No. 80837416, which burn #2 fuel oil. B012 is an emergency/standby unit.
- Emissions unit B045, which is a 240 HP Cummins Internal Combustion Engine, Model No. 6BTA5.9-F1, which burns diesel fuel oil. B045 is an emergency fire pump.

#### **a. Emission Limitations**

##### **(1) Opacity**

The permittee shall not emit into the atmosphere any air contaminant for a period or periods aggregating more than three minutes in any one hour which is greater than or equal to 20 percent opacity. [250-RICR-120-05-1.6] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

##### **(2) Sulfur oxides**

The sulfur content of fuel oil used in B010-B012 and B045 or fuel oil stored for use in B010-B012 and B045 shall demonstrate compliance with Sulfur Content of Fuels, 250-RICR-120-05-8 and Section II.U of this permit. [250-RICR-120-05-8.6(A), 40 CFR 63.6604(b)]

**b. Operating Requirements**

- (1) Emission units B010-B012 and B045 shall be operated less than 500 hours each, during any consecutive twelve (12) month period. If the hours of operation for any emergency generator/fire pump listed in this section exceed 500 hours each in any 12-month period, the unit shall immediately be in compliance with RACT as specified in Control of Nitrogen Oxide Emissions 250-RICR-120-05-27. [250-RICR-120-05-27.6(D), 40 CFR 63.6640(f)(1)]
- (2) Emission units B010-B012 shall be operated only as a mechanical or electrical power source when the primary power source has been rendered inoperable. This does not include power interruptions pursuant to an interruptible power service agreement. [250-RICR-120-05-27.5(A)(4)]
- (3) The permittee shall comply with the following requirements for each of emergency generators/fire pump listed in this section: [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)]
  - (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; and [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(a)]
  - (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(b)]
  - (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(c)]
- (4) The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition (3)(a) of this subsection. The oil analysis shall be performed at the same frequency specified for changing the oil in Condition (3)(a) of this subsection. The analysis program shall at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 business days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the engine. [40 CFR 63.6625(i), 40 CFR Subpart ZZZZ Table 2d footnote 1]



- (5) If the emergency generators/fire pump listed in this section are operating during an emergency and it is not possible to shut down the engine in order to perform the requirements on the schedule of Condition (3) of this subsection, or if performing the requirements of Condition (3)(a-c) of this subsection on the required schedule would otherwise pose an unacceptable risk under federal or state law, the requirements of Condition (3)(a-c) of this subsection can be delayed until the emergency is over or the unacceptable risk under federal or state law has abated. The requirements of Condition (3)(a-c) of this subsection should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal or state law has abated. The permittee shall report any failure to perform the requirements of Condition (3)(a-c) of this subsection on the schedule required and the federal or state law under which the risk was deemed unacceptable. [40 CFR 63 Subpart ZZZZ, Table 2d footnote 2]
- (6) The permittee shall operate each of the emergency generators/fire pump listed in this section according to the requirements in Conditions (6)(a-b) of this subsection. In order for each of the emergency generators listed in this section to be considered an emergency engine, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year as described in Conditions (6)(a-b) of this subsection, is prohibited. If the permittee does not operate each of the emergency generators listed in this section according to the requirements in Conditions (6)(a-b) of this subsection, the emergency generators listed in this section will not be considered an emergency engine under this permit and shall meet all requirements for non-emergency engines under 40 CFR Part 63 Subpart ZZZZ. [40 CFR 63.6640(f)]
- (a) The permittee may operate each of the emergency generators/fire pump listed in this section for any combination of the purposes specified in Condition (6)(a)(i) of this subsection for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition (6)(b) of this subsection counts as part of the 100 hours per calendar year allowed by this Condition.<sup>1</sup> [40 CFR 63.6640(f)(2)]
- (i) The emergency generators/fire pump listed in this section may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal or state government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal or

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<sup>1</sup> Be advised that on May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit **vacated** the provisions of 40 CFR 63, Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”, which allowed emergency engines to operate for up to 100 hours for emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2 or for voltage or frequency deviations of 5 percent or greater below standard voltage or frequency. Specifically, the provisions in 40 CFR 63.6640(f)(2)(ii)-(iii) were vacated. Therefore, if you plan to operate your emergency generator to address voltage or frequency deviations or in emergency demand response, you must apply for a modification to your minor source permits to allow the units to be operated in non-emergency situations.

state standards require maintenance and testing of the emergency engine beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]

- (b) The emergency generators/fire pump listed in this section may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. [40 CFR 63.6640(f)(4)]
- (7) The permittee shall be in compliance with the operating limitations, and other requirements in Subpart ZZZZ for each of the emergency generators/fire pump listed in this section at all times. [40 CFR 63.6605(a)]
- (8) At all times the permittee shall operate and maintain each of the emergency generators/fire pump listed in this section including associated air pollution control equipment (if any) and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]
- (9) The permittee shall operate and maintain each of the emergency generators/fire pump listed in this section and after-treatment control device (if any) according to the manufacturer's emission-related operation and maintenance instructions or the permittee shall develop a maintenance plan which shall provide to the extent practicable for the maintenance and operation of each of the emergency generators listed in this section in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)(3)]
- (10) The permittee shall minimize the time spent at idle during startup by the emergency generators/fire pump listed in this section and minimize the startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h), 40 CFR Subpart ZZZZ Table 2d]
- (11) The emergency generators listed in this section shall be used only during emergencies or for maintenance or testing purposes. Emergency means an electric power outage due to a failure of the electrical grid, on-site disaster, local equipment failure, or public service emergencies such as flood, fire, or natural disaster. [See Footnote 1]
- (12) The emergency generators listed in this section shall not be operated in conjunction with any voluntary demand-reduction program or any other interruptible power supply arrangement with a utility, other market participant or system operator. [See Footnote 1]

**c. Monitoring Requirements**

The permittee shall maintain a non-resettable elapsed time meter on each emergency generator/fire pump listed in this section to indicate, in cumulative hours, the elapsed engine operating time. [250-RICR-120-05-27.10(J)(1), 40 CFR 63.6625(f)]

**d. Testing Requirements**

(1) Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.B.1.a(1) of this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [250-RICR-120-05-1.7(A-B)]

(2) Sulfur oxides

Compliance with the sulfur limitations contained in Condition I.B.1.a(2) of this permit shall be determined by the procedures referenced in Condition II.U.3 of this permit. [250-RICR-120-05-29.10(C)(1)(b)]

(3) The permittee shall comply with Condition I.B.1.b(3)(a-c) of this permit by either: [40 CFR 63.6640(a)]

(a) Operating and maintaining each of the emergency generators/fire pump listed in this section according to the manufacture's emission related operation and maintenance instructions or; [40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ Table 6 (9)(a)(i)]

(b) The permittee shall develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of each of the emergency generators/fire pump listed in this section in a manner consistent with good air pollution control practice of minimizing emissions. [40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ Table 6 (9)(a)(ii)]

**e. Recordkeeping Requirements**

(1) The permittee shall on a monthly basis, no later than fifteen (15) days after the first of each month, determine and record the hours of operation for each of the emergency generators/fire pump listed in this section or the previous twelve (12) month period. [250-RICR-120-05-27.10(J)(2)]

(2) The permittee shall keep records of the hours of operation of each of the emergency generators/fire pump listed in this section that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. The permittee shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 CFR 63.6655(f)(2)]

- (3) The permittee shall maintain the following records: [40 CFR 63.6655(a)]
- (a) A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart ZZZZ including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
  - (b) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
  - (c) Records of all required maintenance performed on the monitoring equipment. [40 CFR 63.6655(a)(4)]
  - (d) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition I.B.1.b(8) of this permit including corrective actions to restore malfunctioning process and equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
  - (e) Records to show continuous compliance with Condition I.B.1.d(3) of this permit. [40 CFR 63.6655(d)]
  - (f) Records of the maintenance conducted on each of the emergency generators/fire pump listed in this section in order to demonstrate that the permittee operated and maintained each of the emergency generators/fire pump listed in this section and after-treatment control device (if any) according to the permittee's own maintenance plan. [40 CFR 63.6655(e)(2)]

**f. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources, in writing, whenever the hours of operation in any twelve (12) month period exceeds 500 hours for each of the generators listed in this section. [250-RICR-120-05-27.10(J)(3)]
- (2) The permittee shall report each instance in which the operating requirements in Conditions I.B.1.b(3)(a-c) of this permit were not met. These instances are considered deviations from the operating limitations of this permit. These deviations shall be reported according to the requirements in Conditions (2)(a)(i-v) of this subsection. [40 CFR 63.6640(b), 63.6650(d)]
  - (a) The report shall contain the following information: [40 CFR 63.6650(c)]
    - (i) Company name and address. [40 CFR 63.6650(c)(1)]
    - (ii) Statement by a responsible official with that official's name, title and signature, certifying the accuracy of the content of the report. [40 CFR 63.6650(c)(2)]

- (iii) Date the report and beginning and ending dates of the reporting period. [40 CFR 63.6650(c)(3)]
  - (iv) The total operating time of the emergency generators/fire pump at which the deviation occurred during the reporting period. [40 CFR 63.6650(d)(1)]
  - (v) Information on the number, duration and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken. [40 CFR 63.6650(d)(2)]
- (3) The permittee shall report each instance in which the applicable requirements in 40 CFR 63 Subpart ZZZZ Table 8 were not meet. [40 CFR 63.6640(e)]

**g. Other Requirements**

The permittee is subject to the requirements of 40 CFR Part 63.1-15, Subpart A, “General Provisions” and 40 CFR Part 63, Subpart ZZZZ “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”. Compliance with all applicable provisions therein is required, unless otherwise stated in Section I.B.1 of this permit. [40 CFR 63.6665]

**2. Requirements for Emission Units P117 and P118**

The following requirements are applicable to:

- Emission unit P117, which is a 5 MW Kawasaki lean-burn engine, Model No. KG-12V60Hz, which burns natural gas. P117 is equipped with air pollution control device C024, which is a Steuler SCR/Oxidation Catalyst System using urea injection, Model No. DeNO<sub>x</sub>-5000/KG12V60Hz. [P117 - Approval No. 2218, C024 – Approval No. 2220]
- Emission unit P118, which is a 7.5 MW Kawasaki lean-burn engine, Model No. KG-18V60Hz, which burns natural gas. P118 is equipped with air pollution control device C025, which is a Steuler SCR/Oxidation Catalyst System using urea injection, Model No. DeNO<sub>x</sub>-7500/KG18V60Hz. [P118 - Approval No. 2219, C025 – Approval No. 2221]

**a. Emission Limitations**

- (1) Nitrogen Oxides (as Nitrogen Dioxide (NO<sub>2</sub>))
  - (a) The emission rate of nitrogen oxides discharged to the atmosphere from P117 exhaust shall not exceed 0.45 pounds per megawatt-hour (lb/MWh) or 2.24 pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(1)(a), 40 CFR 60.4233(e), 40 CFR 60, Subpart JJJJ, Table 1]
  - (b) The emission rate of nitrogen oxides discharged to the atmosphere from P118 exhaust shall not exceed 0.45 pounds per megawatt-hour (lb/MWh) or 3.36

pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(2)(a), 40CFR 60.4233(e), 40 CFR 60, Subpart JJJJ, Table 1]

(2) Carbon Monoxide (CO)

(a) The emission rate of carbon monoxide discharged to the atmosphere from P117 exhaust shall not exceed 1.81 pounds per megawatt-hour (lb/MWh) or 9.05 pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(1)(b), 40 CFR 60.4233(e), 40 CFR 60, Subpart JJJJ, Table 1]

(b) The emission rate of carbon monoxide discharged to the atmosphere from P118 exhaust shall not exceed 1.81 pounds per megawatt-hour (lb/MWh) or 13.58 pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(2)(b), 40 CFR 60.4233(e), 40 CFR 60, Subpart JJJJ, Table 1]

(3) Total Non-methane Hydrocarbons (NMHC)

(a) The emission rate of total non-methane hydrocarbons discharged to the atmosphere P117 exhaust shall not exceed 0.45 pounds per megawatt-hour (lb/MWh) or 2.24 pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(1)(c)]

(b) The emission rate of total non-methane hydrocarbons discharged to the atmosphere from P118 exhaust shall not exceed 0.45 pounds per megawatt-hour (lb/MWh) or 3.36 pounds per hour, whichever is more stringent. [Approval Nos. 2218-2221(A)(2)(c)]

(4) Ammonia (NH<sub>3</sub>)

(a) The concentration of ammonia discharged to the atmosphere from P117 exhaust shall not exceed 5 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (one-hour average). [Approval Nos. 2218-2221(A)(1)(d)(1)]

(b) The emission rate of ammonia discharged to the atmosphere from P117 exhaust shall not exceed 0.32 pounds per hour. [Approval Nos. 2218-2221(A)(1)(d)(2)]

(c) The concentration of ammonia discharged to the atmosphere from P118 exhaust shall not exceed 5 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (one-hour average). [Approval Nos. 2218-2221(A)(2)(d)(1)]

(d) The emission rate of ammonia discharged to the atmosphere from P118 exhaust shall not exceed 0.48 pounds per hour. [Approval Nos. 2218-2221(A)(2)(d)(2)]

(5) Opacity

Visible emissions from the engine exhaust listed in this section shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one hour. [Approval Nos. 2218-2221(A)(1-2)(e), 250-RICR-120-05-1.6] Where the presence

of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

**b. Operating Requirements**

- (1) Natural gas shall be the only fuel fired in the engines listed in this section. [Approval Nos. 2218-2221(B)(1),40 CFR 60.4243(e)]
- (2) The maximum firing rate for P117 shall not exceed 39,733 ft<sup>3</sup>/hr. of natural gas. [Approval Nos. 2218-2221(B)(2)]
- (3) The maximum firing rate for P118 shall not exceed 59,599 ft<sup>3</sup>/hr. of natural gas. [Approval Nos. 2218-2221(B)(3)]
- (4) Each SCR system and oxidation catalyst listed in this section shall be operated and maintained in accordance with the manufacturer's recommendations. [Approval Nos. 2218-2221(B)(4)]
- (5) There shall be no bypassing of the air pollution control system listed in this section during start-up, operation or shutdown. Urea will not be injected during start-up or shutdown unless the catalyst bed is at, or above, the manufacture's specified minimum operating temperature of 540°F. [Approval Nos. 2218-2221(B)(5)]
- (6) The air pollution control devices listed in this section shall be operated according to their design specifications whenever P117 and/or P118 are in operation or is emitting air contaminants. [250-RICR-120-05-16.5]
- (7) In the case that the malfunction of either C024 and/or C025, all reasonable measures shall be taken to assure resumption of the design control efficiency as soon as possible. In the event that the malfunction of either C024 and/or C025 is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate P117 and P118 beyond that period, the Director shall be petitioned for a variance under RI General Laws § 23-23-15, as amended. Such petition shall include, but is not limited, to the following: [250-RICR-120-05-16.6(A)]
  - (a) Identification of the specific air pollution control system (i.e. C024 and C025) and the source on which it is installed (i.e. P117 and P118), [250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that the air pollution control system will be malfunctioning or out of service; [250-RICR-120-05-16.6(A)(2)]
  - (c) The nature and quantity of air contaminants likely to be emitted during said period; [250-RICR-120-05-16.6(A)(3)]
  - (d) Measures that will be taken to minimize the length of said period; and [250-RICR-120-05-16.6(A)(4)]

- (e) The reasons that it would be impossible or impractical to cease the source operation during said period. [250-RICR-120-05-16.6(A)(5)]
- (8) The permitted may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the permittee shall demonstrate to the Office of Air Resources that: [Approval Nos. 2218-2221(G)(1)]
  - (a) The malfunction was not attributable to improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error; [Approval Nos. 2218-2221(G)(1)(a)]
  - (b) The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance; [Approval Nos. 2218-2221(G)(1)(b)]
  - (c) Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable. [Approval Nos. 2218-2221(G)(1)(c)]
  - (d) All possible steps were taken to minimize emissions during the period of time that repairs were performed. [Approval Nos. 2218-2221(G)(1)(d)]
  - (e) Emissions during the period of time that the repairs were performed will not: [Approval Nos. 2218-2221(G)(1)(e)]
    - (i) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and [Approval Nos. 2218-2221(G)(1)(e)(1)]
    - (ii) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard. [Approval Nos. 2218-2221(G)(1)(e)(2)]
  - (f) The reasons that it would be impossible or impractical to cease the source operation during said period. [Approval Nos. 2218-2221(G)(1)(f)]
  - (g) The permittee's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence. [Approval Nos. 2218-2221(G)(1)(g)]

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken. [Approval Nos. 2218-2221(G)(1)]



The permittee shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction. [Approval Nos. 2218-2221(G)(1)]

- (9) The air-to-fuel ratio controller shall be maintained and operated appropriately in order to ensure proper operation of the engines and control devices listed in this section to minimize emissions at all times. [40 CFR 60.4243(g)]

**c. Monitoring Requirements**

- (1) Each engine listed in this section shall be equipped with a non-resettable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time for the unit. [Approval Nos. 2218-2221(C)(1)]
- (2) Each generator listed in this section shall be equipped with a kilowatt-hour meter to indicate, in cumulative kilowatt-hours, the power generated by the engine-generator set. [Approval Nos. 2218-2221(C)(2)]
- (3) Natural gas flow to each engine listed in this section shall be continuously measured and recorded. [Approval Nos. 2218-2221(C)(3)]
- (4) A continuous monitoring system (CMS) shall be installed, operated and maintained to measure the concentration, in parts per million (ppm) of NO<sub>x</sub> and CO at the outlet of each SCR system and oxidation catalyst listed in this section. The concentrations shall be monitored continuously, and the date, time and measurement shall be recorded. [Approval Nos. 2218-2221(C)(4)]
- (5) The permittee shall continuously measure the temperature across the catalyst bed (inlet and outlet) of each air pollution control system listed in this section. [Approval Nos. 2218-2221(C)(5)]
- (6) The permittee shall continuously measure the pressure drop across the catalyst bed of each air pollution control system listed in this section. [Approval Nos. 2218-2221(C)(6)]
- (7) The permittee shall monitor the ammonia emissions for each engine listed in this section according to the following schedule: [Approval Nos. 2218-2221(C)(7)]
  - (a) For the first 18,000 hours of catalyst life, the ammonia concentration (ppm) and mass emission rate (lb./hr.) after the SCR system shall be measured during the initial and each subsequent performance test required by Condition I.B.2.d(1) of this permit using Conditional Test Method 27 (CTM-027) or another method approved by the USEPA and the Director. [Approval Nos. 2218-2221(C)(7)(a)]
  - (b) After 18,000 hours of catalyst life, the ammonia concentration (ppm) shall be measured every 750 operating hours until the SCR catalyst is replaced. CTM-027 is not required for this periodic monitoring. The test method used for this periodic monitoring shall be approved by the Office of Air Resources prior to the performance of this monitoring. [Approval Nos. 2218-2221(C)(7)(b)]

This testing schedule may be revised by the Office of Air Resources if it determines, based on the ammonia emissions testing, that the above schedule is not sufficient to monitor compliance with Conditions I.B.2.a(4) of this permit. [Approval Nos. 2218-2221(C)(7)]

**d. Testing Requirements**

- (1) Emissions testing for each engine listed in this section shall be conducted every 8760 hours of operation or every 3 years, whichever is first, to determine compliance with the nitrogen oxides, carbon monoxide, ammonia and non-methane hydrocarbon emission limitation. Each emission test for nitrogen oxides, carbon monoxide and non-methane hydrocarbons shall be conducted in accordance with the procedures specified in Conditions (2-7) of this subsection. Each emission test for ammonia shall be conducted using Conditional Test Method 27 (CTM-027) or another method approved by the USEPA and the Director. [Approval Nos. 2218-2221(D)(1), 40 CFR 60.4243(b)(2), 40 CFR 60.4243(b)(2)(ii), 40 CFR 60.4244(a-f)]
- (2) An emissions testing protocol shall be submitted to the Office of Air Resources and the USEPA at least 60 days prior to the performance of any emissions test. The owner/operator shall provide the Office of Air Resources and the USEPA at least 60 days prior notice of any emissions test. [Approval Nos. 2218-2221(D)(2)]
- (3) All test procedures used for stack testing shall be approved by the Office of Air Resources and the USEPA prior to the performance of any stack test. [Approval Nos. 2218-2221(D)(3)]
- (4) The permittee shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [Approval Nos. 2218-2221(D)(4)]
- (5) All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitations. [Approval Nos. 2218-2221(D)(5)]
- (6) All emissions testing must be observed by the Office of Resources or its authorized representatives to be considered acceptable, unless the Office of Air Resources provides authorization to the permittee to conduct the testing without an observer present. [Approval Nos. 2218-2221(D)(6)]
- (7) A final report of the results of the subsequent performance tests shall be submitted to the Office of Air Resources and the USEPA no later than 60 days following completion of the testing. [Approval Nos. 2218-2221(D)(7)]
- (8) The permittee shall follow the procedures specified in Conditions (8 - 13) of this subsection. Each performance test shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to subpart 40 CFR 60 Subpart JJJJ. [40 CFR 60.4244(a)]

- (9) The permittee shall not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If any of the engines listed in this section are non-operational, the permittee does not need to start-up the engine solely to conduct a performance test; however, the permittee shall conduct the performance test immediately upon startup of the engine. [40 CFR 60.4244(b)]
- (10) The permittee shall conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. [40 CFR 60.4244(c)]
- (11) To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section: [40 CFR 60.4244(d)]

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912 × 10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- (12) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section: [40 CFR 60.4244(e)]

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C<sub>d</sub> = Measured CO concentration in ppmv.

1.164 × 10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- (13) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section: [40 CFR 60.4244(f)]

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd = VOC concentration measured as propane in ppmv.

$1.833 \times 10^{-3}$  = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

**e. Recordkeeping Requirements**

- (1) The permittee shall, on a monthly basis, no later than 15 days after the first of each month, determine and record the hours of operation for each engine listed in this section for the previous month. The permittee shall keep records of this determination and provide such records to the Office of Air Resources or its authorized representative and USEPA upon request. [Approval Nos. 2218-2221(E)(1)]
- (2) The permittee shall, on a monthly basis, no later than 15 days after the first of each month, determine and record the fuel use for each engine listed in this section for the previous month. The permittee shall keep records of this determination and provide such records to the Office of Air Resources or its authorized representative and USEPA upon request. [Approval Nos. 2218-2221(E)(2)]
- (3) The permittee shall, on a monthly basis, no later than 15 days after the first of each month, determine and record the kilowatt-hours generated for each engine listed in this section for the previous month. The permittee shall keep records of this determination and provide such records to the Office of Air Resources or its authorized representative and USEPA upon request. [Approval Nos. 2218-2221(E)(3)]

- (4) The permittee shall maintain the following records in an operating log at least once per day: [Approval Nos. 2218-2221(E)(4)]
  - (a) The pressure drop and temperature across the catalyst bed (inlet and outlet) of each air pollution control system listed in this section. [Approval Nos. 2218-2221(E)(4)(a)]
  - (b) The concentration, in parts per million (ppm) as measured by the CMS for nitrogen oxides and carbon monoxide. [Approval Nos. 2218-2221(E)(4)(b)]
- (5) The permittee shall maintain records of all ammonia testing conducted pursuant to Condition I.B.2.c(7)(b) of this permit. [Approval Nos. 2218-2221(E)(5)]
- (6) The permittee shall develop a maintenance plan for the engines and air pollution control devices listed in this section and the permittee shall maintain records of all maintenance conducted. [Approval Nos. 2218-2221(E)(6)]
- (7) The permittee shall maintain all records that demonstrate that the engines listed in this section meet the emission standards of 40 CFR 60 Subpart JJJJ. [Approval Nos. 2218-2221(E)(7)]
- (8) The permittee shall retain records of the initial notification onsite. The initial notification shall include: [Approval Nos. 2218-2221(E)(8)(a-e)]
  - (a) Name and address of the permittee;
  - (b) The address of the affected source;
  - (c) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
  - (d) Emission control equipment; and
  - (e) Fuel used.
- (9) The permittee shall meet the following requirements and keep records of the information in Conditions (9)(a-c) of this subsection. [40 CFR 60.4245(a)]
  - (a) All notifications submitted to comply with this subpart and all documentation supporting any notification. [40 CFR 60.4245(a)(1)]
  - (b) Maintenance conducted on the engine. [40 CFR 60.4245(a)(2)]
  - (c) Documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)]
- (10) The permittee shall submit a copy of each performance test as conducted in Conditions I.B.2.d(9-13) of this permit within 60 days after the test has been completed. Performance test reports using USEPA Method 18, USEPA Method 320, or ASTM D6348-03

(incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7. [Approval Nos. 2218-2221(D)(7), 40 CFR 60.4245(d)]

**f. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.B.2 of this permit or any other applicable air pollution control rules and regulations. [Approval Nos. 2218-2221(E)(10)]
- (2) The permittee shall notify the Office of Air Resources in writing of the date whenever the catalyst is replaced for the SCR system. [Approval Nos. 2218-2221(E)(11)]
- (3) The permittee shall notify the Office of Air Resources in writing of the date whenever the catalyst is replaced for the oxidation catalyst system. [Approval Nos. 2218-2221(E)(12)]
- (4) The permittee shall maintain properly signed, contemporaneous operating logs or other relevant evidence to document actions during startup/shutdown periods. [Approval Nos. 2218-2221(E)(15)]

**g. Other Requirements**

- (1) The emission limitations of Conditions I.B.2.a(1-2) of this permit shall not apply during engine startup/shutdown conditions. Engine startup shall be defined as the first ten minutes of firing following the initiation of firing. Engine shutdown shall be defined as the cessation of operation for any purpose. [Approval Nos. 2218-2221(F)(3)]
- (2) The permittee is subject to the requirements of 40 CFR 60, Subpart A (General Provisions) and Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines). Compliance with all applicable provisions therein is required. [Approval Nos. 2218-2221(F)(4)]
- (3) To the extent consistent with the requirements of Section I.B.2 of this permit and applicable federal and state laws, the equipment shall be operated in accordance with the representation of the equipment in the permit application. [Approval Nos. 2218-2221(F)(5)]
- (4) The emission and dispersion characteristics of all emission sources at the facility shall be consistent with the parameters used in the air quality modeling to demonstrate that the emissions from the facility do not cause or contribute to air pollution in violation of any national ambient air quality standard. The Office of Air Resources, in its sole discretion, may reopen the minor source permit for emission units P117 and P118 if it determines that the emission and dispersion characteristics have changed significantly and that emission limitations must be revised and/or added to this permit to ensure compliance with national ambient air quality standards. [Approval Nos. 2218-2221(F)(8)]

### 3. Requirements for Emission Units P107

The following requirements are applicable to:

- Emissions unit P107, which is a 97 MMBTU/hr Solar Taurus 70 turbine-generator, Inc. combustion turbine, Model No.MF-3-78, which burns natural gas and low sulfur fuel oil. P107 is equipped with a SoLoNOx lean-premixed combustion system for NO<sub>x</sub>. [Approval No. 1671]

#### a. **Emission Limitations**

- (1) Turbines firing natural gas with duct burners not fired
  - (a) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))
    - (i) The concentration of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 25.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(1)(a)(1), 40 CFR 60.332(a)(2), 40 CFR 60.332(c)]
    - (ii) The emission rate of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 8.2 lbs/hr. [Approval No. 1671(A)(1)(a)(2)]
  - (b) Carbon Monoxide (CO)
    - (i) The concentration of carbon monoxide discharged to the atmosphere from P107 shall not exceed 50.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(1)(b)(1)]
    - (ii) The emission rate of carbon monoxide discharged to the atmosphere from P107 shall not exceed 9.9 lbs/hr. [Approval No. 1671(A)(1)(b)(2)]
  - (c) Total Non-methane Hydrocarbons (NMHC)
    - (i) The concentration of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 25.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(1)(c)(1)]
    - (ii) The emission rate of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 2.9 lbs/hr. [Approval No. 1671(A)(1)(c)(2)]
  - (d) Sulfur Dioxide

The permittee shall not burn any natural gas which contains sulfur in excess of 0.8 percent by weight. [40 CFR 60.333(b)]

- (2) Turbines firing natural gas with duct burners fired
- (a) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))
    - (i) The concentration of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 30.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(2)(a)(1), 40 CFR 60.332(a)(2), 40 CFR 60.332(c)]
    - (ii) The emission rate of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 12.0 lbs/hr. [Approval No. 1671(A)(2)(a)(2)]
  - (b) Carbon Monoxide (CO)
    - (i) The concentration of carbon monoxide discharged to the atmosphere from P107 set shall not exceed 55.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(2)(b)(1)]
    - (ii) The emission rate of carbon monoxide discharged to the atmosphere from P107 shall not exceed 12.4 lbs/hr. [Approval No. 1671(A)(2)(b)(2)]
  - (c) Total Non-methane Hydrocarbons (NMHC)
    - (i) The concentration of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 25.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(2)(c)(1)]
    - (ii) The emission rate of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 3.5 lbs/hr. [Approval No. 1671(A)(2)(c)(2)]
  - (d) Sulfur Dioxide

The permittee shall not burn any natural gas which contains sulfur in excess of 0.8 percent by weight. [40 CFR 60.333(b)]
- (3) Turbines firing fuel oil with duct burners not fired
- (a) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))
    - (i) The concentration of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 96.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(3)(a)(1) 40 CFR 60.332(a)(2), 40 CFR 60.332(c)]
    - (ii) The emission rate of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 31.4 lbs/hr. [Approval No. 1671(A)(3)(a)(2)]



- (b) Carbon Monoxide (CO)
  - (i) The concentration of carbon monoxide discharged to the atmosphere from P107 shall not exceed 50.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(3)(b)(1)]
  - (ii) The emission rate of carbon monoxide discharged to the atmosphere from P107 shall not exceed 10.0 lbs/hr. [Approval No. 1671(A)(3)(b)(2)]
- (c) Total Non-methane Hydrocarbons (NMHC)
  - (i) The concentration of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 25.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(3)(c)(1)]
  - (ii) The emission rate of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 2.9 lbs/hr. [Approval No. 1671(A)(3)(c)(2)]
- (d) Sulfur Dioxide (SO<sub>2</sub>)
  - (i) All fuel oil burned in P107 shall contain no more than 0.0015 percent sulfur by weight. [Approval No. 1671(A)(3)(d)(1), 40 CFR 60.333(b), 250-RICR-120-8.6(A)]
  - (ii) The emission rate of sulfur dioxide discharged to the atmosphere from P107 shall not exceed 2.4 lbs/hr. [Approval No. 1671(A)(3)(d)(2)]
- (e) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from P107 shall not exceed 0.012 lbs per million BTU heat input or 0.9 lbs/hr whichever is more stringent. [Approval No. 1671(A)(3)(e)]
- (4) Turbines firing fuel oil with duct burners fired
  - (a) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))
    - (i) The concentration of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 90.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(4)(a)(1) 40 CFR 60.332(a)(2), 40 CFR 60.332(c)]
    - (ii) The emission rate of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 35.3 lbs/hr. [Approval No. 1671(A)(4)(a)(2)]

- (b) Carbon Monoxide (CO)
  - (i) The concentration of carbon monoxide discharged to the atmosphere from P107 shall not exceed 55.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(4)(b)(1)]
  - (ii) The emission rate of carbon monoxide discharged to the atmosphere from P107 shall not exceed 12.4 lbs/hr. [Approval No. 1671(A)(4)(b)(2)]
- (c) Total Non-methane Hydrocarbons (NMHC)
  - (i) The concentration of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 25.0 ppmv, on a dry basis, corrected to 15 percent O<sub>2</sub> (1-hour average). [Approval No. 1671(A)(4)(c)(1)]
  - (ii) The emission rate of total non-methane hydrocarbons discharged to the atmosphere from P107 shall not exceed 3.4 lbs/hr. [Approval No. 1671(A)(4)(c)(2)]
- (d) Sulfur Dioxide (SO<sub>2</sub>)
  - (i) All fuel oil burned in P107 shall contain no more than 0.0015 percent sulfur by weight. [Approval No. 1671(A)(4)(d)(1), 40 CFR 60.333(b), 250-RICR-120-05-8.6(A)]
  - (ii) The emission rate of sulfur dioxide discharged to the atmosphere from P107 shall not exceed 4.1 lbs/hr. [Approval No. 1671(A)(4)(d)(2)]
- (e) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from P107 shall not exceed 0.012 lbs per million BTU heat input or 1.4 lbs/hr whichever is more stringent. [Approval No. 1671(A)(4)(e)]
- (5) The total quantity of nitrogen oxides discharged to the atmosphere from P107 shall not exceed 98,000 lbs. in any consecutive 12-month period. [Approval No. 1671(A)(5)(a)(1)]
- (6) Opacity

Visible emissions from P107 shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one hour. [Approval No. 1671(B)(4), 250-RICR-120-05-1.6] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

**b. Operating Requirements**

- (1) The maximum heat input rate to the combustion turbine shall not exceed 97 million BTUs per hour. [Approval No. 1671(B)(1)]
- (2) The maximum heat input rate to the duct burners in the heat recovery steam generator shall not exceed 41 million BTUs per hour. [Approval No. 1671(B)(2)]
- (3) The permittee shall limit the total combined quantity of fuel oil combusted in the combustion turbine to 46,200 gallons for any consecutive 12-month period, excluding fuel oil used for permit required initial and annual stack testing. [Approval No. 1671(B)(3)]
- (4) Natural gas shall be the only fuel fired in the duct burners. [Approval No. 1671(B)(5)]

**c. Testing Requirements**

- (1) Nitrogen Oxides
  - (a) Emissions testing shall be conducted annually to determine compliance with the nitrogen oxides emission limitation for natural gas and fuel oil firing. [Approval No. 1671(D)(1), 29.6.3(b), 250-RICR-120-05-27.9(G)(1)]
  - (b) A stack testing protocol shall be submitted to the Office of Air Resources for review and approval prior to the performance of any stack tests. The permittee shall provide the Division at least 60 days prior notice of any performance test. [Approval No. 1671(D)(2), 250-RICR-120-05-27.9(G)(2)]
  - (c) All test procedures used for stack testing shall be approved by the Office of Air Resources prior to the performance of any stack test. [Approval No. 1671(D)(3), 250-RICR-120-05-27.9(G)(3)]
  - (d) The permittee shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [Approval No. 1671(D)(4), 250-RICR-120-05-27.9(G)(4)]
  - (e) All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitations. [Approval No. 1671(D)(5), 250-RICR-120-05-27.9(G)(5)]
  - (f) All stack testing must be observed by the Office of Air Resources or its authorized representatives to be considered acceptable, unless the Office of Air Resources provides prior written authorization to the permittee to conduct the testing without an observer present. [Approval No. 1671(D)(6), 250-RICR-120-05-27.9(G)(6)]
  - (g) A final report of the results of the stack testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing. [Approval No. 1671(D)(7), 250-RICR-120-05-27.9(G)(7)]

- (2) Sulfur Dioxide
- (a) Compliance with fuel oil sulfur limits may be determined based on a certification from the fuel supplier. [Approval No. 1671(E)(1), 40 CFR 60.335(b)(10)(i), 40 CFR 60.335(b)(11)]
  - (b) Fuel supplier certification shall include the following information: [Approval No. 1671(E)(2)]
    - (i) The name of the oil supplier; [Approval No. 1671(E)(2)(a)]
    - (ii) The sulfur content of the oil; [Approval No. 1671(E)(2)(b)]
    - (iii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil; specifically including whether the oil was sampled as delivered to Toray Plastics (America), Inc. or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility or another location; [Approval No. 1671(E)(2)(c)]
    - (iv) The method used to determine the sulfur content of the oil. [Approval No. 1671(E)(2)(d), 40 CFR 60.335(b)(10)(i)]
    - (v) A statement that the sampling was performed according to either the single tank composite sampling procedure or the all-levels sampling procedure in the most recent version of ASTM D4057, "Standard Practice for Manual Sampling of Petroleum and Petroleum Products" and that no additions have been made to the supplier's tank since sampling. [250-RICR-120-05-29.10(C)(1)(b), 40 CFR 60.334(h)(1), 40 CFR 60.334(i)(1)]
  - (c) As an alternative to fuel supplier certification, the permittee may elect to sample the fuel prior to combustion. Sampling and analysis shall be conducted for the oil in the initial tank of oil to be fired in P107 and after each new shipment of oil is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. [Approval No. 1671(E)(3), 40 CFR 60.334(h)(4)(i)(1)]
  - (d) Each fuel supplier certification or each fuel oil analysis shall demonstrate that the oil contains 0.05 percent sulfur by weight or less. [Approval No. 1671(E)(4)]
  - (e) The fuel analyses required under this section may be performed by the permittee, a service contractor retained by the permittee, the fuel vendor or any other qualified agency. [40 CFR 60.335(b)(11)]

- (3) Opacity

Test for determining compliance with the opacity emissions limitations specified in Condition I.B.3.a(6) of this permit shall be performed as per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.7(A-B)]

**d. Monitoring Requirements**

- (1) Continuous emission monitoring equipment shall be operated and maintained for opacity when P107 is operating on fuel oil. [Approval No. 1671(C)(1)]
- (2) Natural gas flow and fuel oil flow to the combustion turbine and natural gas flow to the duct burner shall be continuously measured. [Approval No. 1671(C)(2)]
- (3) The turbine shall be equipped with an elapsed time meter to indicate in cumulative hours, the amount of time the turbine has operated. [Approval No. 1671(C)(3)]

**e. Recordkeeping Requirements**

- (1) The permittee shall maintain the following records: [Approval No. 1671(F)(1)]
  - (a) The hours of operation, including any start up, shut down or malfunction in the operations of the facility. [Approval No. 1671(F)(1)(a), 40 CFR 60.7(b)]
  - (b) The quantity of natural gas and fuel oil combusted in the turbine and the duct burners. [Approval No. 1671(F)(1)(b)]
- (2) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the fuel oil usage for the previous 12- month period for the combustion turbine. [Approval No. 1671(F)(2)]
- (3) The permittee shall, on a monthly basis, no later than 15 days after the first of each month, determine the total quantity of nitrogen oxides discharged to the atmosphere from P107 for the previous 12 months. [Approval No. 1671(F)(4)]
- (4) The permittee shall maintain the records to demonstrate that the gaseous fuel combusted in P107 meets the definition of natural gas in 40 CFR 60.331(u). The following source of information shall be used to make the required demonstration:
  - (a) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less. [40 CFR 60.334(h)(3)(i), 250-RICR-120-05-29.10(C)(1)(b)]
- (5) The permittee shall maintain records of any scheduled and unscheduled maintenance to emission unit P107. [250-RICR-120-05-29.10(C)(1)(b)]

- (6) Natural gas flow and fuel oil flow to the combustion turbine and natural gas flow to the duct burner shall be continuously recorded. [Approval No. 1671(C)(2)]
- (7) The permittee shall retain copies of all fuel supplier certifications or fuel oil analyses for each calendar quarter. These records shall be made accessible for review by the Office of Air Resources or USEPA. This quarterly record shall include a certified statement, signed by the permittee, that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter. [Approval No. 1671(F)(9)]
- (8) The permittee shall maintain a file of all measurements, including performance testing measurements and all other information required shall be recorded in a permanent form suitable for inspection. [40 CFR 60.7(f)]

**f. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources, in writing, within 15 days, whenever the fuel oil usage exceeds 46,200 gallons for any consecutive 12-month period excluding fuel oil used for permit required initial and annual stack testing. [Approval No. 1671(F)(3)]
- (2) The permittee shall notify the Office of Air Resources in writing within 15 days, whenever total quantity of nitrogen oxides discharged to the atmosphere from P107 exceeds 98,000 lbs. in any consecutive 12-month period. [Approval No. 1671(F)(5)]
- (3) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with Section I.B.3 of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1671(F)(10)]
- (4) The permittee shall submit reports of excess emissions and monitor downtime, on a semiannual basis, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:
  - (a) For oil samples obtained using sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. [40 CFR 60.334(j)(2)(i)]
  - (b) For oil samples obtained using sampling of each delivery of fuel oil, the permittee shall immediately switch to sampling from the unit's storage tank if the sulfur content of a delivery exceeds 0.8 weight percent. The permittee shall continue to use sampling from the unit's storage tank until all of the oil from the delivery has been combusted and shall evaluate excess emissions according to condition (4)(a) of this subsection. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option. [40 CFR 60.334(j)(2)(ii)]

- (c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours and ends on the date and hour of the next valid sample. [40 CFR 60.334(j)(2)(iii)]

**g. Other Requirements**

- (1) To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application dated March 2, 2001. [Approval No. 1671(G)(1)]
- (2) The facility is subject to the requirements of the Federal New Source Performance Standards 40 CFR 60, Subpart A (General Provisions) and Subpart GG (Stationary Gas Turbines). Compliance with all applicable provisions of these regulations is required. [Approval No. 1671(G)(3)]

**C. Process Equipment**

**1. Requirements for Emission Units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P014, P023 P068, P069, P098 and P109**

The following requirements are applicable to:

- Emission units P001 – P005, each of which is an Esterification Vessel (P1-P5) lines respectively). [Approval No. 2069]
- Emission unit P006 (P6 Line), which is a Cryochem Esterification/Ester Interchange (ES/EI) Vessel. P006 is associated with air pollution control devices C003A and/or C003B. [Approval No. 2069]
- Emission units P007-P012, each of which is a Trinity Industries, Inc. PET polymerization vessels (P1-P6 lines, respectively). P007-P012 are associated with air pollution control device C004 when the vessels are vacuum venting. [Approval Nos. 1420 and 2069]
- Emission unit P014, which is a Buhler Precrystallizer, Model No. OTWG-890. This unit dries PET chips using heated air. P014 is associated with air pollution control device C004. [Approval Nos. 1420 and 2069]
- Emission unit P023, which is the wastewater collection, storage and treatment system. Wastewater streams converge at an underground mixing tank and are pumped in batches, to a series of wastewater storage tanks (Tanks Nos. 1 and 2) prior to being treated in sequencing batch reactor No. 2 and/or sequence batch reactor No. 1. The emission unit includes controlled emissions from Wastewater Storage Tanks No. 1 and 2 Sequential Batch Reactor 1 and 2, the TEG Pit and uncontrolled fugitive wastewater emissions. Controlled emission from P023 are associated with air pollution control device C004. [Approval Nos. 1420 and 2069]

- Emission unit P068, which is a Japan Steel Works, LTD (JSW) L1 Sub-Extruder, Model No. TEX 90S-31.5AW-3V. This unit extrudes polyethylene terephthalate for making film and is kept under vacuum. P068 is associated with air pollution control device C004. [Approval Nos. 1420 and 2069]
- Emission unit P069, which is a Japan Steel Works, LTD (JSW) L2 Sub-Extruder, Model No. TEX 90S-31.5AW-3V. This unit extrudes polyethylene terephthalate for making film and is kept under vacuum. P069 is associated with air pollution control device C004. [Approval Nos. 1420 and 2069]
- Emission unit P098, which is a RV Industries, Inc. recovery ethylene glycol (R-EG) distillation process. P098 is used to remove impurities from contaminated ethylene glycol and recover purified ethylene glycol. P098 is associated with air pollution control device C004. [Approval Nos. 1420 and 2069]
- Emission unit P109, which is a polyester scrap extruder system in the Lumirror Scrap Warehouse. Emission unit P109 is associated with air pollution control device C004. [Approval 1420 and 2069]
- Air pollution control device C003A, which is a Metfab Engineering cylindrical shaped Seal Pot. C003A is divided into two sections (upper and lower), both sections containing scrubbant. C003A uses water as its scrubbing liquid. Air pollution control device C003A is utilized during the DMT and PBT polyester production processes.
- Air pollution control device C003B, which is an After Condenser. Air pollution control device C003B is utilized during the DMT, PBT and PTA polyester production processes.
- Air pollution control device C004, which is a 0.8 MMBTU/hr Adwest Technologies Regenerative Thermal Oxidizer, Model No. 3.0RTO95, which burns natural gas. [Approval Nos. 1420 and 2069]

**a. Emission Limitations**

- (1) The emissions of listed toxic air contaminants discharged to the atmosphere from the emission units listed in this section shall not exceed the limitations in Appendix A and Appendix B of this permit. These limitations were established to ensure that emissions from this facility do not exceed any of the Acceptable Ambient Levels (AALs) listed in Air Toxics, 250-RICR-120-05-22. The limitations shown in pounds per year are calculated on a 12-month rolling basis. Emissions from activities exempted from the provisions of 250-RICR-120-05-22.5(B) are not included in this limitation. [Approval No. 2069(A)(1)]
- (2) Except as provided below, VOC emissions generated from the following emission units shall be captured, contained and routed to C004 for treatment prior to discharge from the atmosphere: emission units P007-P012 (when vacuum venting), P014, P023, P068, P069, P098 and P109. C004 shall reduce VOC emissions by 98% or greater, unless outlet emissions are below 5 ppmv. C004 shall reduce acetaldehyde emissions by 98% or greater, unless outlet emissions are below 5 ppmv.

At any time during the months of June, July, August and September, the permittee may remove the side panels from the Sequential Batch Reactor No. 2 in order to lower the temperature of the system and maintain optimal operation. [Approval No. 1420(A)(2)]



**b. Operating Requirements**

- (1) Air pollution control device C004 operating temperature shall be maintained at or above 1500°F whenever VOC is being discharged to the device. [Approval No. 1420(B)(1)]
- (2) All emissions generated from vacuum venting of P006 following methanol distillation and ethylene glycol distillation in the DMT process shall be captured, contained and routed to C003B/C003A for treatment prior to discharge to the atmosphere. [Approval No. 1420(B)(2)]
- (3) All emissions generated from P006 during methanol distillation and butylene glycol distillation in the PBT process shall be captured, contained and routed to C003B/C003A for treatment prior to discharge to the atmosphere. [Approval No. 1420(B)(3)]
- (4) All emissions generated from the P006 in the PTA process, excluding when raw materials are charged to the vessel, shall be captured, contained and routed to C003B for treatment prior to discharge to the atmosphere. [Approval No. 1420(B)(4)]
- (5) The type of material processed through P109 shall be limited to polyester. [Approval No. 2069(B)(1)]
- (6) The maximum quantity of polyester processed through P109 shall not exceed 1,500 pounds per hour. [Approval No. 2069(B)(2)]
- (7) VOC emissions generated from P109 shall be captured, contained and routed to C004 for treatment prior to discharge to the atmosphere. [Approval No. 2069(B)(3)]
- (8) VOC emissions generated from P109 may be redirected uncontrolled to a bypass stack for up to 120 hours in any 12-month period. [Approval No. 2069(B)(4)]
- (9) The air pollution control devices listed in this section shall be operated according to their design specifications whenever the associated emission unit(s) are in operation or are emitting air contaminants. [250-RICR-120-05-16.5]
- (10) Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. [Approval No. 2069(E)(1)]
- (11) In case of malfunction of the air pollution control devices listed in this section, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of the air pollution control devices listed in this section is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate the associate emission unit(s) beyond that period, the Director shall be petitioned for a variance under RI General Laws§ 23-23-15, as amended. Such petition shall include but is not limited to, the following: [Approval No. 1420(E)(1), Approval No. 2069(E)(2), 250-RICR-120-05-16.6(A)]

- (a) Identification of the specific air pollution control system (i.e. C003A C003B and/or C004) and the source on which it is installed (i.e. P006-P012, P014, P068-P069, P098, P109), [Approval No. 1420(E)(1)(a), Approval No. 2069(E)(2)(a), 250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that the air pollution control system will be malfunctioning or out of service, [1420(E)(1)(b), Approval No. 2069(E)(2)(b), 250-RICR-120-05-16.6(A)(2)]
  - (c) The nature and quantity of air contaminants likely to be emitted during said period, [Approval No. 1420(E)(1)(c), Approval No. 2069(E)(2)(c), 250-RICR-120-05-16.6(A)(3)]
  - (d) Measures that will be taken to minimize the length of said period, and [Approval No. 1420(E)(1)(d), Approval No. 2069(E)(2)(d), 250-RICR-120-05-16.6(A)(4)]
  - (e) The reasons it would be impossible or impractical to cease the source operation during said period. [Approval No. 1420(E)(1)(e), Approval No. 2069(E)(2)(e), 250-RICR-120-05-16.6(A)(5)]
- (12) The permittee may seek to establish that a malfunction of the air pollution control devices listed in this section that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the permittee must demonstrate to the Office of Air Resources that: [Approval No. 1420(E)(2), Approval No. 2069(E)(3)]
- (a) The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation or operator error; [Approval No. 1420(E)(2)(a), Approval No. 2069(E)(3)(a)]
  - (b) The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance; [Approval No. 1420(E)(2)(b), Approval No. 2069(E)(3)(b)]
  - (c) Repairs necessary to bring the air pollution control devices listed in this section back to operating at their design control efficiency were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable. Any parts or materials needed should be shipped overnight where possible or practical. [Approval No. 1420(E)(2)(c), Approval No. 2069(E)(3)(c)]
  - (d) All possible steps were taken to minimize emissions during the period of time that the repairs were performed. [Approval No. 1420(E)(2)(d), Approval No. 2069(E)(3)(d)]
  - (e) Emissions during the period of time that the repairs were performed will not: [Approval No. 1420(E)(2)(e), Approval No. 2069(E)(3)(e)]

- (i) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and [Approval No. & 1420(E)(2)(e)(1), Approval No. 2069(E)(3)(e)(1)]
- (ii) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard. [Approval No. 1420(E)(2)(e)(2), Approval No. 2069(E)(3)(e)(2)]
- (f) The reasons that it would be impossible or impractical to cease the operation of the source operation during said period. [Approval No. 1420(E)(2)(f), Approval No. 2069(E)(3)(f)]

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred, and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken. [Approval No. 1420(e)(2), Approval No. 2069(E)(3)]

The permittee shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction. [Approval No. 1420(e)(2), Approval No. 2069(E)(3)]

**c. Monitoring Requirements**

- (1) C004 operating temperature shall be continuously monitored. [Approval No. 1420(D)(4), 250-RICR-120-05-29.10(C)(1)(a), 40 CFR 63]
- (2) Water flow rate and nitrogen flow rate for control device C003A shall be monitored once per shift. [250-RICR-120-05-29.10(C)(1)(b)]
- (3) Outlet temperature for control device C003B shall be monitored continuously. [250-RICR-120-05-29.10(C)(1)(b)]

**d. Recordkeeping Requirements**

- (1) C004 operating temperature shall be continuously recorded. [Approval No. 1420(D)(4), 250-RICR-120-05-29.10(C)(1)(a), 40 CFR 63]
- (2) The permittee shall check the water flow rate and nitrogen flow rate for control device C003A a minimum of once per day and the date, time and a measurement shall be recorded. If the control device is not operating because the process is shutdown, the permittee shall record that the process is shutdown in lieu of a measurement. [250-RICR-120-05-29.10(C)(1)(b)]
- (3) The permittee shall check the outlet temperature for control device C003B a minimum of once per day and the date, time and a measurement shall be recorded. If the control device is not operating because the process is shutdown, the permittee shall record that the process is shutdown in lieu of a measurement. [250-RICR-120-05-29.10(C)(1)(b)]

- (4) The permittee shall on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of scrap polyester processed in P109. Monthly and 12-month rolling totals shall be determined. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval No. 2069(C)(1)]
- (5) The permittee shall maintain the following records for the Sequential Batch Reactor No. 2: [Approval No. 1420(D)(3)]
  - (a) the date and time that the side panels are removed; and, [Approval No. 1420(D)(3)(a)]
  - (b) the temperature in Sequential Batch Reactor No. 2 prior to removal of the side panels; and [Approval No. 1420(D)(3)(b)]
  - (c) the date and time that the side panels are re-installed. [Approval No. 1420(D)(3)(c)]
- (6) All maintenance activities shall be recorded in a log for Air Pollution Control Device C004. The log shall include the following information: [Approval No. 1420(D)(5)]
  - (a) Date, time and duration of the maintenance, and the time C004 was brought back to operating capacity; and [Approval No. 1420(D)(5)(a)]
  - (b) Reason for the maintenance. [Approval No. 1420(D)(5)(b)]
  - (c) For purposes of this permit, maintenance activities occurring less than or equal to 120 hours per year shall not be considered a malfunction. [Approval No. 1420(D)(5)(c)]

**e. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources, in writing, within 15 days of determining that the total hours of maintenance activities for C004 exceeds 120 hours per year based upon a 12-month rolling period. [Approval No. 1420(D)(6)]
- (2) The permittee shall notify the Office of Air Resources, in writing, of the date that each process as specified in Condition I.C.1.a(2) of this permit are routed to C004 no later than 15 days after such date. [Approval No. 1420(D)(7)]
- (3) The permittee shall notify the Office of Air Resources of all periods of operation in which the operating temperature of C004 was less than 1500°F. This information shall be provided in the semi-annual monitoring report required in Condition II.CC.2 of this permit. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]
- (4) The permittee shall notify the Office of Air Resources, of any anticipated noncompliance with the terms of Section I.C.1 of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1420(D)(11), Approval No. 2069(C)(8)]

**f. Other Requirements**

- (1) To the extent consistent with the requirements of Section I.C.1 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval No. 1420(F)(1), Approval No. 2069(D)(1)]
- (2) There shall be no bypassing of C004, C003A and/or C003B during times when VOC or HAP is being discharged to the device. As an exception to this prohibition, the Office of Air Resources may allow bypassing of C004, C003A and/or C003B to perform maintenance on the equipment, if the permittee can demonstrate, to the satisfaction of the Office of Air Resources, that: [Approval No. 1420(F)(4)]
  - (a) It is impossible or impractical to cease operation of the source during the period of time that maintenance is to be performed; and [Approval No. 1420(F)(4)(a)]
  - (b) All possible steps will be taken to minimize emissions during the period of time that the maintenance will be performed; and [Approval No. 1420(F)(4)(b)]
  - (c) Maintenance is to be performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such maintenance is completed as expeditiously as practicable. [Approval No. 1420(F)(4)(c)]
  - (d) Maintenance may be conducted for Air Pollution Control device C004, as needed for up to 120 hours per year. During maintenance, P007-P012 (when vacuum venting), P014, P023, P068, P069, P098 and P109 shall discharge uncontrolled to the Bypass Stack. No wastewater will be transferred from WWST No. 2 to WWST No. 1 (during the initial 12 hours of the shutdown) and the agitator in WWST No. 1 and the mixer in WWST No. 2 will be turned off. [Approval No. 1420(F)(4)(d)]
- (3) If there is any conflict between any emission limitations specified in Appendix A and Appendix B of this permit and any previously issued minor source permit, the permittee shall comply with the emission limitation in this permit. [Approval No. 2069(F)(6)]

**2. Requirements for Emission Units P026, P030, P031, P032, P033, P034, P054, P054A, P056, P077, P078, P108, P110, P115, P123 and P124**

- Emission unit P026, which is a Hart Engineering (Field Installed Piping) L1 chip and RIK pellet transfer lines. P026 is associated with air pollution control device C006, which is a MAC pulse jet bag house, Model No. 39AVSC49.
- Emission unit P030, which is a Kasuga Denki Electronics L1-EC generator, Model No. HF-802. P030 is associated with air pollution control device C009, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5854-2. C009 consists of a homogeneous manganese dioxide (MnO<sub>2</sub>) catalyst which is enclosed within an aluminized steel shell; the inlet duct and outlet duct are connected to the shell.

- Emission unit P031, which is a Kasuga Denki Electronics L2-EC generator, Model No. HF-802. P031 is associated with air pollution control device C010, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5854-2. C010 consists of a homogeneous manganese dioxide (MnO<sub>2</sub>) catalyst which is enclosed within an aluminized steel shell; the inlet duct and outlet duct are connected to the shell.
- Emission unit P032, which is a Kasuga Denki, Inc. A3-EC generator, Model No. HF-802. P032 is associated with air pollution control device C011, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5876-1. C011 consists of a homogeneous manganese dioxide (MnO<sub>2</sub>) catalyst that is enclosed within an aluminized steel shell; the inlet and outlet ducts are connected to the shell.
- Emission unit P033, which is a Kasuga Denki, Inc. A4-EC generator, Model No. HF-802. P033 is associated with air pollution control device C012, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5964-2. C012 consists of a homogeneous manganese dioxide (MnO<sub>2</sub>) catalyst which is enclosed within an aluminized steel shell; the inlet duct and outlet duct are connected to the shell.
- Emission unit P034, which is a Kasuga Denki, Inc. A5-EC generator, Model No. HF-802. P034 is associated with air pollution control device C013, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5964-2. C013 consists of a homogeneous manganese dioxide (MnO<sub>2</sub>) catalyst which is enclosed within an aluminized steel shell; the inlet duct and outlet duct are connected to the shell.
- Emission unit P054, which is the DMT Melting Tank. Crushed DMT briquettes are melted into a liquid. P054 is associated with air pollution control device C018, which is a Metfab Engineering unpacked water scrubber.
- Emission unit P054A, which is the DMT Charge Hopper. DMT briquettes are crushed and prepared for the DMT melting tank (P054). P054A is associated with air pollution control device C017, which is a Metfab Engineering unpacked water scrubber.
- Emission unit P056, which is the AL-D Dispersion Vessel. The AL-D catalyst (fine powder) is charged to the dispersion vessel, where it is dissolved in ethylene glycol (EG). P056 is associated with air pollution control device C017, which is a Metfab Engineering unpacked water scrubber.
- Emission unit P077, which is an Arden Engineering (Field Installed Piping) L2 chip transfer line. P077 is associated with air pollution control device C007, which is a MAC pulse jet bag house, Model No. 39AVSC49.
- Emission unit P078, which is an Arden Engineering (Field Installed Piping) L3 chip transfer line. P078 is associated with air pollution control device C008, which is a MAC pulse jet bag house, Model No. 39AVSC49.
- Emission unit P108, which is a Pillar Technologies Universal Corona Treater Station, Model No. CG2063-44. P108 is associated with air pollution control device C021, which is a Pillar Technologies, Inc. Ozone Destroyer, Model No. AB5964-2. C021 consists of a homogeneous

manganese dioxide (MnO<sub>2</sub>) catalyst which is enclosed within an aluminized steel shell; the inlet duct and outlet duct are connected to the shell.

- Emission unit P110, which is the CE-1 Unwind Treater Station. P110 is associated with Air Pollution Control Device C022, which is an Enercon ozone destruct unit, Model No. LM3686-10. Emission unit P110 is part of the extrusion coating process, which also includes Extruder Stations #1 and #2.
- Emission unit P115, which is the CE-1 Rewind Treater. P115 is associated with Air Pollution Control Device C023, which is an Enercon ozone destruct unit, Model No. LM3686-10. Emission unit P115 is part of the extrusion coating process, which also includes Extruder Stations #1 and #2.
- Emission unit P123 which is a polyester recycling equipment consisting of film shredding/grinding, compaction and recycling equipment. P123 is associated with air pollution control device C026, which is a Donaldson-Torit pulse jet baghouse, Model No. Downflo Evolution DFE 3-12.
- Emission unit P124 which is a polyester film grinder to cut previously shredded film into smaller pieces. P124 is associated with air pollution control device C027, which is a Donaldson-Torit pulse jet baghouse, Model No. Downflo Evolution DFE 2-8.

**a. Emission Limitations**

Opacity

The permittee shall not emit into the atmosphere, any air contaminant from all of the emission units listed in this section, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [250-RICR-120-05-1.6] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

**b. Operating Requirements**

- (1) The air pollution control devices listed in this section shall be operated according to their design specifications whenever any of the associated emission units are in operation or are emitting air contaminants. [250-RICR-120-05-16.5]
- (2) In case of malfunction of any air pollution control devices listed in this section, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of any of the associated emission units listed in this section are expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate any of the emission units listed in this section beyond that period, the Director shall be petitioned for a variance under RI General Laws § 23-23-15, as amended. Such petition shall include but is not limited to, the following: [250-RICR-120-05-16.6(A)]
  - (a) Identification of the specific air pollution control system (i.e. C006 – C013, C017, C018, C021, C022, C023, C026, C027) and the source on which it is installed (i.e. P026, P030 - P034, P054, P054A, P056, P077, P078, P108, P110, P115, P123, P124), [250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that control system will be malfunctioning or out of service, [250-RICR-120-05-16.6(A)(2)]

- (c) The nature and quantity of air contaminants likely to be emitted during said period [250-RICR-120-05-16.6(A)(3)]
- (d) Measures that will be taken to minimize the length of said period, and [250-RICR-120-05-16.6(A)(4)]
- (e) The reasons it would be impossible or impractical to cease the source operation during said period. [250-RICR-120-05-16.6(A)(5)]

**c. Monitoring Requirements**

- (1) Pressure drop across control devices C006 – C013, C017, C021, C022, C023, C026, C027 shall be monitored continuously. [250-RICR-120-05-29.10(C)(1)(b)]
- (2) Make-up water pressure for control device C018 shall be monitored continuously. [250-RICR-120-05-29.10(C)(1)(b)]

**d. Testing Requirements**

Opacity

Test for determining compliance with the opacity emissions limitations specified in Condition I.C.2.a of this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [250-RICR-120-05-1.7(A-b)]

**e. Recordkeeping Requirements**

- (1) The permittee shall check the pressure drop for control devices C006 – C013, C017, C021, C022, C023, C026, C027 a minimum of once per day and the date, time and a measurement shall be recorded. If the control device is not operating because the process is shutdown, the permittee shall record that the process is shutdown in lieu of a measurement. [250-RICR-120-05-29.10(C)(1)(b)]
- (2) The permittee shall check the make-up water pressure for control device C018 a minimum of once per day and the date, time and measurement shall be recorded. [250-RICR-120-05-29.10(C)(1)(b)]

**3. Requirements for Emission Unit P035**

The following requirements are applicable to:

- Emission unit P035, which is a 0.08 MMBTU/hr Pollution Control Products Co. A3 Cleaning Oven, Model No. IGG 27, which burns natural gas.

**a. Emission limitations**

Opacity

The permittee shall not emit into the atmosphere, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [250-RICR-120-05-1.6] Where the presence of uncombined water is the only reason for



failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]

**b. Operating Requirements**

- (1) The secondary chamber/stack shall be equipped with a temperature controller and indicator. [Approval No. 1240(1)]
- (2) The thermocouple shall be located as close to the secondary chamber exit as possible. [Approval No. 1240(2)]
- (3) The temperature controller shall be set to maintain secondary chamber temperature at 1400°F or greater. [Approval No. 1240(3)]
- (4) The oven door shall remain closed whenever material is being processed. [Approval No. 1240(4)]

**c. Testing Requirements**

Opacity

Test for determining compliance with the opacity emissions limitations specified in Condition I.C.3.a of this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [250-RICR-120-05-1.7(A-B)]

**4. Requirements for Emissions Units P102, P103, and P104**

The following requirements are applicable to:

- Emissions unit P102, which is the Meyer rod and gravure coating operation at the Lumirror L1 film line. [Approval Nos. 1740 and 2069]
- Emissions unit P103, which is the Meyer rod and gravure coating operation at the Lumirror L2 film line. [Approval Nos. 1741 and 2069]
- Emissions unit P104, which is the Meyer rod and gravure coating operation at the Lumirror L3 film line. [Approval Nos. 1742 and 2069]

**a. Emission Limitations**

- (1) Volatile Organic Compounds (VOC)
  - (a) The VOC content of all coatings used in polyester film coating operations on P102, P103, and P104 shall not exceed 2.9 lbs of VOC per gallon of coating (minus water and exempt compounds). [Approval Nos. 1740-1742(A)(1)(a), 250-RICR-120-05-19.6.8(A) and (C), 19.7.8(A)(1)]

- (b) The total quantity of volatile organic compound emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed: [Approval Nos. 1740-1742(A)(1)(b)]
  - (i) 10,000 pounds in any one month; and, [Approval Nos. 1740-1742(A)(1)(b)(1)]
  - (ii) 30,000 pounds in any consecutive 12-month period. [Approval Nos. 1740-1742(A)(1)(b)(2)]

(2) Hazardous Air Pollutant (HAP)

The total quantity of HAP emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed 2,500 pounds of any combination of HAPs per calendar month based upon a 12-month rolling average. [Approval Nos. 1740-1742(A)(2)]

(3) Listed Toxic Air Contaminant

- (a) The total quantity of ethylene glycol emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed: [Approval Nos. 1740-1742(A)(3)(a)]
  - (i) 0.016 pounds per hour; and, [Approval Nos. 1740-1742(A)(3)(a)(1), Approval No. 2069, Table 2]
  - (ii) 139.28 pounds in any consecutive 12-month period [Approval Nos. 1740-1742(A)(3)(b)(2), Approval No. 2069, Table 1]
- (b) The total quantity of ammonia emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed: [Approval Nos. 1740-1742(A)(3)(b)]
  - (i) 1.36 pounds per hour; and, [Approval Nos. 1740-1742(A)(3)(b)(1)]
  - (ii) 11,880 pounds in any consecutive 12-month period [Approval Nos. 1740-1742(A)(3)(b)(2)]
- (c) The total quantity of ethylene glycol monobutyl ether emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed: [Approval Nos. 1740-1742(A)(3)(c)]
  - (i) 4.01 pounds per hour; and, [Approval Nos. 1740-1742(A)(3)(c)(1)]
  - (ii) 30,000 pounds in any consecutive 12-month period [Approval Nos. 1740-1742(A)(3)(c)(2)]

- (d) The total quantity of formaldehyde emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 shall not exceed: [Approval Nos.1740-1742(A)(3)(a)]
  - (i) 0.016 pounds per hour; and, [Approval Nos. 1740-1742(A)(3)(d)(1), Approval No. 2069, Table 2]
  - (ii) 0.382 pounds per day; and, [Approval Nos. 1740-1742(A)(3)(d)(2)]
  - (iii) 139.28 pounds in any consecutive 12-month period. [Approval Nos. 1740-1742(A)(3)(d)(3), Approval No. 2069, Table 1]
- (e) The following listed toxic air contaminants shall not be discharged to the atmosphere from polyester film coating operations on P102, P103, and P104: 1,4-dioxane, acetaldehyde, antimony trioxide, arsenic, 1,3-butadiene, cadmium, chromium, hydrogen chloride, nickel, nitric acid and vanadium. [Approval Nos. 1740-1742(A)(3)(e)]

**b. Operating Requirements**

- (1) The permittee shall implement the following work practices for coating related activities: [250-RICR-120-05-19.8(A)]
  - (a) Store all new and used VOC-containing coating, thinners or coating related waste in closed containers; [250-RICR-120-05-19.8(A)(1)]
  - (b) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(A)(2)]
  - (c) Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; [250-RICR-120-05-19.8(A)(3)] and
  - (d) Convey VOC-containing coatings, thinners and coating related waste materials form one location to another in closed containers or pipes. [250-RICR-120-05-19.8(A)(4)]
- (2) The permittee shall implement the following work practices for cleaning related activities: [250-RICR-120-05-19.8(B)]
  - (a) Store all VOC-containing cleaning materials and used shop towels in closed containers; [250-RICR-120-05-19.8(B)(1)]
  - (b) Ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(B)(2)]
  - (c) Minimize spills of VOC-containing cleaning materials; [250-RICR-120-05-19.8(B)(3)]

- (d) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and [250-RICR-120-05-19.8(B)(4)]
- (e) Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers. [250-RICR-120-05-19.8(B)(5)]

**c. Testing Requirements**

(1) VOC Content of Coatings Formulated On-Site

- (a) For each coating that is formulated on-site (by thinning or mixing with another material), the VOC content of the coating shall be determined by: [Approval Nos. 1740-1742(B)(1)(a)]
  - (i) Maintaining batch formulation information documenting the VOC content of each coating; or, [Approval Nos. 1740-1742(B)(1)(a)(1)]
  - (ii) Using USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A,” EPA-340/1-91-010. [Approval Nos. 1740-1742(B)(1)(a)(2), 250-RICR-120-05-19.12(A)]
- (b) If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the facility’s formulation data, the USEPA Method 24 test shall govern. [Approval Nos. 1740-1742(B)(1)(b)]

(2) VOC Content of Coatings As-Supplied

- (a) For each coating that is not formulated on-site by thinning or mixing with another material (“as-supplied”), the VOC content of the coating shall be determined by documentation furnished by the coating supplier or an outside laboratory that provides the VOC content, water content, exempt compounds content, solids content and density of each coating used. [Approval Nos. 1740-1742(B)(2)(a)]
- (b) VOC, water, exempt compounds and solids content, by weight, of as-supplied coatings shall be determined with USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A”, EPA-340/1-91-010. [Approval Nos. 1740-1742(B)(2)(b), 250-RICR-120-05-19.12(A), 250-RICR-120-05-29.10(C)(1)(b)]

- (c) If the permittee uses a coating that does not release VOC reaction by products during the cure; for example, if all VOC is solvent; the permittee may request permission to use batch formulation information to determine VOC content. If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the formulation data, the USEPA Method 24 test shall govern. [Approval Nos. 1740-1742(B)(2)(c)]

**d. Recordkeeping Requirements**

- (1) The permittee shall collect and record all of the following information each month for P102, P103, and P104: [Approval Nos. 1740-1742(C)(1), 250-RICR-120-05-19.10(A)(1), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) The name, description and amount of each coating, as applied, on each emission unit; and, [Approval Nos. 1740-1742(C)(1)(a), 250-RICR-120-05-19.10(A)(1)(a), 250-RICR-120-05-29.10(C)(1)(b)]
  - (b) The mass of VOC per volume of each coating (excluding water and exempt compounds), as applied, used each month on each emission unit; and, [Approval Nos. 1740-1742(C)(1)(b), 250-RICR-120-05-19.10(A)(1)(c), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) The mass of HAP per volume of each coating, as applied, used each month on each emission unit; and, [Approval Nos. 1740-1742(C)(1)(c), 250-RICR-120-05-29.10(C)(1)(b)]
  - (d) The mass of any listed toxic air contaminant per volume of each coating, as applied, used each month on each emission unit; and, [Approval Nos. 1740-1742(C)(1)(d), 250-RICR-120-05-29.10(C)(b)]
  - (e) The type and amount of solvent used for diluents and cleanup operations. [Approval Nos. 1740-1742(C)(1)(e), 250-RICR-120-05-19.10(A)(1)(b), 250-RICR-120-05-29.10(C)(1)(b)]
  - (f) A Safety Data Sheet, a Certified Product Data Sheet or equivalent for each coating, diluent or cleaning solvent used. [250-RICR-120-05-19.10(A)(1)(d)]
- (2) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from polyester film coating operations on P102, P103, and P104. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1740-1742(C)(2), 250-RICR-120-05-29.10(C)(1)(b)]
- (3) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of HAP discharged to the atmosphere from polyester film coating operations on P102, P103, and P104. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1740-1742(C)(4), 250-RICR-120-05-29.10(C)(1)(b)]

- (4) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of each listed toxic air contaminant discharged to the atmosphere from polyester film coating operations on P102, P103, and P104. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1740-1742(C)(6)]

**f. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources in writing within 15 days, whenever the total quantity of volatile organic compound emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 exceeds: [Approval Nos. 1740-1742(C)(3), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) 10,000 pounds in any one month; or, [Approval Nos. 1740-1742(C)(3)(a)]
  - (b) 30,000 pounds in any consecutive 12-month period [Approval Nos. 1740-1742(C)(3)(b)]
- (2) The permittee shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of HAP emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 exceeds 2,500 pounds of any combination of HAPs per calendar month based upon a 12-month rolling average. [Approval Nos. 1740-1742(C)(5), 250-RICR-120-05-29.10(C)(1)(b)]
- (3) The permittee shall notify the Office of Air Resources in writing, within 15 days, of determining that the total quantity of emissions discharged to the atmosphere from polyester film coating operations on P102, P103, and P104 exceeds: [Approval Nos. 1740-1742(C)(7), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) 0.016 pounds per hour or 139.28 pounds in any consecutive 12-month period for ethylene glycol; or, [Approval Nos. 1740-1742(C)(7)(a)]
  - (b) 1.36 pounds per hour or 11,880 pounds in any consecutive 12-month period for ammonia; [Approval Nos. 1740-1742(C)(7)(b)]
  - (c) 4.01 pounds per hour or 30,000 pounds in any consecutive 12-month period for ethylene glycol monobutyl ether; and, [Approval Nos. 1740-1742(C)(7)(c)]
  - (d) 0.016 pounds per hour or 0.382 pounds per day, or 139.28 pounds in any consecutive 12-month period for formaldehyde; [Approval Nos. 1740-1742(C)(7)(d)]
- (4) The permittee shall notify the Office of Air Resources in writing, within 15 days, whenever the emissions of 1,4-dioxane, acetaldehyde, antimony trioxide, arsenic, 1,3 butadiene, cadmium, chromium, hydrogen chloride, nickel, nitric acid or vanadium are discharged to the atmosphere from polyester film coating operations on P102, P103, and P104. [Approval Nos. 1740-1742(C)(8), 250-RICR-120-05-29.10(C)(1)(b)]

- (5) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.C.4 of this permit or any other applicable air pollution control rules and regulations. [Approval Nos. 1740-1742(C)(11)]
- (6) The permittee shall notify the Office of Air Resources of any record showing any non-complying coatings by sending a copy of such a record to the Office of Air Resources within thirty (30) calendar days following that use. [250-RICR-120-05-19.10(B)(1)(a)]
- (7) The permittee shall notify the Office of Air Resources, at least thirty (30) calendar days before changing the method of compliance from complying coatings to the use of daily-weighted averaging or control devices. [250-RICR-120-05-19.10(B)(1)(d), Approval Nos. 1740-1742(C)(10)]

**g. Other Requirements**

To the extent consistent with the requirements of Section I.C.4 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval Nos. 1740-1742(D)(2)]

**h. Trial Surface Coating Operations**

- (1) The permittee may conduct trial surface coating operations subject to the following conditions. [Approval Nos. 1740-1742(E)(1)]
  - (a) Trial surface coating operations do not include the production for sale of established product recipes. A recipe is considered established once it is run three times or more in a rolling 12-month period. [Approval Nos. 1740-1742(E)(1)(a)]
  - (b) The permittee shall comply with the provisions of 250-RICR-120-05-9 by: [Approval Nos. 1740-1742(E)(1)(b), 250-RICR-120-05-9.7.1(A)]
    - (i) Limiting the total quantity of emissions discharged to the atmosphere, from the trial surface coating operations, to no more than 10 pounds per hour or 100 pounds per day of VOC, whichever is more stringent; [Approval Nos. 1740-1742(E)(1)(b)(1), 250-RICR-120-05-9.7.1(A)(7)]
    - (ii) Limiting the total quantity of emissions discharged to the atmosphere, from trial surface coating operations, so that facility emissions do not exceed the minimum quantity for a listed toxic air contaminant, as specified in 250-RICR-120-9.17 Appendix A; and, [Approval Nos. 1740-1742(E)(1)(b)(2), 250-RICR-120-05-9.7.1(A)(7)(a)]
    - (iii) Prohibiting the use, in trial surface coating operations, of any toxic air contaminant that has actual facility emissions which exceed the minimum quantity, as specified in 250-RICR-120-9.17, Appendix A unless allowed under a separate permit. [Approval Nos. 1740-1742(E)(1)(b)(3), 9.7.1(A)(7)(a)]

- (c) The permittee shall comply with the provisions of 250-RICR-120-05-19 by limiting emissions from trial surface coating operations to no more than 2.9 pounds of VOC per gallon of coating, minus water. [Approval Nos. 1740-1742(E)(1)(c), 250-RICR-120-05-19.7]
- (2) The permittee shall maintain the following records to determine compliance with 250-RICR-120-05-9 for trial surface coating operation. These records shall be maintained for a period of five (5) years and shall be available for inspection by the Office of Air Resources and the Environmental Protection Agency upon request for the purpose of determining compliance with this condition. These records shall include the following: [Approval Nos. 1740-1742(E)(1)(d)]
  - (a) The date, start time and end time for each coating trial and the quantity of coating used for each coating trial; [Approval Nos. 1740-1742(E)(1)(d)(1)]
  - (b) The name, identification number and amount used each hour and each day of each coating, as applied; [Approval Nos. 1740-1742(E)(1)(d)(2)]
  - (c) For each coating used, the VOC content in pounds of VOC per gallon of coating, as applied, and the quantity of any listed toxic air contaminant in pounds per gallon of coating as applied; [Approval Nos. 1740-1742(E)(1)(d)(3)]
  - (d) Records of any and all calculations documenting the as applied VOC content in pounds per gallon of coating and the listed toxic air contaminant content in pounds per gallon of coating; and, [Approval Nos. 1740-1742(E)(1)(d)(4)]
  - (e) The type and amount of any solvent used for diluents and cleanup operations. [Approval Nos. 1740-1742(E)(1)(d)(5)]
- (3) The permittee shall notify the Office of Air Resources in writing, within 5 days, whenever: [Approval Nos. 1740-1742(E)(1)(e)]
  - (a) The total quantity of emissions discharged to the atmosphere, from trial surface coating operations exceeds 10 pounds per hour or 100 pounds per day of VOC, whichever is more stringent, unless otherwise allowed by permit approval; or, [Approval Nos. 1740-1742(E)(1)(e)(1)]
  - (b) The aggregate quantity of emissions discharged to the atmosphere, from the trial operations and facility operations, exceeds the minimum quantity for any listed toxic air contaminant, as specified in 250-RICR-120-05-9.17, Appendix A. [Approval Nos. 1740-1742(E)(1)(e)(2)]
- (4) The permittee shall notify the Office of Air Resources in writing, within 5 days, whenever the VOC emissions from trial surface coating operations exceed 2.9 pounds of VOC per gallon of coating, minus water. [Approval Nos. 1740-1742(E)(1)(f)]



## 5. Requirements for Emissions Units P105 and P106

The following requirements are applicable to:

- Emissions unit P105, which is the gravure coating operation at the Torayfan A4 film line. [Approval No. 1908]
- Emissions unit P106, which is the gravure coating operation at the Torayfan A5 film line. [Approval No. 1909]

### a. **Emission Limitations**

#### (1) Volatile Organic Compounds

The VOC content of all coatings used in polypropylene film coating operations on the emission units listed in this section shall not exceed 2.9 pounds of VOC per gallon of coating (minus water and exempt compounds). [Approval Nos. 1908-1909(A)(1)(a), 250-RICR-120-05-19.6.8(A), 19.7.8(A)(1)(a)]

#### (2) The VOC content of all coatings used in the polypropylene film coating operations after July 1, 2020 shall only use low-VOC coatings that have an applied VOC content, as calculated using the equation in Conditions I.C.5.c(3) of this permit, that does not exceed 0.08 lbs of VOC/lb of coating, as applied or 0.4 lbs VOC per lb solids. [250-RICR-120-05-19.6.8(A), 19.7.8(B)(1)(a)]

#### (3) Listed Toxic Air Contaminant

(a) The total quantity of formaldehyde emissions discharged to the atmosphere from coating operations on each of the emission units listed in this section shall not exceed: [Approval Nos. 1908-1909(A)(2)(a)]

(i) 0.0091 pounds per hour; and, [Approval Nos. 1908-1909(A)(2)(a)(1)]

(ii) 0.218 pounds per day; and, [Approval Nos. 1908-1909(A)(2)(a)(2)]

(iii) 79.47 pounds in any consecutive 12-month period. [Approval Nos. 1908-1909(A)(2)(a)(3)]

(b) The total quantity of ethylene glycol emissions discharged to the atmosphere from coating operations on each of the emission units listed in this section shall not exceed: [Approval Nos. 1908-1909(A)(2)(b)]

(i) 0.0091 pounds per hour; and, [Approval Nos. 1908-1909(A)(2)(b)(1)]

(ii) 79.74 pounds in any consecutive 12-month period. [Approval Nos. 1908-1909(A)(2)(b)(2)]

**b. Operating Requirements**

- (1) The gravure coaters on P105 and P106 shall perform single-sided coating operations only. [Approval Nos. 1908-1909(B)(1)]
- (2) The permittee shall implement the following work practices for coating related activities: [250-RICR-120-05-19.8(A)]
  - (a) Store all new and used VOC-containing coating, thinners or coating related waste in closed containers; [250-RICR-120-05-19.8(A)(1)]
  - (b) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(A)(2)]
  - (c) Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; [250-RICR-120-05-19.8(A)(3)] and
  - (d) Convey VOC-containing coatings, thinners and coating related waste materials from one location to another in closed containers or pipes. [250-RICR-120-05-19.8(A)(4)]
- (3) The permittee shall implement the following work practices for cleaning related activities: [250-RICR-120-05-19.8(B)]
  - (a) Store all VOC-containing cleaning materials and used shop towels in closed containers; [250-RICR-120-05-19.8(B)(1)]
  - (b) Ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(B)(2)]
  - (c) Minimize spills of VOC-containing cleaning materials; [250-RICR-120-05-19.8(B)(3)]
  - (d) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and [250-RICR-120-05-19.8(B)(4)]
  - (e) Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers. [250-RICR-120-05-19.8(B)(5)]

**c. Testing Requirements**

- (1) VOC Content of Coatings Formulated On-Site
  - (a) For a coating that is formulated on-site (by thinning or mixing with another material), the VOC content of the coating shall be determined by: [Approval Nos. 1908-1909(C)(1)(a)]
    - (i) Maintaining batch formulation information documenting the VOC content of the coating; or, [Approval Nos. 1908-1909(C)(1)(a)(1)]
    - (ii) Using USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A,” EPA-340/1-91-010. [Approval Nos. 1908-1909(C)(1)(a)(2), 250-RICR-120-05-19.12(A)]
  - (b) If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the facility’s formulation data, the USEPA Method 24 test shall govern. [Approval Nos. 1908-1909(C)(1)(b)]
- (2) VOC Content of Coating As-Supplied
  - (a) For a coating that is not formulated on-site by thinning or mixing with another material (“as-supplied”), the VOC content of the coating shall be determined by documentation furnished by the coating supplier or an outside laboratory that provides the VOC content, water content, exempt compounds content, solids content and density of the coating. [Approval Nos. 1908-1909(C)(2)(a)]
  - (b) VOC, water, exempt compounds and solids content, by weight, of as-supplied coatings shall be determined with USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A”, EPA-340/1-91-010. [Approval Nos. 1908-1909(C)(2)(b), 250-RICR-120-05-19.12(A)]
  - (c) If the permittee uses a coating that does not release VOC reaction by products during the cure; for example, if all VOC is solvent; the permittee may request permission to use batch formulation information to determination VOC content. If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the formulation data, the USEPA Method 24 test shall govern. [Approval Nos. 1908-1909(C)(2)(c)]
- (3) VOC content of the as applied coating, expressed in units of pounds of VOC per pound of coating solids, shall be calculated using equation 1 of this section: [250-RICR-120-05-19.13(B)]

Equation 1

$$\text{VOC}_B = (\text{W}_o)/(\text{W}_n)$$

Where:

$\text{VOC}_B$	=	VOC content in lbs. VOC/lb of coating solids
$\text{W}_o$	=	Weight percent of VOC ( $\text{W}_v - \text{W}_w - \text{W}_{ex}$ )
$\text{W}_v$	=	Weight percent of total volatiles (100%-weight percent solids)
$\text{W}_w$	=	Weight percent of water
$\text{W}_{ex}$	=	Weight percent of exempt solvents
$\text{W}_n$	=	Weight percent of solids of the as applied coating

**d. Recordkeeping Requirements**

- (1) The permittee shall collect and record all of the following information each month for the emission units listed in this section: [Approval Nos. 1908-1909(D)(1), 250-RICR-120-05-19.9(C)(3), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) The name, description and amount of the coating used, as applied, on each emission unit listed in this section; and, [Approval Nos. 1908-1909(D)(1)(a), 250-RICR-120-05-19.10(A)(1)(a), 250-RICR-120-05-29.10(C)(1)(b)]
  - (b) The mass of VOC per volume of the coating (excluding water and exempt compounds), as applied, used each month on each emission unit listed in this section; and, [Approval Nos. 1908-1909(D)(1)(b), 250-RICR-120-05-19.10(A)(1)(c), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) The mass of any listed toxic air contaminant per volume of the coating, as applied, used each month on each film line. [Approval Nos. 1908-1909(D)(1)(c), 250-RICR-120-05-29.10(C)(1)(b)]
  - (d) The type and amount of solvent used for diluents and cleanup operations. [Approval Nos. 1908-1909(D)(1)(d), 250-RICR-120-05-19.10(A)(1)(b), 250-RICR-120-05-29.10(C)(1)(b)]
  - (e) A Safety Data Sheet, a Certified Product Data Sheet or equivalent for each coating, diluent or cleaning solvent used. [250-RICR-120-05-19.10(A)(1)(d)]
- (2) The permittee shall, on a daily basis, determine the total quantity of formaldehyde and ethylene glycol discharged to the atmosphere from the emission units listed in this section. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1908-1909(D)(2), 250-RICR-120-05-29.10(C)(1)(b)]
- (3) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of formaldehyde and ethylene glycol discharged to the atmosphere from the emission units listed in this section. Monthly and 12-month rolling average shall be calculated. The permittee shall keep records of this

determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1908-1909(D)(4)]

**e. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources within 24 hours, whenever the total quantity of formaldehyde or ethylene glycol discharged to the atmosphere from the coating operations on the emission units listed in this section exceeds the hourly or daily emission limitations in Condition I.C.5.a(2) of this permit. [Approval Nos. 1908-1909(D)(3), 250-RICR-120-05-29.10(C)(1)(b)]
- (2) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.C.5 of this permit or any other applicable air pollution control rules and regulations. [Approval Nos. 1908-1909(D)(12)]
- (3) The permittee shall notify the Office of Air Resources, at least thirty (30) calendar days before changing the method of compliance from complying coatings to the use of daily-weighted averaging or control devices. [250-RICR-120-05-19.10(B)(1)(d), Approval Nos. 1740-1742(C)(10)]
- (4) The permittee shall notify the Office of Air Resources in writing, within 15 days after the first of the month, whenever the total quantity of formaldehyde or ethylene glycol discharged to the atmosphere from coating operations on P105 and P106, exceeds the 12-month emission limitations in I.C.5.a(2) of this permit. [Approval Nos. 1908-1909(D)(5)]
- (5) The permittee shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of Section I.C.5 of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information: [Approval Nos. 1908-1909(D)(15), 250-RICR-120-05-19.10(B)(1)(a)]
  - (a) The name and location of the facility; [Approval Nos. 1908-1909(D)(15)(a)]
  - (b) The subject source(s) that caused the noncompliance with the permit term; [Approval Nos. 1908-1909(D)(15)(b)]
  - (c) The time and date of first observation of the incident of noncompliance; [Approval Nos. 1908-1909(D)(15)(c)]
  - (d) The cause and expected duration of the incident of noncompliance; [Approval Nos. 1908-1909(D)(15)(d)]
  - (e) The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate; [Approval Nos. 1908-1909(D)(15)(e)]
  - (f) The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance. [Approval Nos. 1908-1909(D)(15)(f)]

- (6) The permittee shall notify the Office of Air Resources, at least thirty (30) calendar days before changing the method of compliance from complying coatings to the use of daily-weighted averaging or control devices. [Approval Nos. 1908-1909(D)(10), 250-RICR-120-05-19.10(B)(1)(d)]

**f. Other Requirements**

To the extent consistent with the requirements of Section I.C.5 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval Nos. 1908-1909(E)(1)]

**g. Trial Surface Coating Operations**

- (1) The permittee may conduct trial surface coating operations subject to the following conditions. Trial surface coating operations do not include the production for sale of established products through established processes. [Approval Nos. 1908 – 1909(F)(1)]
  - (a) The permittee shall comply with the provisions of 250-RICR-120-05-9 by limiting the total quantity of emissions discharged to the atmosphere, from the trial surface coating operations to no more than: [Approval Nos. 1908 – 1909(F)(1)(a)]
    - (a) 10 pounds per hour or 100 pounds per day of VOC, whichever is more stringent; and, [Approval Nos. 1908 – 1909(F)(1)(a)(1)]
    - (b) the minimum quantity for any listed toxic air contaminant, as specified in 250-RICR-120-05-9.17, Appendix A. [Approval Nos. 1908 – 1909(F)(1)(a)(2)]
- (2) The permittee shall comply with the provisions of 250-RICR-120-05-19 by limiting emissions from the trial surface coating operations to no more than: [Approval Nos. 1908 – 1909(F)(1)(b)]
  - (a) 4.79 pounds of VOC per gallon of solids if add-on VOC control equipment is used on the surface coating line, or; [250-RICR-120-05-19.7(A), Approval Nos. 1908 – 1909(F)(1)(b)(1)]
  - (b) 2.9 pounds of VOC per gallon of coating, minus water, if add-on VOC control equipment is not used on the surface coating line. [250-RICR-120-05-19.7(A), Approval Nos. 1908 – 1909(F)(1)(b)(2)]
- (3) The permittee shall maintain the following records to determine compliance with 250-RICR-120-05-9 for the trial surface coating operations. These records shall be maintained for a period of five (5) years and shall be available for inspection by the Office of Air Resources and the Environmental Protection Agency upon request for the purpose of determining compliance with this condition. These records shall include the following: [Approval Nos. 1908 – 1909(F)(1)(c)]
  - (a) The date, start time and end time for each coating trial and the quantity of coating used for each coating trial; [Approval Nos. 1908 – 1909(F)(1)(c)(1)]

- (b) The name, identification number and amount used each hour and each day of each coating, as applied. [Approval Nos. 1908 – 1909(F)(1)(c)(2)]
  - (c) For each coating used, the VOC content in, pounds of VOC per gallon of coating and pounds of VOC per gallon of coating solids, as applied, and the quantity of any listed toxic air contaminant in pounds per gallon of coating as applied; [Approval Nos. 1908 – 1909(F)(1)(c)(3)]
  - (d) The type and amount of any solvent used for diluents and cleanup operations. [Approval Nos. 1908 – 1909(F)(1)(c)(4)]
  - (e) Records of any and all calculations documenting the as applied VOC content in pounds per gallon of coating and pounds per gallon of coating solids and the listed toxic air contaminant content in pounds per gallon of coating. [Approval Nos. 1908 – 1909(F)(1)(c)(5)]
- (4) The permittee shall notify the Office of Air Resources in writing, within 5 days, whenever the total quantity of emissions discharged to the atmosphere, from the trial operations exceeds: [Approval Nos. 1908 – 1909(F)(1)(d)]
- (a) 10 pounds per hour or 100 pounds per day of VOC, whichever is more stringent; or, [Approval Nos. 1908 – 1909(F)(1)(d)(1)]
  - (b) the minimum quantity for any listed toxic air contaminant, as specified in 250-RICR-120-05-19.17, Appendix A. [Approval Nos. 1908 – 1909(F)(1)(d)(2)]
- (5) The permittee shall notify the Office of Air Resources in writing, within 5 days, whenever the VOC emissions from the trial operations exceeds: [Approval Nos. 1908 – 1909(F)(1)(e)]
- (a) 4.79 pounds of VOC per gallon of solids if add-on VOC control equipment is used on the surface coating line, or; [Approval Nos. 1908 – 1909(F)(1)(e)(1)]
  - (b) 2.9 pounds of VOC per gallon of coating, minus water, if add-on VOC control equipment is not used on the surface coating line. [Approval Nos. 1908 – 1909(F)(1)(e)(2)]

**6. Requirements for Emissions Unit P101**

The following requirements are applicable to:

- Emissions unit P101, which is the coating operation at the Research and Development pilot extrusion film line.

**a. Emission Limitations**

- (1) The VOC content of each coating used by the permittee on P101, shall not exceed 2.9 lbs. VOC/gallon of coating, minus water and exempt compounds, as applied. [250-RICR-120-05-19.6.8(A)(1), 19.7.8(A)(1)(a)]
- (2) The VOC content of all coatings used on P101 after July 1, 2020 shall only use low-VOC coatings that have an applied VOC content, as calculated using the equation in Conditions I.C.6.c.(3) of this permit, that does not exceed 0.08 lbs of VOC/lb of coating, as applied or 0.4 lbs VOC per lb solids. [250-RICR-120-05-19.6.8(A), 19.7.8(B)(1)(a)]

**b. Operating Requirements**

- (1) The permittee shall implement the following work practices for coating related activities: [250-RICR-120-05-19.8(A)]
  - (a) Store all new and used VOC-containing coating, thinners or coating related waste in closed containers; [250-RICR-120-05-19.8(A)(1)]
  - (b) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(A)(2)]
  - (c) Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; [250-RICR-120-05-19.8(A)(3)] and
  - (d) Convey VOC-containing coatings, thinners and coating related waste materials from one location to another in closed containers or pipes. [250-RICR-120-05-19.8(A)(4)]
- (2) The permittee shall implement the following work practices for cleaning related activities: [250-RICR-120-05-19.8(B)]
  - (a) Store all VOC-containing cleaning materials and used shop towels in closed containers; [250-RICR-120-05-19.8(B)(1)]
  - (b) Ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials; [250-RICR-120-05-19.8(B)(2)]
  - (c) Minimize spills of VOC-containing cleaning materials; [250-RICR-120-05-19.8(B)(3)]
  - (d) Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and [250-RICR-120-05-19.8(B)(4)]
  - (e) Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed



without atomizing the cleaning solvent and all spent solvent is captured in closed containers. [250-RICR-120-05-19.8(B)(5)]

**c. Testing Requirements**

- (1) VOC Content of Coatings Formulated On-Site
  - (a) For each coating that is formulated on-site (by thinning or mixing with another material), the VOC content of the coating shall be determined by: [250-RICR-120-05-29.10(C)(1)(b)]
    - (1) Maintaining batch formulation information documenting the VOC content of each coating; or, [250-RICR-120-05-29.10(C)(1)(b)]
    - (2) Using USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A,” EPA-340/1-91-010. [250-RICR-120-05-19.12(A)]
  - (b) If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the facility’s formulation data, the USEPA Method 24 test shall govern. [250-RICR-120-05-29.10(C)(1)(b)]
- (2) VOC Content of Coatings As-Supplied
  - (a) For each coating that is not formulated on-site by thinning or mixing with another material (“as-supplied”), the VOC content of the coating shall be determined by documentation furnished by the coating supplier or an outside laboratory that provides the VOC content, water content, exempt compounds content, solids content and density of each coating used. [250-RICR-120-05-29.10(C)(1)(b)]
  - (b) VOC, water, exempt compounds and solids content, by weight, of as-supplied coatings shall be determined with USEPA Method 24 or an alternative procedure approved by USEPA and the Office of Air Resources. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A”, EPA-340/1-91-010. [250-RICR-120-05-19.11(A), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) If the permittee uses a coating that does not release VOC reaction by products during the cure; for example, if all VOC is solvent; the permittee may request permission to use batch formulation information to determination VOC content. If the VOC content of a coating determined by an USEPA Method 24 test is greater than that indicated by the formulation data, the USEPA Method 24 test shall govern. [250-RICR-120-05-29.10(C)(1)(b)]

- (3) VOC content of the as applied coating, expressed in units of pounds of VOC per pound of coating solids, shall be calculated using equation 1 of this section: [250-RICR-120-05-19.13(B-C)]

Equation 1

$$\text{VOCB} = (\text{Wo})/(\text{Wn})$$

Where:

VOCB	=	VOC content in lbs. VOC/lb of coating solids
Wo	=	Weight percent of VOC (Wv-Ww-Wex)
Wv	=	Weight percent of total volatiles (100%-weight percent solids)
Ww	=	Weight percent of water
Wex	=	Weight percent of exempt solvents
Wn	=	Weight percent of solids of the as applied coating

**d. Recordkeeping Requirements**

- (1) The permittee shall collect and record the following information each month for P101: [250-RICR-120-05-19.10(A)(1), 250-RICR-120-05-29.10(C)(1)(b)]
- (a) The name, description (coating category) and amount of each coating, as applied, on each coating line or operation, and [250-RICR-120-05-19.10(A)(1)(a), 250-RICR-120-05-29.10(C)(1)(b)]
  - (b) The mass of VOC per volume of each coating (excluding water), as applied, used each month on each coating line or operation. [250-RICR-120—05-19.10(A)(1)(c), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) The type and amount of solvent used for diluents and cleanup operations. [250-RICR-120-05-19.10(C)(1)(b), 250-RICR-120-05-29.10(C)(1)(b)]
  - (d) A Safety Data Sheet, a Certified Product Data Sheet or equivalent for each coating, diluent or cleaning solvent used. [250-RICR-120-05-19.10(A)(1)(d)]

**e. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources of any record showing any non-complying coatings by sending a copy of such a record to the Office of Air Resources within thirty (30) calendar days following that use. [250-RICR-120-05-19.10(B)(1)(a)]
- (2) The permittee shall notify the Office of Air Resources, at least thirty (30) calendar days before changing the method of compliance from complying coatings to the use of daily-weighted averaging or control devices. [250-RICR-120-05-19.10(B)(1)(d)]

## 7. Requirements for Emission Unit P116

The following requirements are applicable to:

- Emission unit P116, which is the Lumirror Cooling Towers (Wastewater Reuse System).

### a. **Emission Limitations**

- (1) The concentration of 1,4-dioxane and acetaldehyde discharged from the effluent tub of the wastewater treatment system to P116 shall not exceed: [Approval No. 2212(A)(1)(a-b)]

- (a) 1,4-dioxane: 53,000 µg/l

- (b) Acetaldehyde: 910 µg/l

The limitations shown in µg/l must not be exceeded for any wastewater sample tested from the effluent tub as required in Condition I.C.8.c(5) of this permit. [Approval No. 2212(A)(1)]

- (2) The total quantity of 1,4-dioxane emissions discharged to the atmosphere from P116 shall not exceed: [Approval No. 2212(A)(2)(a-b)]

- (a) 0.018 pounds per hour; and,

- (b) 0.66 pounds in any consecutive 12-month period.

- (3) The total quantity of acetaldehyde emissions discharged to the atmosphere from P116 shall not exceed 227 pounds in any consecutive 12-month period. [Approval No. 2212(A)(3)(a)]

### b. **Operating Requirements**

- (1) The total quantity of process wastewater discharged to P116 shall not exceed 30,000,000 gallons in any consecutive 12-month period. [Approval No. 2212(B)(1)]

- (2) Any wastewater which does not meet a turbidity limit which corresponds to a total suspended solids (TSS) limitation of 128 mg/l must be immediately diverted from P116 to the Quonset Wastewater Treatment Facility. In lieu of using turbidity, TSS may be used directly. [Approval No. 2212(B)(2)]

- (3) The permittee shall not use chromium-based biocides and/or chromium-based fungicides in P116. [Approval No. 2212(B)(3)]

- (4) The permittee shall maintain P116 in accordance with the manufacturer's (Marley) recommendations. [Approval No. 2212(B)(4)]

- (5) P116 shall be equipped with Drift Eliminators to minimize water drift losses and plume visibility. The permittee shall maintain the drift eliminators and conduct any

recommended tests in accordance with the manufacturer's recommendations. [Approval No. 2212(B)(5)]

**c. Monitoring Requirements**

- (1) The permittee shall measure the volume of wastewater discharged from the effluent tub of the wastewater treatment system to P116 continuously. [Approval No. 2212(C)(1)]
- (2) The facility shall continue to perform and submit effluent sampling in accordance with the requirements of the pretreatment plant discharge permit (Quonset Wastewater Treatment Facility Wastewater Discharge Permit). [Approval No. 2212(C)(2)]
- (3) The facility shall be equipped with a continuous TSS monitor to continuously monitor the final effluent from the treatment system prior to discharge to P116. This monitor must be set to alarm if the treated effluent equals or exceeds a TSS limitation 128 mg/l. The facility must be prepared on a 24-hour basis to stop the flow of any non-compliant wastewater to P116 upon detection. During the initial calibration period if the permittee determines that this limitation is not reflective of compliant system performance then the permittee may submit documentation and data which reflects a more appropriate limitation. The TSS effluent monitor shall be equipped with a recorder. [Approval No. 2212(C)(3)]
- (4) The permittee shall continuously monitor the pH of water in the effluent tub prior to discharge. This monitor shall have the ability to record pH in a range of 0-12 and must be equipped with a recorder. [Approval No. 2212(C)(4)]
- (5) The permittee shall monitor the concentration of 1,4-dioxane, acetaldehyde, ethylene glycol, methanol, and formaldehyde in the effluent tub discharge prior to P116. Sampling shall be conducted for a minimum of one day per month and may be composited in the lab if allowed by approved USEPA methodology. The sampling shall be conducted within the first 12-month period that the wastewater is discharged to P116 and shall ensure that processes which are manufactured at the facility during that 12-month period that can contaminate the wastewater are included. The permittee must record and maintain records of what process were run prior to the sampling and must account for the delay within the treatment system. The duration of each sample and any compositing method shall be compliant with an appropriate approved USEPA method. The owner/operator may propose alternatives to this testing requirement after conducting a minimum of 12 months of testing. Such alternatives shall not be implemented until the Office of Air Resources issues a written approval of the proposal. [Approval No. 2212(C)(5), 250-RICR-120-05-29.10(C)(1)(b)]
- (6) Monthly sampling shall be conducted for all pollutants required by the Quonset Point Wastewater Treatment Facility Wastewater Discharge Permit excluding BOD, COD, oil/grease, 1,3-dichlorobenzene, and diethyl phthalate. The sampling shall be conducted within the first 6-month period that the process wastewater is discharged to P116 and shall ensure that processes which are manufactured at the facility during that 6-month period that can contaminate the wastewater are included. The permittee shall record and maintain records of what process were run prior to the sampling and must account for the delay within the treatment system. The duration of each sample and any compositing method shall be compliant with the requirements of the Quonset Point

Wastewater Treatment Facility Wastewater Discharge Permit and an appropriate approved USEPA method. [Approval No. 2212(C)(6), 250-RICR-120-05-29.10(C)(1)(b)]

- (7) All analyses performed in Conditions (5-6) of this subsection shall be performed at a certified laboratory. The permittee must ensure that the laboratory uses testing methods with the most stringent and consistent detection limitations available. [Approval No. 2212(C)(7)]

**d. Recordkeeping Requirements**

- (1) The permittee shall record the volume of wastewater discharged from the effluent tub of the wastewater treatment system to P116 continuously. [Approval No. 2212(C)(1)]
- (2) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the quantity of each listed toxic air contaminant discharged to the atmosphere from P116. Monthly and 12-month rolling averages shall be calculated. The permittee shall determine the one-hour emission rate for 1,4-dioxane using the equation below and substituting the maximum capacity of the cooling tower (814,680 gallons/hr) for  $Q_{eff}$ . The permittee shall keep records of each determination and provide such records to the Office of Air Resources upon request. [Approval No. 2212(D)(2), 250-RICR-120-05-29.10(C)(1)(b)]

The quantity of each listed toxic air contaminant discharged to the atmosphere from P116 shall be determined as follows:

$$E_i \text{ (lbs/month)} = Q_{eff} \times C_i \times 8.34 \text{ E-}09 \times D$$

Where:

$E_i$  = Emissions of a listed toxic air contaminant  $i$  (lb/month)

$Q_{eff}$  = Volume of wastewater discharged from the effluent tub of the wastewater treatment system to the cooling towers (gal/month)

$C_i$  = Concentration of listed toxic air contaminant  $i$  in the wastewater discharged from the effluent tub of the wastewater treatment system to P116 ( $\mu\text{g/l}$ ). For the first 12 months of discharge, the concentration shall be determined by the results of sampling required in Condition I.C.8.c(5) of this permit.

$D$  = % Drift – use only for 1,4-dioxane, 0.005% or 5.0 E-05

7.34-09 = Conversion factor for  $\mu\text{g/l}$  to lb/gal

- (3) The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of process wastewater discharged to P116. Monthly and 12-month rolling averages shall be calculated. The permittee shall keep records of this

determination and provide such records to the Office of Air Resources upon request. [Approval No. 2212(D)(6)]

- (4) The permittee shall maintain all records for the TSS effluent monitor. The permittee shall keep records from this monitor and provide such records to the Office of Air Resources upon request. [Approval No. 2212(D)(8)]
- (5) The permittee shall maintain all maintenance records for P116 and all maintenance and any recommended test records for the drift eliminators as required in this permit. [Approval No. 2212(D)(9)]

**e. Reporting Requirements**

- (1) Results of the monthly monitoring performed pursuant to Conditions I.C.7.c(5-6) of this permit shall be submitted to the Office of Air Resources within 45 days of completion of the sampling. [Approval No. 2212(D)(1)]
- (2) The permittee shall notify the Office of Air Resources, in writing, within 15 days of determining that the quantity of 1,4-dioxane or acetaldehyde discharged to the atmosphere from P116, exceeds the applicable 12-month emission limitations in Condition I.C.8.a(2-3) of this permit. [Approval No. 2212(D)(3)]
- (3) The permittee shall notify the Office of Air Resources, in writing, within 15 days of determining that the quantity of 1,4-dioxane discharged to the atmosphere from P116, exceeds the one-hour emission limitation in Condition I.C.7.a(2)(a) of this permit. [Approval No. 2212(D)(4)]
- (4) The permittee shall notify the Office of Air Resources in writing, within 5 business days of receiving test results that show that the monthly average concentration of 1,4-dioxane and/or acetaldehyde discharged from the effluent tub to P116 exceeds the limitations set forth in Condition I.C.7.a(1) of this permit. [Approval No. 2212(D)(5)]
- (5) The permittee shall notify the Office of Air Resources in writing, within 15 days of determining that the total quantity of process wastewater discharged to P116 exceeds 30,000,000 gallons in any consecutive 12-month period. [Approval No. 2212(D)(7)]
- (6) The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.C.7 of this permit or any other applicable air pollution control rules and regulations. [Approval No. 2212(D)(12)]

**f. Other Requirements**

- (1) To the extent consistent with the requirements of Section I.C.7 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval No. 2212(E)(1)]
- (2) If there is any conflict between any emission limitation in this permit and any previously issued minor source permit, the permittee shall comply with the emission limitation in this permit. [Approval No. 2212(E)(5)]

## 8. Requirements for Emission Units P046, P047, P048, P049, P050 and P051

The following requirements are applicable to:

- Emission unit P046, which is a Marshall & Williams A3 Tenter Oven. This unit heats and stretches polypropylene film. P046 is capable of burning propane and natural gas.
- Emission unit P047, which is a Marshall & Williams A4 Tenter Oven. This unit heats and stretches polypropylene film. P047 is capable of burning propane and natural gas.
- Emission unit P048, which is a Marshall & Williams A5 Tenter Oven. This unit heats and stretches polypropylene film. P048 is capable of burning propane and natural gas.
- Emission unit P049, which is a Mitsubishi Heavy Industries Ltd. A3 Die Vent. This unit Extrudes and forces polypropylene through a die onto a casting drum, which transforms it into a film.
- Emission unit P050, which is a Mitsubishi Heavy Industries Ltd. A4 Die Vent, Model No. 175D/220D. This unit Extrudes and forces polypropylene through a die onto a casting drum, which transforms it into a film.
- Emission unit P051, which is a Mitsubishi Heavy Industries Ltd. A5 Die Vent, Model No. 175D/220D. This unit Extrudes and forces polypropylene through a die onto a casting drum, which transforms it into a film.

There are no specific applicable requirements for P046-P051. This does not relieve the permittee from compliance with the provisions of the General Conditions, outlined in Section II of this permit, as they apply to for P046-P051.

## D. Organic Solvent Cleaning Devices

### 1. Requirements for Emissions Units P022 and P060-P064

The following requirements are applicable to:

- Emission units P022, P060-P064, each of which is a die and filter tank. P022 and P060-P064 are associated with air pollution control device C004, which is a Regenerative Thermal Oxidizer Model No. 3.ORTO95, which burns natural gas. [Approval 1420 and 2069]

#### (1) **Emission Limitations**

- (1) Except as provided below, VOC emissions generated from the following emission units shall be captured, contained and routed to C004 for treatment prior to discharge from the atmosphere: emission units P022 and P060 – P064. C004 shall reduce VOC emissions by 98% or greater, unless outlet emissions are below 5 ppmv. C004 shall reduce acetaldehyde emissions by 98% or greater, unless outlet emissions are below 5 ppmv.

At any time during the months of June, July, August and September, the permittee may remove the side panels from the Sequential Batch Reactor No. 2 in order to lower the temperature of the system and maintain optimal operation. [Approval No. 1420(A)(2)]

**(2) Operating Requirements**

- (1) Air pollution control device C004 operating temperature shall be maintained at or above 1500°F whenever VOC is being discharged to the device. [Approval No. 1420(B)(1)]
- (2) VOC emissions generated from the emission units listed in this section shall be captured, contained and routed to C004 for treatment prior to discharge to the atmosphere. [Approval No. 2069(B)(3)]
- (3) VOC emissions generated from the emission units listed in this section may be redirected uncontrolled to a bypass stack for up to 120 hours in any 12-month period. [Approval No. 2069(B)(4)]
- (4) The air pollution control device listed in this section shall be operated according to its design specifications whenever the associated emission unit(s) are in operation or are emitting air contaminants. [250-RICR-120-05-16.5]
- (5) Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. [Approval No. 2069(E)(1)]
- (6) In case of malfunction of the air pollution control devices listed in this section, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of the air pollution control devices listed in this section is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate the associate emission unit(s) beyond that period, the Director shall be petitioned for a variance under RI General Laws § 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include but is not limited to, the following: [Approval No. 1420(E)(1), Approval No. 2069(E)(2), 250-RICR-120-05-16.5]
  - (a) Identification of the specific air pollution control system (i.e. C004) and the source on which it is installed (i.e. P022, P060-P064), [Approval No. 1420(E)(1)(a), Approval No. 2069(E)(2)(a), 250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that the air pollution control system will be malfunctioning or out of service, [1420(E)(1)(b), Approval No. 2069(E)(2)(b), 250-RICR-120-05-16.6(A)(2)]
  - (c) The nature and quantity of air contaminants likely to be emitted during said period, [Approval No. 1420(E)(1)(c), Approval No. 2069(E)(2)(c), 250-RICR-120-05-16.6(A)(3)]



- (d) Measures that will be taken to minimize the length of said period, and [Approval No. 1420(E)(1)(d), Approval No. 2069(E)(2)(d), 250-RICR-120-05-16.6(A)(4)]
  - (e) The reasons it would be impossible or impractical to cease the source operation during said period. [Approval No. 1420(E)(1)(e), Approval No. 2069(E)(2)(e), 250-RICR-120-05-16.6(A)(5)]
- (7) The permittee may seek to establish that a malfunction of the air pollution control devices listed in this section that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the permittee must demonstrate to the Office of Air Resources that: [Approval No. 1420(E)(2), Approval No. 2069(E)(3)]
- (a) The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation or operator error; [Approval No. 1420(E)(2)(a), Approval No. 2069(E)(3)(a)]
  - (b) The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance; [Approval No. 1420(E)(2)(b), Approval No. 2069(E)(3)(b)]
  - (c) Repairs necessary to bring the air pollution control devices listed in this section back to operating at their design control efficiency were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable. Any parts or materials needed should be shipped overnight where possible or practical. [Approval No. 1420(E)(2)(c), Approval No. 2069(E)(3)(c)]
  - (d) All possible steps were taken to minimize emissions during the period of time that the repairs were performed. [Approval No. 1420(E)(2)(d), Approval No. 2069(E)(3)(d)]
  - (e) Emissions during the period of time that the repairs were performed will not: [Approval No. 1420(E)(2)(e), Approval No. 2069(E)(3)(e)]
    - (i) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by 250-RICR-120-05-22 and any Calculated Acceptable Ambient Levels; and [Approval No. & 1420(E)(2)(e)(1), Approval No. 2069(E)(3)(e)(1)]
    - (ii) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard. [Approval No. 1420(E)(2)(e)(2), Approval No. 2069(E)(3)(e)(2)]
  - (f) The reasons that it would be impossible or impractical to cease the operation of the source operation during said period. [Approval No. 1420(E)(2)(f), Approval No. 2069(E)(3)(f)]

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred, and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken. [Approval No. 1420(e)(2), Approval No. 2069(E)(3)]

The permittee shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction. [Approval No. 1420(e)(2), Approval No. 2069(E)(3)]

- (8) Equipment covers and dipping, or rotating baskets shall be constructed of nonporous or nonabsorbent material. Covers shall form a tight seal with the sides of the solvent cleaners listed in this section and have no gaps or holes. [250-RICR-120-05-36.8(A)]
- (9) When the covers for any of the solvent cleaners listed in this section are open, drafts at the same elevation as the tanks lip shall not be greater than 40 m/min. (130 ft/min.) when measured 1 to 2 meters (3 to 7 feet) upwind. [250-RICR-120-05-36.8(B)]
- (10) Leaks shall be repaired immediately or the solvent cleaners listed in this section shall be shut down. [250-RICR-120-05-36.8(C)]
- (11) The solvent cleaners listed in this section shall display a conspicuous summary of proper operating procedures consistent with minimizing emissions of organic solvents. [250-RICR-120-05-36.8(D)]
- (12) Spills shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the specifications in Condition (17) of this subsection. [250-RICR-120-05-36.8(F)]
- (13) No porous or absorbent materials, such as sponges, fabrics, wood, or paper products, shall be placed in any of the solvent cleaners listed in this section. [250-RICR-120-05-36.8(G)]
- (14) The permittee has demonstrated that equivalent control has been achieved to the requirements contained in Control of Emissions from Organic Solvent Cleaning 250-RICR-120-05-36 sections 36.8(H-I) through the following measures, currently utilized at the facility:
  - (a) Use of triethylene glycol (TEG) as a cleaning solvent,
  - (b) The parts shall remain in the tanks until dripping ceases. When transferring the parts to the rinse tanks there shall be no dripping of the solvent.
  - (c) Placing parts in rinse tanks containing an aqueous bath to remove excess TEG. [250-RICR-120-05-36.8(H-I) and Letter dated 13 December 2002 from Terrence Tuchon of the RIDEM Office of Air Resources to Drew Peters of Toray Plastics (America), Inc.]
- (15) All parts shall be oriented for best drainage. [250-RICR-120-05-36.8(J)]

- (16) When solvent is added to or drained from any of the solvent cleaners listed in this section, the solvent shall be transferred using threaded or other leak-proof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface. [250-RICR-120-05-36.8(K)]
- (17) Solvent, waste solvent, still bottoms, and sump bottoms shall be stored in covered containers and waste solvent transferal or disposal shall not allow greater than 20 percent of the waste solvent (by weight) to evaporate into the atmosphere. The closed containers may contain a device that allows for pressure relief, providing that the device does not allow liquid solvent to drain from the container. [250-RICR-120-05-36.8(L)]
- (18) The solvent cleaners listed in this section shall be maintained as recommended by the manufacturer of the equipment. [250-RICR-120-05-36.8(M)]
- (19) Operators must receive training in proper solvent cleaning procedures and, if requested by representatives of the Office of Air Resources or the USEPA during an inspection, shall complete and pass the applicable sections of the test on those procedures as shown in 40 CFR 63, Appendix A Subpart T incorporated in 250-RICR-120-05-36.4. [250-RICR-120-05-36.8(N)]
- (20) No work area fans shall be located and positioned so that they blow across the opening of any of the solvent cleaners listed in this section. [250-RICR-120-05-36.8(O)]
- (21) The solvent cleaners listed in this section shall be located and positioned so that ventilation from an open window does not blow across the opening of any of the solvent cleaners listed in this section. [250-RICR-120-05-36.8(P)]
- (22) The following requirements are not applicable if any of the solvent cleaners listed in this section use a solvent which contains more than 5% VOC or volatile HAP by weight. [250-RICR-120-05-36.6(B)]
  - (a) The solvent cleaners listed in this section shall be equipped with an attached cover, below the lip exhaust, that can be operated easily with one hand. The covers shall be closed at all times except during parts entry and removal. If any of the solvent cleaners listed in this section are equipped with a lip exhaust, the cover shall be located below the lip exhaust. [250-RICR-120-05-36.9(A)]
  - (b) The solvent sump shall be equipped with a tight-fitting cover that is kept closed at all times except during the cleaning of parts. [250-RICR-120-05-36.9(B)]
  - (c) A freeboard ratio greater than or equal to 0.75 shall be used to control solvent emissions from the solvent cleaners listed in this section. [250-RICR-120-05-36.9(C)]
  - (d) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard zone of the solvent cleaners listed in this section. [250-RICR-120-05-36.9(C)]

- (e) The solvent height in the solvent cleaners listed in this section shall not exceed the manufacturer's fill line. [250-RICR-120-05-36.9(F)]
- (f) The solvent cleaners listed in this section shall not use any solvent with a vapor pressure equal to or greater than 1.0 millimeters of mercury (mm Hg), measured at 20°C (68°F). The following are exempt from this requirement: [250-RICR-120-05-36.9(G)]
  - (i) A cold cleaning unit with an internal volume of 1 liter or less; [250-RICR-120-05-36.9(G)(1)]
  - (ii) A cold cleaning unit used for special and extreme solvent cleaning, as defined in 250-RICR-120-05-36(A)(37), with the Director's approval; [250-RICR-120-05-36.9(G)(2)]
  - (iii) A cold cleaning unit which cannot be operated safely using a solvent that complies with the vapor pressure limit in Condition (22)(f) of this subsection, with the Director's approval; [250-RICR-120-05-36.9(G)(3)]
  - (iv) A cold cleaning unit operated in a permanent total enclosure equipped with an air pollution control system with an overall VOC removal efficiency of 90% or greater, with the Director's approval. [250-RICR-120-05-36.9(G)(4)]

**c. Monitoring Requirements**

C004 operating temperature shall be continuously monitored. [Approval No. 1420(D)(4), 250-RICR-120-05-29.10(C)(1)(a), 40 CFR 63]

**d. Recordkeeping Requirements**

- (1) C004 operating temperature shall be continuously recorded. [Approval No. 1420(D)(4), 250-RICR-120-05-29.10(C)(1)(a), 40 CFR 63]
- (2) All maintenance activities shall be recorded in a log for Air Pollution Control Device C004. The log shall include the following information: [Approval No. 1420(D)(5)]
  - (a) Date, time and duration of the maintenance, and the time C004 was brought back to operating capacity; and [Approval No. 1420(D)(5)(a)]
  - (b) Reason for the maintenance. [Approval No. 1420(D)(5)(b)]
  - (c) For purposes of this permit, maintenance activities occurring less than or equal to 120 hours per year shall not be considered a malfunction. [Approval No. 1420(D)(5)(c)]

- (3) The permittee shall maintain records of the training provided to the cleaning machine operators for the lifetime of the unit and shall maintain the following records for a period of five years: [250-RICR-120-05-36.14(D), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) The amount and type of solvent used in each of the solvent cleaners listed in this section for each year, and [250-RICR-120-05-36.14(D)(1), 250-RICR-120-05-29.10(C)(1)(b)]
  - (b) The date and type of each equipment malfunction or leak and the date the malfunction or leak is repaired. [250-RICR-120-05-36.14(D)(2), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) The date and time of each incidence where a cover was not in place as specified in I.D.1.b(22)(a) of this permit [250-RICR-120-05-36.14(D)(3), 250-RICR-120-05-29.10(C)(1)(b)]
  - (d) The amount of trichloroethylene, perchloroethylene and methylene chloride used in each of the emission units listed in this section each month (if applicable). [250-RICR-120-05-36.14(D)(4), 250-RICR-120-05-29.10(C)(1)(b)]
- (4) The permittee shall maintain, for a period of not less than two years, written records of each purchase of solvents containing volatile organic compounds for cold cleaning, including the following information: [250-RICR-120-05-36.14(E)]
  - (a) The name and address of the solvent supplier. [250-RICR-120-05-36.14(E)(1)]
  - (b) The type of solvent, including the product or vendor identification number. [250-RICR-120-05-36.14(E)(2)]
  - (c) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F). [250-RICR-120-05-36.14(E)(3)]
  - (d) An invoice, bill of sale, certificate that corresponds to a number of sales, Material Safety Data Sheet (MSDS), or other documentation acceptable to the Department may be used to comply with Conditions (4)(a-c) of this subsection. [250-RICR-120-05-36.14(E)(4)]
- (5) All records specified in Conditions (3-4) of this subsection shall be made available to the Office of Air Resources or the USEPA for inspection upon request. [36.14(F)]

**e. Reporting Requirements**

- (1) The permittee shall notify the Office of Air Resources, in writing, within 15 days of determining that the total hours of maintenance activities for C004 exceeds 120 hours per year based upon a 12-month rolling period. [Approval No. 1420(D)(6)]
- (2) The permittee shall notify the Office of Air Resources of all periods of operation in which the operating temperature of C004 was less than 1500°F. This information shall

be provided in the semi-annual monitoring report required in Condition II.CC.2 of this permit. [250-RICR-120-05-29.10(C)(1)(a), 40 CFR 64]

- (3) The permittee shall notify the Office of Air Resources, of any anticipated noncompliance with the terms of Section I.D.1 of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1420(D)(11), Approval No. 2069(C)(8)]
- (4) If the permittee uses a solvent containing trichloroethylene, perchloroethylene or methylene chloride in a solvent cleaning machine shall report its annual emissions of those solvents in writing to the Office of Air Resources on or before 15 April of the following calendar year. The report shall be signed by the permittee of the facility and can be fulfilled by submitting the reports required in Recordkeeping and Reporting 250-RICR-120-05-14.5 and 14.6. If annual emissions of those solvents from solvent cleaning operations at a facility exceed 50% of the facility wide limits established in 40 CFR 63.471, incorporated in 250-RICR-120-05-36.4 in any year, the facility shall thereafter fulfill all applicable recordkeeping and reporting requirements in 40 CFR 63.460 and 40 CFR 63.471, incorporated in 250-RICR-120-05-36.4. [250-RICR-120-05-36.15.4(B)]

**f. Other Requirements**

- (1) To the extent consistent with the requirements of Section I.D.1 of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the permit application. [Approval Nos. 1420 and 2069(F)(1)]
- (2) There shall be no bypassing of C004 during times when VOC or HAP is being discharged to the device. As an exception to this prohibition, the Office of Air Resources may allow bypassing of C004 to perform maintenance on the equipment, if the permittee can demonstrate, to the satisfaction of the Office of Air Resources, that: [Approval No. 1420(F)(4)]
  - (a) It is impossible or impractical to cease operation of the source during the period of time that maintenance is to be performed; and [Approval No. 1420(F)(4)(a)]
  - (b) All possible steps will be taken to minimize emissions during the period of time that the maintenance will be performed; and [Approval No. 1420(F)(4)(b)]
  - (c) Maintenance is to be performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such maintenance is completed as expeditiously as practicable. [Approval No. 1420(F)(4)(c)]
  - (d) Maintenance may be conducted for Air Pollution Control device C004, as needed for up to 120 hours per year. During maintenance, P022 and P060 – P064 shall be discharged uncontrolled to the Bypass Stack. No wastewater will be transferred from WWST No. 2 to WWST No. 1 (during the initial 12 hours

of the shutdown) and the agitator in WWST No. 1 and the mixer in WWST No. 2 will be turned off. [Approval No. 1420(F)(4)(d)]

- (3) If there is any conflict between any emission limitations in Table 1 or Table 2 found in Appendix A and Appendix B of this permit and any previously issued minor source permit, the permittee shall comply with the emission limitation in this permit. [Approval No. 2069(F)(6)]

## **2. Requirements for Emissions Units P076, P099 and P100**

The following requirements are applicable to:

- Emission Units P076, P099 and P100, each of which is a bar coating cleaner trough degreaser.

### **a. Operating Requirements**

- (1) Equipment covers and dipping or rotating baskets shall be constructed of nonporous or nonabsorbent material. Covers must form a tight seal with the sides of the emission units listed in this section and have no gaps or holes. [250-RICR-120-05-36.8(A)]
- (2) When the covers for any of the solvent cleaners listed in this section are open, drafts at the same elevation as the tanks lip shall not be greater than 40 m/min. (130 ft/min.) when measured 1 to 2 meters (3 to 7 feet) upwind. [250-RICR-120-05-36.8(B)]
- (3) Leaks shall be repaired immediately or the solvent cleaners listed in this section shall be shut down [250-RICR-120-05-36.6(C)]
- (4) The solvent cleaners listed in this section shall display a conspicuous summary of proper operating procedures consistent with minimizing emissions of organic solvents. [250-RICR-120-05-36.6(D)]
- (5) Spills shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the specifications in Condition (11) of this subsection. [250-RICR-120-05-36.6(F)]
- (6) No porous or absorbent materials, such as sponges, fabrics, wood, or paper products, shall be placed in any of the solvent cleaners listed in this section. [250-RICR-120-05-36.8(G)]
- (7) Parts baskets or parts shall be drained under the cover and shall not be removed from any of the solvent cleaners listed in this section or at least 15 seconds or until dripping ceases and the pieces are visually dry, whichever is longer. [250-RICR-120-05-36.6(H)]
- (8) Parts with cavities or blind holes shall be tipped or rotated while draining before removed from the vapor zone and shall be oriented for best drainage. [250-RICR-120-05-36.6(I)]

- (9) All parts shall be oriented for best drainage. [250-RICR-120-05-36.6(J)]
- (10) When solvent is added to or drained from the solvent cleaners listed in this section, the solvent shall be transferred using threaded or other leak-proof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface. [250-RICR-120-05-36.6(K)]
- (11) Solvent, waste solvent, still bottoms, and sump bottoms shall be stored in covered containers and waste solvent transferal or disposal shall not allow greater than 20 percent of the waste solvent (by weight) to evaporate into the atmosphere. The closed containers may contain a device that allows for pressure relief, providing that the device does not allow liquid solvent to drain from the container. [250-RICR-120-05-36.8(L)]
- (12) The solvent cleaners listed in this section shall be maintained as recommended by the manufacturer of the equipment. [250-RICR-120-05-36.8(M)]
- (13) Operators shall receive training in proper solvent cleaning procedures and, if requested by representatives of the Office of Air Resources or the USEPA during an inspection, shall complete and pass the applicable sections of the test on those procedures as shown in 40 CFR 63 Appendix A, Subpart T incorporated in 250-RICR-120-05-36.4. [250-RICR-120-05-36.8(N)]
- (14) No work area fans shall be located and positioned so that they blow across the opening of any solvent cleaners listed in this section. [250-RICR-120-05-36.8(O)]
- (15) The solvent cleaners listed in this section shall be located and positioned so that ventilation from an open window does not blow across the opening of any of the solvent cleaners listed in this section. [250-RICR-120-05-36.8(P)]
- (16) The following requirements are not applicable if any of the emission units listed in this section use a solvent which contains no more than 5% VOC or volatile HAP by weight. [250-RICR-120-05-36.6(B)]
  - (a) The solvent cleaners listed in this section shall be equipped with an attached cover, below the lip exhaust, that can be operated easily with one hand. The covers shall be closed at all times except during parts entry and removal. If the any of the emission units listed in this section are equipped with a lip exhaust, the cover shall be located below the lip exhaust. [250-RICR-120-05-36.9(A)]
  - (b) The solvent sump shall be equipped with a fitting cover that is kept closed at all times except during the cleaning of parts. [250-RICR-120-05-36.9(B)]
  - (c) The permittee has demonstrated equivalent control to the 0.75 freeboard requirement contained in 250-RICR-120-05-36.9(C)(1) through the use of a cleaning solvent which has a total VOC content <0.625% by wt. [250-RICR-120-05-36.9(C), Letter dated 13 December 2002 from Terrence Tuchon of the RIDEM Office of Air Resources to Drew Peters of Toray Plastics (America), Inc.]



- (d) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard zone of the solvent cleaners listed in this section. [250-RICR-120-05-36.9(D)]
- (e) The solvent height in any of the solvent cleaners listed in this section shall not exceed the manufacturer's fill line. [250-RICR-120-05-36.9(F)]
- (f) The solvent cleaners listed in this section shall not use any solvent with a vapor pressure equal to or greater than 1.0 millimeters of mercury (mm Hg), measured at 20°C (68°F). The following are exempt from this requirement: [250-RICR-120-05-36.9(G)]
  - (i) A cold cleaning unit with an internal volume of 1 liter or less; [250-RICR-120-05-36.9(G)(1)]
  - (ii) A cold cleaning unit used for special and extreme solvent cleaning, as defined in 250-RICR-120-05-36(A)(37), with the Director's approval; [250-RICR-120-05-36.9(G)(2)]
  - (iii) A cold cleaning unit which cannot be operated safely using a solvent that complies with the vapor pressure limit in Condition (16)(f) of this subsection, with the Director's approval; [250-RICR-120-05-36.9(G)(3)]
  - (iv) A cold cleaning unit operated in a permanent total enclosure equipped with an air pollution control system with an overall VOC removal efficiency of 90% or greater, with the Director's approval. [250-RICR-120-05-36.9(G)(4)]

**b. Recordkeeping Requirements**

- (1) The permittee shall maintain records of the training provided to the operators of the solvent cleaners listed in this section for the lifetime of the unit and shall maintain the following records for a period of five years: [250-RICR-120-05-36.14(D), 250-RICR-120-05-29.10(C)(1)(b)]
  - (a) The amount and type of solvent used in each of the emission units listed in this section for each year, and [250-RICR-120-05-36.14(D)(1), 250-RICR-120-05-29.10(C)(1)(b)]
  - (b) The date and type of each equipment malfunction or leak and the date the malfunction or leak is repaired. [250-RICR-120-05-36.14(D)(2), 250-RICR-120-05-29.10(C)(1)(b)]
  - (c) The date and time of each incidence where a cover was not in place as specified in I.D.2.a(16)(a) of this permit [36.14(D)(3), 250-RICR-120-05-29.10.(C)(1)(b)]

- (d) The amount of trichloroethylene, perchloroethylene and methylene chloride used in each of the emission units listed in this section each month (if applicable). [250-RICR-120-05-36.14(D)(4), 250-RICR-120-05-29.10(C)(1)(b)]
- (2) The permittee shall maintain, for a period of not less than two years, written records of each purchase of solvents containing volatile organic compounds for cold cleaning, including the following information: [250-RICR-120-05-36.14(E)]
- (a) The name and address of the solvent supplier. [250-RICR-120-05-36.14(E)(1)]
- (b) The type of solvent, including the product or vendor identification number. [250-RICR-120-05-36.14(E)(2)]
- (c) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F). [250-RICR-120-05-36.14(E)(3)]
- (d) An invoice, bill of sale, certificate that corresponds to a number of sales, Material Safety Data Sheet (MSDS), or other documentation acceptable to the Department may be used to comply with Conditions (2)(a-c) of this subsection. [250-RICR-120-05-36.14(E)(4)]
- (3) All records specified in Conditions (1-2) of this subsection shall be made available to the Office of Air Resources or the USEPA for inspection upon request. [250-RICR-120-05-36.14(F)]

**c. Reporting Requirements**

If the permittee uses a solvent containing trichloroethylene, perchloroethylene or methylene chloride in a solvent cleaning machine shall report its annual emissions of those solvents in writing to the Office of Air Resources on or before 15 April of the following calendar year. The report shall be signed by the permittee of the facility and can be fulfilled by submitting the reports required in Recordkeeping and Reporting 250-RICR-120-05-14.5 and 14.6. If annual emissions of those solvents from solvent cleaning operations at a facility exceed 50% of the facility wide limits established in 40 CFR 63.471, incorporated in 250-RICR-120-05-36.4 in any year, the facility shall thereafter fulfill all applicable recordkeeping and reporting requirements in 40 CFR 63.460 and 40 CFR 63.471, incorporated in 250-RICR-120-05-36.4. [250-RICR-120-05-36.15.4(B)]

**E. Tanks**

**1. Requirements for Emission Units T001, T002 and T003**

The following requirements are applicable to:

- Emission units T001 and T002, which are two 72,000-gallon tanks. Each tank stores ethylene glycol, tank I.D. Nos. P107-02-(1) and P107-02-(2) respectively. T001 and T002 are equipped with a fixed roof.

- Emission unit T003, which is a 39,750-gallon tank, which stores recovered ethylene glycol, tank I.D. No. P107-09(1). T003 is equipped with a fixed roof.

**a. Emission Limitations**

The emissions of listed toxic air contaminants discharged to the atmosphere from the emission units listed in this section shall not exceed the limitations in Tables 1 and 2 found in Appendix A and Appendix B of this permit. These limitations were established to ensure that emissions from this facility do not exceed any of the Acceptable Ambient Levels (AALs) listed in Air Pollution Control Regulation 250-RICR-120-05-22. The limitations shown in pounds per year are calculated on a 12-month rolling basis. Emissions from activities exempted from the provisions of 250-RICR-120-05-22.5(B) are not included in this limitation. [Approval No. 2069(A)(1)]

**2. Requirements for Emission Unit T004**

The following requirements are applicable to:

- Emission unit T004, which is a 15,850-gallon tank, which stores dimethyl terephthalate (DMT), tank I.D. No. P611-060(1). T004 is equipped with a fixed roof. T004 is associated with air pollution control device C018, which is a Metfab Engineering unpacked water scrubber.

**a. Operating Requirements**

- (1) C018 shall be operated according to its design specifications whenever T004 is in operation or are emitting air contaminants. [250-RICR-120-05-16.5]
- (2) In case of malfunction of C018, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of C018 is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate T004 beyond that period, the Director shall be petitioned for a variance under RI General Laws § 23-23-15, as amended. Such petition shall include but is not limited to, the following: [250-RICR-120-05-16.6(A)]
  - (a) Identification of the specific air pollution control system (i.e. C018) and the source on which it is installed (i.e. T004), [250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that control system will be malfunctioning or out of service, [250-RICR-120-05-16.6(A)(2)]
  - (c) The nature and quantity of air contaminants likely to be emitted during said period, [250-RICR-120-05-16.6(A)(3)]
  - (d) Measures that will be taken to minimize the length of during said period, and [250-RICR-120-05-16.6(A)(4)]
  - (e) The reasons it would be impossible or impractical to cease the source operation during said period. [250-RICR-120-05-16.6(A)(5)]

**b. Monitoring Requirements**

Make-up water pressure for control device C018 shall be monitored continuously. [250-RICR-120-05-29.10(C)(1)(b)]

**c. Recordkeeping Requirements**

The permittee shall check the make-up water pressure for control device C018 a minimum of once per day and the date, time and a measurement shall be recorded. [250-RICR-120-05-29.10(C)(1)(b)]

**3. Requirements for Emission Unit T010**

The following requirements are applicable to:

- Emission unit T010, which is a 48,550-gallon tank which stores recovered methanol, tank I.D. No. P607-01-(1). T010 is equipped with a fixed roof. T010 is associated with air pollution control device C016, which is a Metfab Engineering Unpacked tower scrubber. C016 is divided into two sections (upper and lower), both sections containing scrubbant. C016 uses water as its scrubbing liquid.

**a. Emission Limitations**

Air pollution control device C016 shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. [40 CFR 60.112b(a)(3)(ii)]

**b. Operating Requirements**

- (1) T010 shall be equipped with a closed vent system and C016. [40 CFR 60.112b(a)(3)]
- (2) The closed vent system shall be designed to collect all VOC vapors and gases discharged from T010 and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, Subpart VV. [40 CFR 60.112b(a)(3)(i)]
- (3) The permittee shall operate the closed vent system and C016 and monitor the parameters of the closed vent system and C016 in accordance with the operating plan submitted to the Office of Air Resources. [40 CFR 60.113b(c)(2)]
- (4) C016 shall be operated according to its design specifications whenever T010 is in operation or is emitting air contaminants. [250-RICR-120-05-16.5]
- (5) In case of malfunction of C016, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of C016 is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate T010 beyond that period, the Director shall be petitioned for a variance under RI General Laws § 23-23-15, as amended. Such petition shall include but is not limited to, the following: [250-RICR-120-05-16.6(A)]

- (a) Identification of the specific air pollution control system (i.e. C016) and the source on which it is installed (i.e. T010), [250-RICR-120-05-16.6(A)(1)]
  - (b) The expected period of time that control system will be malfunctioning or out of service, [250-RICR-120-05-16.6(A)(2)]
  - (c) The nature and quantity of air contaminants likely to be emitted during said period, [250-RICR-120-05-16.6(A)(3)]
  - (d) Measures that will be taken to minimize the length of during said period, and [250-RICR-120-05-16.6(A)(4)]
  - (e) The reasons it would be impossible or impractical to cease the source operation during said period. [250-RICR-120-05-16.6(A)(5)]
- (6) At all times, including periods of startup, shutdown and malfunctions, the permittee shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the facility. [40 CFR 60.11(d)]

**c. Monitoring Requirements**

- (1) The permittee shall continuously monitor the water flow rate and nitrogen flow rate parameters of the closed vent system and C016 in accordance with the operating plan submitted to the Office of Air Resources. [40 CFR 60.113b(c)(2), 29.6.3(a), 40 CFR 64]

**d. Recordkeeping Requirements**

- (1) The permittee shall keep a copy of the operating plan submitted to the Office of Air Resources. [40 CFR 60.115b(c)(1)]
- (2) The permittee shall check the water flow rate and nitrogen flow rate for control device C016 a minimum of once per shift and the date, time and a measurement shall be recorded. [40 CFR 60.115b(c)(2)]
- (3) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of this unit; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device required by 40 CFR 60 is inoperative. [40 CFR 60.7(b)]
- (4) The permittee shall keep readily accessible records showing the dimension of T010 and an analysis showing the capacity of T010. [40 CFR 60.116b(b)]
- (5) The permittee shall maintain the records specified in Condition (4) of this subsection for the life of the source. [40 CFR 60.116b(a)]

**3a. Alternate Operating Requirements for Emission Unit T010**

The following requirements are applicable to:

- Emission unit T010, which is a 48,550-gallon tank, which stores recycled ethylene glycol (REG), tank I.D. No. P607-01-(1). T010 is equipped with a fixed roof.

**a. Emission Limitations**

The emissions of listed toxic air contaminants discharged to the atmosphere from T010 shall not exceed the limitations in Tables 1 and 2 found in Appendix A and Appendix B of this permit. These limitations were established to ensure that emissions from this facility do not exceed any of the Acceptable Ambient Levels (AALs) listed in 250-RICR-120-05-22. The limitations shown in pounds per year are calculated on a 12-month rolling basis. Emissions from activities exempted from the provisions of 250-RICR-120-05-22.5(B) are not included in this limitation. [Approval No. 2069(A)(1)]

**b. Operating Requirements**

When emission unit T010 is storing recycled ethylene glycol (REG), T010 is not required to discharge to an air pollution control system. [Approval No. 2069(B)(5)]

**4. Requirements for Emission Units T007, T011, T012 and T013**

The following requirements are applicable to:

- Emission unit T007, which is an 80,000-gallon #2 fuel oil storage tank No. L112-01-11. T007 is equipped with a fixed roof.
- Emission unit T011, which is a nitric acid storage tank.
- Emission unit T012, which is a neutralization nitric acid tank.
- Emission unit T013, which is an indoor nitric acid storage tank.

There are no specific applicable requirements for T007 and T011-T013. This does not relieve the permittee from compliance with the provisions of the General Conditions, outlined in Section II of this permit, as they apply to for T007 and T011-T013.

**F. Facility Requirements**

**1. Emission Limitations**

- a. The total quantity of Hazardous Air Pollutant (HAP) emissions discharged to the atmosphere from all operations, for the entire facility shall not exceed 1,666 pounds of any one (1) HAP or 4,166 pounds of any combination of HAPs per calendar month based upon a 12-month rolling average. [Approval No. 1420(A)(1)]

- b. The total quantity of VOC emissions discharged to the atmosphere from all operations conducted for the entire facility shall not exceed 8,167 pounds of VOC per calendar month based upon a 12-month rolling average. [Approval Nos. 1908-1909(A)(1)(b)]
- c. Any air contaminant or combination of air contaminants discharged to the atmosphere from the facility shall not create an objectionable odor beyond the property line of this facility. Odor evaluations shall be conducted according to the provisions of “Odors” 250-RICR-120-05-17. [Approval Nos.1740-1742(A)(4)]
- d. The emissions discharged to the atmosphere from the entire facility, for any listed toxic air contaminant that does not have a pollutant specific emission limit defined in this permit shall not exceed the minimum quantity for that contaminant as specified in 250-RICR-120-9.17, Appendix A. The limits shown in pounds per year are calculated on a 12-month rolling basis. Emissions from activities exempted from the provisions of 250-RICR-120-05-22.5(B) are not included in this limitation. [Approval Nos. 1740-1742(A)(3)(f), Approval No. 2069(A)(1-2)]
- e. Facility wide emissions of HAPs from organic solvent cleaning operations shall not exceed 1,500 pounds of any one (1) HAP or 4,000 pounds of any combination of HAPs per calendar month, based upon a 12-month rolling average unless a greater quantity of HAP emissions is allowed by an operating permit issued pursuant to “Operating Permits” 250-RICR-120-05-29. In no case shall emissions exceed the facility wide emission limits specified in 40 CFR Part 63.471, incorporated in 250-RICR-120-05-36.4. [250-RICR-120-05-36.8(Q)]

## **2. Recordkeeping Requirements**

- a. The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of HAP discharged to the atmosphere from the entire facility. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval No. 1420(D)(1), 250-RICR-120-05-29.10(C)(1)(b)]
- b. The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from all operations for the entire facility. Monthly and 12-month rolling averages shall be calculated. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1908-1909(D)(6), 250-RICR-120-05-29.10(C)(1)(b)]
- c. The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of each listed toxic air contaminant specified in Conditions I.C.5.a(3)(a-b) of this permit discharged to the atmosphere from the entire facility. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval Nos. 1908-1909(D)(8), 250-RICR-120-05-29.10(C)(1)(b)]
- d. The permittee shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of acetaldehyde, 1,4-dioxane, ethylene glycol,

formaldehyde and methanol discharged to the atmosphere from the entire facility. Monthly and 12-month rolling averages shall be calculated. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval No. 2069(C)(2), 250-RICR-120-05-29.10(C)(1)(b)]

### **3. Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of HAP discharged to the atmosphere exceeds 1,666 pounds of any one (1) HAP or 4,166 pounds of any combination of HAPs per calendar month based upon a 12-month rolling average. [Approval No. 1420(D)(2)]
- b. The permittee shall notify the Office of Air Resources, in writing, within 15 days of determining that the total quantity of VOC discharged to the atmosphere from all operations for the entire facility exceeds 8167 pounds per month, based upon a 12-month rolling average. [Approval Nos. 1908-1909(D)(7)]
- c. The permittee shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of emissions discharged to the atmosphere from the entire facility, of any listed toxic air contaminant that does not have a pollutant-specific emission limitation, exceeds the minimum quantity for that contaminant as specified in 250-RICR-120-05-9.17, Appendix A. [Approval Nos. 1908-1909(D)(9), Approval No. 2069(C)(5), Approval Nos. 1740-1742(C)(9)]
- d. The permittee shall notify the Office of Air Resources in writing, within 15 days of determining that the total quantity of acetaldehyde, 1,4-dioxane, ethylene glycol, or formaldehyde discharged to the atmosphere from the entire facility exceeds the 12-month emission limitations in Appendix A of this permit. [Approval No. 2069(C)(3)]
- e. The permittee shall notify the Office of Air Resources in writing, within 15 days of determining that the total quantity of 1,4-dioxane, ethylene glycol, or formaldehyde discharged to the atmosphere from the entire facility exceeds the hourly or daily emissions limitations in Appendix B of this permit. [Approval No. 2069(C)(4)]
- f. The permittee shall submit to the Office of Air Resources a land use report no later than April 15<sup>th</sup> of each year. This report shall include, at a minimum, the following information:
  - Identification of each receptor that the permittee used an adjusted annual AAL to determine the acceptability of acetaldehyde impacts in the modeling analysis submitted in support of the 24 February 2009 application, as amended, for a new scrap extruder.
  - The land use at that receptor in the modeling analysis.
  - The current land use at that receptor, including zoning, owner and occupant.
  - A statement certifying that no adjusted receptor is located on a parcel that is occupied by a school, day care center, residence or food preparation facility.



In preparing this report, the permittee shall utilize information from the Town of North Kingstown and the Rhode Island Economic Development Corporation.

If, upon review of this report, it is determined that the use of an adjusted AAL is no longer allowable based on changes in land use or other factors that change the potential duration of public exposure to acetaldehyde in that area, the permittee shall submit a plan that demonstrates how the facility will achieve compliance with the AAL for acetaldehyde. This plan shall be filed within 60 days of written notice from the Office of Air Resources that the use of an adjusted AAL is no longer allowable. [Approval No. 2069(C)(11)]

#### **4. Other Requirements**

The emission and dispersion characteristics of all sources of any listed toxic air contaminant at the facility shall be consistent with the parameters used in the air quality modeling to demonstrate that the emissions do not cause an impact, at or beyond the property line of the facility, which exceeds the Acceptable Ambient Level for that substance. The Office of Air Resources, in its sole discretion, may reopen this minor source permit if it determines that the emission and dispersion characteristics have changed significantly and that emission limitations shall be revised and/or added to this permit to ensure compliance with 250-RICR-120-05-22. [250-RICR-120-05-22.8(C), Approval No. 2069(D)(4), Approval Nos. 1740-1742(D)(4), 1908-1909(E)(4), 2069(E)(4), 2212(E)(2), 2218-2221(F)(8)]

## SECTION II. GENERAL CONDITIONS

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### A. Annual Emissions Fee Payment

The permittee shall pay an annual emissions fee as established in "Operating Permit Fees" 250-RICR-120-05-28. [250-RICR-120-05-29.10(H)(1)(d)]

### B. Permit Renewal and Expiration

This permit is issued for a fixed term of 5 years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least 12 months prior to the date of permit expiration. Upon receipt of a complete and timely application for renewal, this source may continue to operate subject to final action by the Office of Air Resources on the renewal application. In such an event, the permit shield in Condition II.AA of this permit shall extend beyond the original permit term until renewal. This protection shall cease to apply if, subsequent to a completeness determination, the applicant fails to submit by the deadline specified in writing by the Office of Air Resources any additional information identified as being needed to process the application. The application for renewal shall include the current permit number, description of permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. [250-RICR-120-05-29.8(B)(3), 29.8(F), 29.10(H)(1)(a), 29.13.4(B), 29.13.4(D)]

### C. Transfer of Ownership or Operation

This permit is nontransferable by the permittee. Future owners and operators must obtain a new operating permit from the Office of Air Resources. A change in ownership or operational control of this source is treated as an administrative permit amendment if no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Office of Air Resources. [250-RICR-120-05-29.14.1(A)(4)]

### D. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege. [250-RICR-120-05-29.10(H)(1)(c)(4)]

### E. Submissions

1. Reports, test data, monitoring data, notifications, and requests for renewal shall be submitted to:

RIDEM – Office of Air Resources  
Compliance Assurance Section  
235 Promenade St.  
Providence, RI 02908

2. Any records, compliance certifications and monitoring data required by the provisions of this permit to be submitted to USEPA shall be sent to:

USEPA Region 1 - New England  
Enforcement and Compliance Assurance Division  
Air Compliance Section  
Attn: Air Compliance Clerk  
5 Post Office Square  
Mail Code: 04-2  
Boston, MA 02109-3912

3. Any document submitted shall be certified as being true, accurate, and complete by a responsible official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. [250-RICR-120-05-29.9.9(B), 29.10(H)(1)(e)]

#### **F. Inspection and Entry**

1. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter this facility at all reasonable times for the purpose of: [250-RICR-120-05-29.10(H)(1)(f)(1)]
  - a. having access to and copying at reasonable times any records that must be kept under the conditions of this permit; [250-RICR-120-05-29.10(H)(1)(f)(2)]
  - b. inspecting at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and [250-RICR-120-05-29.10(H)(1)(f)(3)]
  - c. sampling or monitoring, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements. [RIGL 23-23-5(7), 250-RICR-120-05-29.10(H)(1)(f)(4), Approval Nos. 1209 and 1363(G)(2), Approval No. 1420(F)(2), Approval Nos. 1420(F)(2); Approval Nos. 1740-1742(D)(1), Approval Nos. 1908-1909(E)(2), Approval No. 1671(G)(2), Approval No. 2069(D)(3), Approval Nos. 2218-2221(F)(6), Approval No. 2212(E)(4)]

Nothing in this condition shall limit the ability of USEPA to inspect or enter the premises of the permittee under Section 114 or other provisions of the Clean Air Act.

#### **G. Compliance**

1. The permittee must comply with all conditions of this permit. Any noncompliance with a federally enforceable permit condition constitutes a violation of the Clean Air Act and is grounds for enforcement action, for permit termination, revocation and reissuance or modification, or for denial of a permit renewal application. Any noncompliance with a permit condition designated as state only enforceable constitutes a violation of state rules only and is grounds for enforcement action, for permit termination, revocation and reissuance or modification, or for denial of a permit renewal application. [250-RICR-120-05-29.10(H)(1)(c)(1)]

2. For each unit at the facility for which an applicable requirement becomes effective during the permit term, the permittee shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. [250-RICR-120-05-29.9.1(A)(10)(c)(2)]
3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [250-RICR-120-05-29.10(H)(1)(c)(2)]

#### **H. Excess Emissions Due to an Emergency**

As the term is used in this condition an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes this source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. [250-RICR-120-05-29.10(K)(1)(b)]

Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain a health-based air quality standard.

The permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency. To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that: [250-RICR-120-05-29.10(K)(1)(a), 29.10(K)(1)(c)]

1. an emergency occurred and that the permittee can identify the cause(s) of the emergency; [250-RICR-120-05-29.10(K)(1)(c)(1)]
2. the permitted facility was at the time being properly operated; [250-RICR-120-05-29.10(K)(1)(c)(2)]
3. during the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and [250-RICR-120-05-29.10(K)(1)(c)(3)]
4. the permittee submitted notice of the emergency to the Office of Air Resources within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirements of Condition II.CC.3 of this permit. [250-RICR-120-05-29.10(K)(1)(c)(4)]

The permittee shall have the burden of proof in seeking to establish the occurrence of an emergency. [250-RICR-120-05-29.10(K)(1)(d)]

**I. Duty to Provide Information**

The permittee shall furnish to the Office of Air Resources, within a reasonable time, any pertinent information that the Office of Air Resources may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Office of Air Resources copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. [250-RICR-120-05-29.10(H)(1)(c)(5)]

**J. Duty to Supplement**

The permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the Office of Air Resources. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit. [250-RICR-120-05-29.9.2(E)(1)]

**K. Reopening for Cause**

The Office of Air Resources will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances: [Approval No. 2069(C)(10)(a-c), Approval No. 2212(D)(14)(a-c)]

1. Additional requirements under the Clean Air Act become applicable to a major source 3 or more years prior to the expiration date of this permit. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit, unless this permit or any of its terms and conditions has been extended. [250-RICR-120-05-29.10(M)(1)(a)]
2. The Office of Air Resources or the Administrator determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. [250-RICR-120-05-29.10(M)(1)(c)]
3. The Office of Air Resources or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [250-RICR-120-05-29.10(M)(1)(d)]

Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable. [250-RICR-120-05-29.13.5(A)]

Reopenings shall not be initiated before a notice of intent to reopen is provided to the permittee by the Office of Air Resources at least 30 days in advance of the date that this permit is to be reopened, except that the Office of Air Resources may provide a shorter time period (but not less than 5 days) in the case of an emergency. [250-RICR-120-05-29.13.5(B)]

All permit conditions remain in effect until such time as the Office of Air Resources takes final action. The filing of a request by the permittee for a permit modification, revocation and reissuance, or

termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [§70.6(a)(6)(iii)]

**L. Severability Clause**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [250-RICR-120-05-29.3, 29.10(H)(1)(b)]

**M. Off-Permit Changes**

1. The permittee is allowed to make certain changes that are not addressed or prohibited by this permit without a permit revision, provided that the following conditions are met: [250-RICR-120-05-29.15.2(A)]
  - a. Changes under this provision may not include changes or activities subject to any requirement under Title IV or modifications under any provision of Title I of the Clean Air Act. [250-RICR-120-05-29.15.2(A)]
  - b. Each such change shall comply with all applicable requirements and shall not violate any term or condition of this permit. [250-RICR-120-05-29.15.2(B)]
  - c. Before the permit change is made, the permittee must provide concurrent written notice to the Office of Air Resources and the USEPA Region I, except for changes that qualify as insignificant activities as specified in 250-RICR-120-05-29.20, Appendix A. This notice shall describe each change, including the date, and change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change. [250-RICR-120-05-29.15.2(C)]
  - d. The permit shield does not apply to changes made under this provision. [250-RICR-120-05-29.15.2(D)]
  - e. The permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes, including any other data necessary to show compliance with applicable ambient air quality standards. The record shall reside at the permittee's facility. [250-RICR-120-05-29.15.2(E)]
  - f. Changes made pursuant to this provision shall be incorporated into this permit at the time of renewal. [29.15.2(F)]
2. Changes made pursuant to this provision shall not be exempt from the requirement to obtain a minor source permit pursuant to the requirements of 250-RICR-120-05-9, if applicable. [250-RICR-120-05-29.15.2(A)]

**N. Section 502(b)(10) Changes**

1. The permittee is allowed to make changes within this permitted facility that contravene the specific terms of this permit without applying for a permit revision, provided the changes do not exceed the emissions allowable under this permit, whether expressed therein as a rate of emissions or in terms of total emissions and are not Title I modifications. [250-RICR-120-05-29.15.1(A)] This class of changes does not include: [250-RICR-120-05-29.5(A)(27)]
  - a. changes that would violate applicable requirements; or [250-RICR-120-05-29.5(A)(27)]
  - b. changes to federally-enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements. [250-RICR-120-05-29.5(A)(27)]
2. The permittee shall provide written notice to the Office of Air Resources and the USEPA Region I of any change made under this provision. The notice must be received by the Office of Air Resources no later than fourteen (14) days in advance of the proposed changes. The notice shall include information describing the nature of the change, the effect of the change on the emission of any air contaminant, the scheduled completion date of the planned change and identify any permit terms or conditions that are no longer applicable as a result of the change. The permittee shall attach each notice to its copy of this permit. [250-RICR-120-05-29.15.1(A)(1), 29.15.1(A)(2)]
3. The permittee shall be allowed to make such change proposed in its notice the day following the last day of the advance notice described in Condition 2 of this subsection if the Office of Air Resources has not responded nor objected to the proposed change on or before that day. [250-RICR-120-05-29.15.1(B)]
4. Any permit shield provided in this permit does not apply to changes made under this provision. If subsequent changes cause the permittee's operations and emissions to revert to those anticipated in this permit, the permittee resumes compliance with the terms and conditions of the permit, and has provided the Office of Air Resources and USEPA with a minimum of fourteen (14) days advance notice of such changes in accordance with the provisions of Condition 2 of this subsection, the permit shield shall be reinstated in accordance with terms and conditions stated in this permit. [250-RICR-120-05-29.15.1(C)]
5. Changes made pursuant to this provision shall be incorporated into the operating permit at the time of renewal. [250-RICR-120-05-29.15.1(D)]

**O. Emissions Trading**

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. [250-RICR-120-05-29.10(F)(1)(a)]

**P. Emission of Air Contaminants Detrimental to Person or Property**

The permittee shall not emit any air contaminant which either alone or in connection with other emissions, by reason of their concentration or duration, may be injurious to human, plant or animal life, or cause damage to property or which unreasonably interferes with the enjoyment of life or property. [250-RICR-120-05-7.6]

**Q. Odors**

1. The permittee shall not emit or cause to be emitted into the atmosphere any air contaminant or combination of air contaminants which creates an objectionable odor beyond the property line of this facility. [250-RICR-120-05-17.5, Approval Nos.1740-1742(A)(4)] [Not Federally Enforceable]
2. A staff member of the Office of Air Resources shall determine by personal observation if an odor is objectionable, taking into account its nature, concentration, location, duration and source. [250-RICR-120-05-17.6, Approval Nos.1740-1742(A)(4)] [Not Federally Enforceable]

**R. Visible Emissions**

1. Except as may be specified in other provisions of this permit, the permittee shall not emit into the atmosphere, from any emission unit, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [250-RICR-120-05-1.6] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [250-RICR-120-05-1.8]
2. Tests for determining compliance with the opacity limitations specified in this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [250-RICR-120-05-1.7(A-B)]

**S. Open Fires**

It shall be unlawful for the permittee to burn any material in an open fire, except as provided in “Open Fires” 250-RICR-120-05-4, Section 4.3. [250-RICR-120-05-4.5]

**T. Construction Permits**

The permittee shall not construct, install, modify or cause the construction, installation or modification of any stationary source subject to the provisions of 250-RICR-120-05-9 without obtaining either a minor source permit or a major source permit from the Director. [250-RICR-120-05-9.6(A)]

**U. Fuel Oil**

1. Unless the Director determines, pursuant to Conditions II.U.7 and 8 of this permit, that a shortage of fuel oil meeting the requirements of this permit exists, the permittee shall not use or store fuel oil having a sulfur content in excess of the following, except for use with marine vessels and motor vehicles: [250-RICR-120-05-8.6(A), 8.7(C)]



- a. All distillate or biodiesel fuel oil burned at the facility shall contain no more than 0.0015 percent sulfur by weight (15 ppm).
  - b. All residual fuel oil burned at the facility shall contain no more than 0.5 percent sulfur by weight (5000 ppm).
2. Fuel oil stored at the facility that met the applicable requirements of subsection II.U.1 at the time the fuel oil was received for storage at the facility may be stored for use after the effective date in 250-RICR-120-05-8.6(A)(1). [250-RICR-120-05-8.7(B)]
  3. Compliance with the sulfur in fuel limitations contained in this section shall be determined by procedures referenced below or deemed equivalent by the Director. Such procedures shall include but not be limited to any of the following: [250-RICR-120-05-8.8(A)]
    - a. Emission testing conducted by the permittee according to the Reference Methods of Appendix A to 40 CFR 60; or [250-RICR-120-05- 8.8(A)(1)]
    - b. For each shipment of fuel oil, the permittee shall obtain a certification from the fuel supplier which contains: [250-RICR-120-05-8.8(A)(2), 250-RICR-120-05-27.10(E)]
      - (1) the name of the supplier and the date the fuel oil was received from the supplier; and, [250-RICR-120-05-8.8(A)(2)(a), 250-RICR-120-05-27.10(E)(1)]
      - (2) the sulfur content of the fuel oil; and, [250-RICR-120-05-8.8(A)(2)(b)]
      - (3) the date and location of the fuel oil when the sample was drawn for analysis to determine the sulfur content of the fuel oil, specifically including where the fuel oil was sampled; or [250-RICR-120-05-8.8(A)(2)(c)]
    - c. Laboratory analysis of fuel oils by the permittee or by the supplier. Sampling and analysis shall be conducted after each new shipment of fuel oil is received by the permittee. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any fuel oil is combusted. All fuel oil must be sampled and analyzed in accordance with applicable ASTM methods or another method which has the prior approval of or are required by the Director. [250-RICR-120-05-29.10(C)(1)(b), 250-RICR-120-05-8.8(A)(3)]
    - d. A continuous monitoring system for the measurement of sulfur dioxide that meets the performance specifications in Appendix B of 40 CFR 60. The monitoring equipment shall also be installed, calibrated, operated, and maintained in accordance with the procedures in Appendix B of 40 CFR 60 and the minimum specifications in Appendix P of 40 CFR 51. [250-RICR-120-05-8.8(A)(4)]
  4. The Director may require, under his supervision, the collection of fossil fuel samples for the purpose of determining compliance with the sulfur limitations in this permit. [250-RICR-120-05-8.8(C)]

5. For residual oil, the fuel supplier's certification shall also contain the following information:
  - (a) The nitrogen content of the oil and the ASTM method used to determine the nitrogen content of the oil. [250-RICR-120-05-27.10(E)(2)]
  - (b) The location of the oil when the sample was drawn for analysis to determine the nitrogen content of the oil, specifically including whether the oil was sampled as delivered to the permittee or whether the sample was drawn from oil in storage at the oil suppliers/refiners' facility or another location. [250-RICR-120-05-27.10(E)(4)]
6. Copies of the fuel oil analysis sheets shall be maintained at the facility and be made accessible for review by the Office of Air Resources or its authorized representatives and USEPA. These records shall include a certified statement, signed by a responsible official, that the records represent all of the fuel combusted during each quarter. [250-RICR-120-05-8.9(A), 250-RICR-120-05-27.10(G)]
7. The Director may, upon application, defer compliance with Conditions II.U.1 of this permit where compliance is not possible because of breakdowns or malfunction of equipment, acts of God, other unavoidable casualties or for good cause shown; provided that the order shall not defer compliance for more than three (3) months. [250-RICR-120-05-8.11(A)]
8. The Director shall notify the Administrator within five (5) business days after issuing an order deferring compliance with Conditions II.U.1 of this permit. [250-RICR-120-05-8.11(B)]

**V. Air Pollution Episodes**

Conditions justifying the proclamation of an air pollution alert, air pollution warning or air pollution emergency shall be deemed to exist whenever the Director determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. If the governor declares an air pollution alert, air pollution warning or air pollution emergency, the permittee shall comply with the applicable requirements contained in "Air Pollution Episodes" 250-RICR-120-05-10. [250-RICR-120-05-10.5(A)]

**W. Fugitive Dust**

The permittee shall not cause or permit any materials, including but not limited to sand, gravel, soil, aggregate and any other organic or inorganic solid matter capable of releasing dust, to be handled, transported, mined, quarried, stored or otherwise utilized in any way so as to cause airborne particulate matter to travel beyond the property line of the facility without taking adequate precautions to prevent particulate matter from becoming airborne. Such precaution shall be in accordance with good industrial practice as determined by the Director and/or shall be other reasonable fugitive dust prevention measures as determined by the Director. [250-RICR-120-05-5.6(A)]

**X. Adhesives and Sealants**

Except as provided in 250-RICR-120-05-44.6(B-C), the permittee shall comply with all applicable provisions of Control of VOC from Adhesives and Sealants, 250-RICR-120-05-44 if the permittee sells, offers for sale supplies or manufactures any adhesive, sealant, adhesive primer or sealant primer

for use within the State of Rhode Island or uses or solicits the use of any adhesive, sealant, adhesive primer or sealant primer within the State of Rhode Island. [250-RICR-120-05-44.6(A)]

**Y. Architectural and Industrial Maintenance Coatings**

Except as provided in 250-RICR-120-05-33.6(B), the permittee shall comply with all applicable provisions of Control of VOC from Architectural Coatings and Industrial Maintenance Coatings, 250-RICR-120-05-33 if the permittee sells, offers for sale, or supplies or manufactures an architectural coating for use within the State of Rhode Island or applies an architectural coating for compensation, or solicits the application of any architectural coating within the State of Rhode Island. [250-RICR-120-05-33.6(A)]

**Z. Compliance Certifications**

1. The permittee shall submit a certification of compliance with permit terms and conditions annually. [250-RICR-120-05-29.10(E)(1)(c)(1)]
2. The certification shall describe the following:
  - a. the permit term or condition that is the basis of the certification; [250-RICR-120-05-29.10(E)(1)(c)(3)(AA)]
  - b. the current compliance status; [250-RICR-120-05-29.10(E)(1)(c)(3)(BB)]
  - c. whether compliance was continuous or intermittent; and [250-RICR-120-05-29.10(E)(1)(c)(3)(CC)]
  - d. the methods used for determining the current compliance status and the compliance status during the reporting period. They shall be submitted within 60 days following the end of the reporting period which is the calendar year unless otherwise specified. [250-RICR-120-05-29.10(E)(1)(c)(3)(DD)]
3. All compliance certifications shall be submitted to the Office of Air Resources and to the USEPA Region I. [250-RICR-120-05-29.10(E)(1)(c)(4)]
4. All compliance certifications shall be certified as being true, accurate, and complete by a responsible corporate official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. [250-RICR-120-05-29.9(B)]

**AA. Permit Shield**

1. Compliance with the terms and conditions of this permit shall be deemed compliance with all requirements applicable to the source in the following: Approval Nos. 1209, 1240, 1363, 1420, 1671, 1740, 1741, 1742, 1908, 1909, 2069, 2212, 2218 – 2221; Federal Requirements 40 CFR 60 Subpart A, Dc, Kb, GG, JJJJ, 40 CFR 63 Subpart A, ZZZZ and JJJJJ and 250-RICR-120-05 Parts 1, 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 17, 19, 22, 27, 28, 29, 33, 36 and 44. [250-RICR-120-05-29.10(L)(1)(a)(1)]

2. The Office of Air Resources has determined that units B002, B003, B004, B005, B006, B007, B008, B009, B010, B011, B012, B045, T001-T004, T007, T010, T011, T012, T013, P001-P012, P014, P022, P023, P026, P030, P031, P032, P033, P034, P035, P046-P051, P054, P054A, P056, P060-P064, P068, P069, P076, P077, P078, P098, P099, P100, P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P115, P116, P117, P118, P123, P124 are not subject to the following Regulations: RI APC Regulations 3, 11, 12, 15, 20, 21, 23, 24, 25, 26, 30, 31, 32, 35, 39, 41, 43, 46, 47, 48, 51 and Federal Requirements 40 CFR 60 Subparts DDD, SSS and VVV, 40 CFR 63 Subpart JJJ and DDDDD. [250-RICR-120-05-29.10(L)(1)(a)(2)]
3. Nothing in this permit shall alter or affect the following:
  - a. the provisions of Section 303 of the Clean Air Act, including the authority of USEPA under that Section. [250-RICR-120-05-29.10(L)(1)(c)(1)]
  - b. the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [250-RICR-120-05-29.10(L)(1)(c)(2)]
  - c. the applicable requirements of the acid rain program consistent with Section 408 of the Clean Air Act. [250-RICR-120-05-29.10(L)(1)(c)(3)]
  - d. the ability of the USEPA to obtain information under Section 114 of the Act. [250-RICR-120-05-29.10(L)(1)(c)(4)]
4. If it is determined that this operating permit was issued based on inaccurate or incomplete information provided by the permittee, this permit shield shall be void as to the portions of this permit which are affected, directly or indirectly, by the inaccurate or incomplete information. [250-RICR-120-05-29.10(L)(1)(d)]

**BB. Recordkeeping**

1. The permittee shall, at the request of the Director, maintain records of and provide data on operational processes, fuel usage, raw materials, stack dimensions, exhaust gas flow rates and temperatures, emissions of air contaminants, steam or hot water generator capacities, types of equipment producing air contaminants and air pollution control systems or other data that may be necessary to determine if the facility is in compliance with air pollution control regulations. [250-RICR-120-05-14.5.1]
2. All records and supporting information required by this permit shall be maintained at the permittee's 50 Belver Ave facility for a period of at least 5 years from the date of sample monitoring, measurement, report or application, and shall be made available to representatives of the Office of Air Resources and USEPA upon request. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [250-RICR-120-05-14.5.1, 250-RICR-120-05-29.10(D)(1)(b), 40 CFR 63.6660(a-c), 40 CFR 63.11225(d), Approval Nos. 1209 and 1363(F)(13), Approval No. 1420(D)(13), Approval Nos. 1740-1742(C)(14), Approval Nos. 1908-1909(D)(16), Approval No. 1671(F)(12), 40 CFR 60.116b(a), 40 CFR 60.48c(i), 40 CFR 60.7(f), Approval No. 2069(C)(12), Approval Nos. 2218-2221(E)(16), Approval No. 2212(D)(15)]

3. The permittee shall keep records of required monitoring information that include the following:
  - a. The date, place and time of sampling or measurements; [250-RICR-120-05-29.10(D)(1)(a)(1)]
  - b. The date(s) analyses were performed; [250-RICR-120-05-29.10(D)(1)(a)(2)]
  - c. The company or entity that performed the analyses; [250-RICR-120-05-29.10(D)(1)(a)(3)]
  - d. The analytical techniques or methods used; [250-RICR-120-05-29.10(D)(1)(a)(5)]
  - e. The results of such analyses; and [250-RICR-120-05-29.10(D)(1)(a)(6)]
  - f. The operating conditions as existing at the time of sampling or measurement. [250-RICR-120-05-29.10(D)(1)(a)(6)]

**CC. Reporting**

1. The information recorded by the permittee pursuant to Condition II.BB.1 of this Section shall be summarized and reported at least annually to the Director. It shall be submitted by April 15th unless otherwise specified. [250-RICR-120-05-14.5.2] Information submitted pursuant to this condition will be correlated with applicable emissions limitations and other applicable emissions information and will be available for public inspection. [250-RICR-120-05-14.5.3]
2. The permittee shall submit reports of any required monitoring for each semi-annual period ending 30 June and 31 December of every calendar year. These reports shall be due to the Office of Air Resources no later than forty-five (45) days after the end of the reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with condition II.Z.4. [250-RICR-120-05-29.10(2)(a)]
3. Deviations from permit conditions, including those attributable to upset conditions as defined in this permit, shall be reported, in writing, within five (5) business days of the deviation, to the Office of Air Resources. A copy of any such report shall be sent to the USEPA Region I. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken. Each report must be certified by a responsible official consistent with Condition II.Z.4 of this permit. [250-RICR-120-05-29.10(D)(2)(b)(2), Approval Nos. 1209 and 1363(F)(12), Approval No. 1420(D)(8), Approval Nos. 1740-1742(C)(12), Approval Nos. 1908-1909(D)(13) and Approval No. 1671(F)(11), Approval No.2069(C)(7), Approval Nos. 2218-2221(E)(14), Approval No. 2212(D)(11)]
4. The Office of Air Resources shall be notified in writing of any planned physical change or operational change to the emissions units and control devices identified in this permit. Such notification shall include information describing the nature of the change, information describing the effect of the change on the emissions of air contaminants and the scheduled completion date of the planned change. Any change which may result in an increased emission rate of any air contaminant shall be subject to approval of the Office of Air Resources. [Approval Nos. 1209 and 1363(F)(9), Approval No. 1420(D)(12), Approval No. 1240, Approval Nos. 1740-1743(C)(13),

**DD. Credible Evidence**

For the purpose of submitting compliance certifications or establishing whether or not the permittee has violated or is in violation of any provision of this permit, the methods used in this permit shall be used, as applicable. However, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the permittee would have been in compliance with applicable requirements if the appropriate performance or compliance test procedures or methods had been performed. [40 CFR 51.212c, 52.12c, 52.33a]

**EE. Emission Statements**

1. The permittee shall submit annually an emission statement which includes information for both VOC and NO<sub>x</sub> if facility wide actual emissions are 25 tons per year of either pollutant. Emission statements shall be submitted to the Director on April 15<sup>th</sup> of each year unless otherwise specified. The permittee may apply to the Office of Air Resources to be allowed to discontinue submitting annual emission statements if actual emissions at the facility decrease to below 10 tons per year as a result of a permanent process change. [250-RICR-120-05-14.6.1] The permittee shall submit an emission statement in a format approved by the Office of Air Resources. The emission statement shall contain the following information: [250-RICR-120-05-14.6.2]
  - a. A certification that the information contained in the emission statement is accurate and complete to the best knowledge of the certifying individual. [250-RICR-120-05-14.6.2(A)(1)]
  - b. The full name, title, signature, date of signature, and telephone number of the certifying individual. [250-RICR-120-05-14.6.2(A)(2)]
  - c. Facility identification information, including the full name, physical location, mailing address, latitude, longitude, and four digit SIC code(s). [250-RICR-120-05-14.6.2(A)(3)]
  - d. Process data pertaining to each process emitting VOC and/or NO<sub>x</sub>, including: [250-RICR-120-05-14.6.2(A)(4)]
    - (1) Annual and typical ozone season daily fuel use, [250-RICR-120-05-14.6.2(A)(4)(a)]
    - (2) Annual and typical ozone season daily process rate(s), and [250-RICR-120-05-14.6.2(A)(4)(b)]
    - (3) Process throughput while air pollution control equipment was not in operation. [250-RICR-120-05-14.6.2(A)(4)(c)]
  - e. Operating data pertaining to each process emitting VOC and/or NO<sub>x</sub> during the reporting year, including: [250-RICR-120-05-14.6.2(A)(5)]
    - (1) Percentage annual throughput, [250-RICR-120-05-14.6.2(A)(5)(a)]
    - (2) Average hours of operation per day during the reporting year and on a typical ozone season day, [250-RICR-120-05-14.6.2(A)(5)(b)]

- (3) Average number of days of operation per week during the reporting year and during a typical ozone season week, and [250-RICR-120-05-14.6.2(A)(5)(c)]
  - (4) Weeks of operation during the reporting year and during the peak ozone season. [250-RICR-120-05-14.6.2(A)(5)(d)]
- f. Control equipment information, including: [250-RICR-120-05-14.6.2(A)(6)]
- (1) Specific primary and secondary control equipment for each process emitting VOC and/or NO<sub>x</sub>, [250-RICR-120-05-14.6.2(A)(6)(a)]
  - (2) Current overall control efficiency for each piece of control equipment (indicated by percent capture and percent destruction or removal), and [250-RICR-120-05-14.6.2(A)(6)(b)]
  - (3) Control equipment downtime during the reporting year and during the peak ozone season. [250-RICR-120-05-14.6.2(A)(6)(c)]
- g. Emissions information, including: [250-RICR-120-05-14.6.2(A)(7)]
- (1) Actual annual and typical ozone season daily emissions of VOC and NO<sub>x</sub> for each process. Emissions should be reported in tons per year and in pounds per day. [250-RICR-120-05-14.6.2(A)(7)(a)]
  - (2) A description of the emission calculation method and, if applicable, emission factor(s) used, and [250-RICR-120-05-14.6.2(A)(7)(b)]
  - (3) The calendar year for which emissions are reported. [250-RICR-120-05-14.6.2(A)(7)(c)]
- h. Any additional information required by the Director to document the facility's emission statements. [250-RICR-120-05-14.6.2(A)(8)]

**FF. Miscellaneous Conditions**

- 1. This permit may be modified, revoked, reopened, reissued or terminated for cause. The filing of a request, by the permittee, for a permit modification, revocation and reissuance or termination or of a notification of planned changes or anticipated noncompliance does not release the permittee from the conditions of this permit. [250-RICR-120-05-29.10(H)(1)(c)(3)]
- 2. Any application for a permit revision need only submit information related to the proposed change. [250-RICR-120-05-29.8(C)(2)]
- 3. Terms not otherwise defined in this permit shall have the meaning given to such terms in 40 CFR 60.2 of the Clean Air Act as amended in 1990 or the referenced regulation as applicable.
- 4. Where more than one condition in this permit applies to an emission unit and/or the entire facility, the most stringent condition shall apply.

## SECTION III. SPECIAL CONDITIONS

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### A. Ozone-depleting Substances

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers containing a class I or class II substance that is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR 82.106.
  - b. The placement of the required warning statement must comply with the requirements of 40 CFR 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements of 40 CFR 82.110.
  - d. No person may modify, remove or interfere with the required warning statement except as described in 40 CFR 82.112.
  
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVAC) in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices of 40 CFR 82.156.
  - b. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment of 40 CFR 82.158.
  - c. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.
  - d. Persons disposing of small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152) must comply with recordkeeping requirements of 40 CFR 82.166.
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair equipment requirements of 40 CFR 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.



3. If the permittee manufactures, transforms, imports or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, "Production and Consumption Controls".
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, "Servicing of Motor Vehicle Air Conditioners".

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

#### **B. Prevention of Accidental Releases**

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

Your facility is subject to the requirements of the General Duty Clause, under Section 112(r)(1) of the CAA Amendments of 1990. This clause specifies that owners or operators of stationary sources producing, processing, handling or storing a chemical in any quantity listed in 40 CFR Part 68 or any other extremely hazardous substance have a general duty to identify hazards associated with these substances and to design, operate and maintain a safe facility, in order to prevent releases and to minimize the consequences of accidental releases which may occur.

**APPENDIX A**

<b>Table 1 - Annual Emission Limitations</b>					
<b>Emission Unit</b>	<b>AERMOD ID</b>	<b>Allowable Emissions (pounds/year)</b>			
		<b>Acetaldehyde</b>	<b>1,4-Dioxane</b>	<b>Ethylene Glycol</b>	<b>Formaldehyde</b>
		lb/yr	lb/yr	lb/yr	lb/yr
RTO (C004) emission units consisting of: Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Sequential Batch Reactor No. 1 and 2 (P023); Wastewater Storage Tank No. 1 and 2 (P023); Scrap extruder (P109); Wastewater TEG pit (P023)	RTO	1114.66	61.12	143.49	1.60
Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Scrap extruder (P109); Wastewater TEG pit (P023)	Bypass Stack	194.94	163.08	14.86	1.10
Combined emissions from the RTO and Bypass stack cannot exceed the following emission rates:		1297.91	238.71	156.38	2.68
Torayfan A4 (P105) and A5 (P106) Coaters	A4IR/A5IR (30% of each) FAN 42A-42B (70% of each)			158.93	158.93
Poly ES & ES/EI vessels charging and processing (P001-P006)	COMBO	931.75	3.82	31.01	0.887
Wastewater Effluent Tub and Effluent Tub Weir (P023); N-EG tank (T001); P-EG tank (T002); R-EG tank (T003)	WWTF	416.92	0.318	126.14	
Poly R-EG Process (P098) <sup>1</sup>	WWTF	49.01	20.14	83.42	
Die & Filter R-TEG tank (T005)	CHEMICAL	4.25	1.72		
Poly EG Preheater (P088); Poly vessel charging (P007-P012)	LUMIRROR 102A-102D	424.42	308.79	1,333.49	3.15
RIK & L1-L3 CVD (low vacuum) (P015-P020, P013); RIK & L1-L3 CVD (high vacuum) (P015-P020, P013); RIK & L1-L3 process vacuum & extruder hopper (P037, P065-P067); Lumirror Casting Drums (P079-P081)	LUMIRROR 56A-56C	1,234.29	5.56	23.38	2.13
Wastewater mixing tank (P023)	LUMIRROR 4436A-B	305.05	1.75		
Lumirror L1-L3 coating lines (P102-P104)	LUMIRROR 34A-34B			139.28	139.28

**Table 2 Short-Term Emission Limitations**

		Allowable Emissions			
Emission Unit	AERMOD ID	1,4-Dioxane	Ethylene Glycol	Formaldehyde	
		lb/hr	lb/hr	lb/hr	lb/day
RTO (C004) emission units consisting of: Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Sequential Batch Reactor No. 1 and 2 (P023); Wastewater Storage Tank No. 1 and 2 (P023); Scrap extruder (P109); Wastewater TEG pit (P023)	RTO	0.059	0.016	1.83E-04	4.39E-03
Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Scrap extruder (P109); Wastewater TEG pit (P023)	Bypass Stack	2.72	0.124	9.15E-03	0.220
Combined emissions from the RTO and Bypass stack cannot exceed the following emission rates:		2.77	0.140	9.30E-03	0.224
Torayfan A4 (P105) and A5 (P106) Coaters	A4IR/A5IR (30% of each) FAN 42A-42B (70% of each)		0.018	0.018	0.435
Poly ES & ES/EI vessels charging and processing (P001-P006)	COMBO	4.37E-04	3.54E-03	1.01E-04	2.43E-03
Wastewater Effluent Tub and Effluent Tub Weir (P023); N-EG tank (T001); P-EG tank (T002); R-EG tank (T003)	WWTF	3.63E-05	0.014		
Poly R-EG Process (P098) <sup>1</sup>	WWTF	0.168	0.695		
Die & Filter R-TEG tank (T005)	CHEMICAL	1.97E-04			
Poly EG Preheater (P088); Poly vessel charging (P007-P012)	LUMIRROR 102A-102D	0.035	0.152	3.60E-04	8.64E-03
RIK & L1-L3 CVD (low vacuum) (P015-P020, P013); RIK & L1-L3 CVD (high vacuum) (P015-P020, P013); RIK & L1-L3 process vacuum & extruder hopper (P037, P065-P067); Lumirror Casting Drums (P079-P081)	LUMIRROR 56A-56C	6.18E-04	2.67E-03	5.85E-04	5.83E-03
Wastewater mixing tank (P023)	LUMIRROR 4436A-B	1.99E-04			
Lumirror L1-L3 coating lines (P102-P104)	LUMIRROR 34A-34B		0.016	0.016	0.382

<sup>1</sup>This emission limitation applies during maintenance on the RTO (C004) (i.e., when the RTO is being bypassed).

Annual Emission Limitations					
		Allowable Emissions (pounds/year)			
Emission Unit	AERMOD ID	Acetaldehyde	1,4-Dioxane	Ethylene Glycol	Formaldehyde
		lb/yr	lb/yr	lb/yr	lb/yr
RTO (C004) emission units consisting of: Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Sequential Batch Reactor No. 1 and 2 (P023); Wastewater Storage Tank No. 1 and 2 (P023); Scrap extruder (P109); Wastewater TEG pit (P023)	RTO	1114.66	61.12	143.49	1.60
Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Scrap extruder (P109); Wastewater TEG pit (P023)	Bypass Stack	194.94	163.08	14.86	1.10
The combined emissions from the RTO and Bypass stack cannot exceed the following emission rates:		1297.91	238.71	156.38	2.68
Torayfan A4 (P105) and A5 (P106) Coaters	A4IR/A5IR (30% of each) FAN 42A-42B (70% of each)			158.93	158.93
Poly ES & ES/EI vessels charging and processing (P001-P006)	COMBO	931.75	3.82	31.01	0.887
Wastewater Effluent Tub and Effluent Tub Weir (P023); N-EG tank (T001); P-EG tank (T002); R-EG tank (T003)	WWTF	416.92	0.318	126.14	
Poly R-EG Process (P098) <sup>1</sup>	WWTF	49.01	20.14	83.42	
Die & Filter R-TEG tank (T005)	CHEMICAL	4.25	1.72		
Poly EG Preheater (P088); Poly vessel charging (P007-P012)	LUMIRROR 102A-102D	424.42	308.79	1,333.49	3.15
RIK & L1-L3 CVD (low vacuum) (P015-P020, P013); RIK & L1-L3 CVD (high vacuum) (P015-P020, P013); RIK & L1-L3 process vacuum & extruder hopper (P037, P065-P067); Lumirror Casting Drums (P079-P081)	LUMIRROR 56A-56C	1,234.29	5.56	23.38	2.13
Wastewater mixing tank (P023)	LUMIRROR 4436A-B	305.05	1.75		
Lumirror L1-L3 coating lines (P102-P104)	LUMIRROR 34A-34B			139.28	139.28
Cooling Tower	COOLTOW1-6	227	0.66		
RMA/REG Tank (T010)	RMA			0.670	

This emission limitation applies during maintenance on the RTO (C004) (i.e., when the RTO is being bypassed).

### APPENDIX B

## Short-Term Emission Limitations

		Allowable Emissions			
Emission Unit	AERMOD ID	1,4-Dioxane	Ethylene Glycol	Formaldehyde	
		lb/hr	lb/hr	lb/hr	lb/day
RTO (C004) emission units consisting of: Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Sequential Batch Reactor No. 1 and 2 (P023); Wastewater Storage Tank No. 1 and 2 (P023); Scrap extruder (P109); Wastewater TEG pit (P023)	RTO	0.059	0.016	1.83E-04	4.39E-03
Poly vessels vacuum systems (P007-P012); Poly Precrystallizer (P014); L1 & L2 subextruders (P068-P069); Die & Filter A&B Tanks (P022, P060-P064); Poly R-EG Process (P098); Scrap extruder (P109); Wastewater TEG pit (P023)	Bypass Stack	2.72	0.124	9.15E-03	0.220
The combined emissions from the RTO and Bypass stack cannot exceed the following emission rates:		2.77	0.140	9.30E-03	0.224
Torayfan A4 (P105) and A5 (P106) Coaters	A4IR/A5IR (30% of each) FAN 42A-42B (70% of each)		0.018	0.018	0.435
Poly ES & ES/EI vessels charging and processing (P001-P006)	COMBO	4.37E-04	3.54E-03	1.01E-04	2.43E-03
Wastewater Effluent Tub and Effluent Tub Weir (P023); N-EG tank (T001); P-EG tank (T002); R-EG tank (T003)	WWTF	3.63E-05	0.014		
Poly R-EG Process (P098) <sup>1</sup>	WWTF	0.168	0.695		
Die & Filter R-TEG tank (T005)	CHEMICAL	1.97E-04			
Poly EG Preheater (P088); Poly vessel charging (P007-P012)	LUMIRROR 102A-102D	0.035	0.152	3.60E-04	8.64E-03
RIK & L1-L3 CVD (low vacuum) (P015-P020, P013); RIK & L1-L3 CVD (high vacuum) (P015-P020, P013); RIK & L1-L3 process vacuum & extruder hopper (P037, P065-P067); Lumirror Casting Drums (P079-P081)	LUMIRROR 56A-56C	6.18E-04	2.67E-03	5.85E-04	5.83E-03
Wastewater mixing tank (P023)	LUMIRROR 4436A-B	1.99E-04			
Lumirror L1-L3 coating lines (P102-P104)	LUMIRROR 34A-34B		0.016	0.016	0.382
Cooling Tower	COOLTOW1 -6	0.018			
RMA/REG Tank (T010)	RMA		7.65E-05		

<sup>1</sup>This emission limitation applies during maintenance on the RTO (C004) (i.e., when the RTO is being bypassed).

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