

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- REVISED

PERMITTEE

Tredegar Film Products - Lake Zurich, Inc.  
Attn: Harry K. Makridakis  
351 North Oakwood Road  
Lake Zurich, Illinois 60047

Application No.: 91020100

I.D. No.: 097085ABE

Applicant's Designation:

Date Received: March 25, 2009

Subject: Plastic Film Mfg.

Date Issued: October 8, 2010

Expiration Date: August 6, 2012

Location: 351 North Oakwood Road, Lake Zurich, Lake County

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of blown film, cast film manufacturing process and extraflex film manufacturing processes and wipe cleaning operations. Each process consists of extruders, resin transport systems with baghouse filters, resin blending units with filters, and regrinders pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
  - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for volatile organic material (VOM), 10 tons/year for a single hazardous air pollutant (HAP) and 25 tons/year for totaled HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
  - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
  - iii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for VOM to less than 25 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units).
- b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.

- 3a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 Ill. Adm. Code 212.321.
4. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
- 5a. Pursuant to 35 Ill. Adm. Code 218.187(a)(1), on and after April 1, 2011 except as provided in 35 Ill. Adm. Code 218.187(a)(2), the requirements of this Section shall apply to all cleaning operations that use organic materials at sources that emit a total of 6.8 kg/day (15 lbs/day) or more of VOM from cleaning operations at the source, in the absence of air pollution control equipment. For purposes of 35 Ill. Adm. Code 218.187, "cleaning operation" means the process of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units;
- b. Pursuant to 35 Ill. Adm. Code 218.187(b), no owner or operator of a source subject to this 35 Ill. Adm. Code 218.187 shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in 35 Ill. Adm. Code 218.187(b)(1), (b)(2), or (b)(3):
  - i. The VOM content of the as-used cleaning solutions (minus water and any compounds that are specifically exempted from the definitions of VOM) does not exceed the following emissions limitations:

- |  | <u>kg/l</u> | <u>lb/gal</u> |
|--|-------------|---------------|
| All other cleaning operations not subject to a specific limitation in 35 Ill. Adm. Code 218.187(b)(1)(A) through (b)(1)(C) | 0.050       | 0.42          |
- ii. The composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20°C (68°F);
  - c. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall apply only to photochemically reactive material.
  - 6. This permit issued based on the wipe cleaning process not being subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). VOM emissions from clean-up solvents operations are exclude from the applicability of 35 Ill. Adm. Code 218 Subpart TT under 35 Ill. Adm. Code 218.980(b)(1)(B).
  - 7a. Pursuant to 35 Ill. Adm. Code 218.187(c), the owner or operator of a subject source shall demonstrate compliance with 35 Ill. Adm. Code 218.187 by using the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.187(g) and by complying with the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.187(e).
  - b. Pursuant to 35 Ill. Adm. Code 218.187(d), the owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.187 shall comply with the following for each subject cleaning operation:
    - i. Cover open containers and properly cover and store applicators used to apply cleaning solvents;
    - ii. Minimize air circulation around the cleaning operation;
    - iii. Dispose of all used cleaning solutions, cleaning towels, and applicators used to apply cleaning solvents in closed containers;
    - iv. Utilize equipment practices that minimize emissions.
  - 8a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.
  - b. Natural gas shall be the only fuel used in all the fuel combustion emission sources. Use of any fuel other than natural gas requires a permit revision.

- 9a. Emissions and operation of blown film manufacturing process shall not exceed the following limits:

Polypropylene/Polyethylene Pellet Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
2,000	20,000	0.56	5.6

These limits are based on maximum material usage and an emission factor of 0.56 lb VOM/ton of material usage as established by the Permittee.

- b. Emissions and operation of cast film manufacturing and twilfit cast line processes shall not exceed the following limits:

<u>Material</u>	Material Usage		VOM Emissions		
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(lb/Ton)</u>	<u>(Ton/Mo)</u>	<u>(Tons/Yr)</u>
Polypropylene/Polyethylene Pellet	3,200	32,000	0.56	0.9	9.0
Polyolefins Styrene Copolymers	1,500	15,000	0.60	0.5	<u>4.5</u>
				Total:	<u>13.5</u>

These limits are based on maximum material usage and emission factors established by the Permittee.

- c. Emissions and operation of extraflex film manufacturing process shall not exceed the following limits:

Polypropylene/Polyethylene Pellet Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
1,000	10,000	0.28	2.8

These limits are based on maximum material usage and an emission factor of 0.56 lb VOM/ton of material usage as established by the Permittee.

- d. Emissions and operation of all fuel combustion emission sources shall not exceed the following limits:

<u>Material</u>	<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>	<u>Pollutant</u>	Emission	Emissions	
				<u>Factor</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
				<u>(Lb/mmscf)</u>		
Natural Gas	10	100	NO <sub>x</sub>	100	0.5	5.0
			CO	84	0.42	4.2
			PM	7.6	0.1	0.4
			VOM	5.5	0.1	0.3

These limits define the potential emissions of NO<sub>x</sub>, CO, PM and VOM and are based on maximum fuel usage and standard emission factors.

- e. Emissions of volatile organic material (VOM) and operation of the wipe cleaning process shall not exceed the following limits:

Solvent Usage		VOM Content	VOM Emissions	
<u>(Gallons/Month)</u>	<u>(Gallons/Year)</u>	<u>(Lbs/Gallon)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
80	800	6.51	0.26	2.6

These limits are based on maximum material usage and the maximum VOM content of the material.

- f. This permit is issued based on negligible emissions of particulate matter from the blown film, cast film, and extraflex film processes. For this purpose emissions from each emission source, shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- g. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP and 2.25 tons/month and 22.5 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a CAAPP permit from the Illinois EPA, and Section 112(g) of the Clean Air Act.
- h. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 10a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
  - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon

request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.

- b. Testing required by Condition 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 11a. Pursuant to 35 Ill. Adm. Code 218.187(g)(1), testing to demonstrate compliance with the requirements of 35 Ill. Adm. Code 218.187 shall be conducted by the owner or operator within 90 days after a request by the Illinois EPA, or as otherwise specified in 35 Ill. Adm. Code 218.187. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Illinois EPA in writing 30 days in advance of conducting the testing to allow the Illinois EPA to be present during the testing;
- b. Pursuant to 35 Ill. Adm. Code 218.187(g)(2), testing to demonstrate compliance with the VOM content limitations in 35 Ill. Adm. Code 218.187(b)(1), and to determine the VOM content of cleaning solvents and cleaning solutions, shall be conducted as follows:
  - i. The applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) shall be used; provided, however, Method 24, incorporated by reference in 35 Ill. Adm. Code 218.112, shall be used to demonstrate compliance; or
  - ii. The manufacturer's specifications for VOM content for cleaning solvents may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a); provided, however, Method 24 shall be used to determine compliance;
- c. Pursuant to 35 Ill. Adm. Code 218.187(g)(3), testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110;
- 12. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of

the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

13a. Pursuant to 35 Ill. Adm. Code 218.187(e)(3), all sources complying with 35 Ill. Adm. Code 218.187 pursuant to the requirements of 35 Ill. Adm. Code 218.187(b)(1) shall collect and record the following information for each cleaning solution used:

- i. For each cleaning solution that is prepared at the source with automatic equipment:
  - A. The name and identification of each cleaning solution;
  - B. The VOM content of each cleaning solvent in the cleaning solution;
  - C. Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
  - D. The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
  - E. The VOM content of the as-used cleaning solution, with supporting calculations; and
  - F. A calibration log for the automatic equipment, detailing periodic checks;
- ii. For each batch of cleaning solution that is not prepared at the source with automatic equipment:

- A. The name and identification of each cleaning solution;
  - B. Date, time of preparation, and each subsequent modification of the batch;
  - C. The VOM content of each cleaning solvent in the cleaning solution;
  - D. The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
  - D. The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are not prepared at the site but are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a);
- b. Pursuant to 35 Ill. Adm. Code 218.187(e)(4), all sources complying with this Section pursuant to the requirements of 35 Ill. Adm. Code 218.187(b)(2) shall collect and record the following information for each cleaning solution used:
- i. The name and identification of each cleaning solution;
  - ii. Date, time of preparation, and each subsequent modification of the batch;
  - iii. The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;
  - iv. The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and
  - v. The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110;
- c. Pursuant to 35 Ill. Adm. Code 218.187(e)(7), all records required by 35 Ill. Adm. Code 218.187(e) shall be retained by the source for at least three years and shall be made available to the Illinois EPA upon request.
- 14a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

- i. Polyethylene/polypropylene and other plastic resin usage in the blown film manufacturing process and the extraflex film manufacturing process (tons/month and tons/year);
  - ii. Polypropylene/polyethylene pellet and polyolefins styrene copolymers usage in the cast film manufacturing and twilfit cast line processes (ton/mo and tons/year);
  - iii. Amount of solvent used in the wipe cleaning process (gallons/month and gallons/year);
  - iv. Density of the solvent used in the wipe cleaning process (lbs/gallon);
  - v. VOM content of the solvent used in the wipe cleaning process ((% by weight);
  - vi. Records which indicate the VOM emission factor development and an explanation showing why the emission would be representative of these processes;
  - vii. Material Safety Data Sheets (MSDS) for each VOM and HAP containing material;
  - viii. Maintenance records of all control equipment;
  - ix. Natural gas consumption (mmft<sup>3</sup>/month and mmft<sup>3</sup>/year);
  - x. Monthly and annual VOM emissions from the cast film manufacturing and twilfit cast line processes with supporting calculations (tons/month and tons/year); and
  - xi. Monthly and annual CO, NO<sub>x</sub>, PM, VOM, and HAP emissions from the source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 15a. Pursuant to 35 Ill. Adm. Code 218.187(e)(2), all sources subject to the requirements of 35 Ill. Adm. Code 218.187 shall:
- i. By April 1, 2011, or upon initial start-up of the source, whichever is later, submit a certification to the Illinois EPA that includes:

- A. A declaration that all subject cleaning operations are in compliance with the requirements of 35 Ill. Adm. Code 218.187;
  - B. Identification of each subject cleaning operation and each VOM-containing cleaning solution used as of the date of certification in such operation;
  - C. If complying with the emissions control system requirement, what type of emissions control system will be used;
  - D. Initial documentation that each subject cleaning operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;
  - E. Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
  - F. A description of the practices and procedures that the source will follow to ensure compliance with the limitations in 35 Ill. Adm. Code 218.187218.187(d); and
  - G. A description of each cleaning operation exempt pursuant to 35 Ill. Adm. 218.187(a)(2), if any, and a listing of the emission units on which the exempt cleaning operation is performed;
- ii. At least 30 calendar days before changing the method of compliance between 35 Ill. Adm. Code 218.187(b)(1) or (b)(2) and 35 Ill. Adm. Code 218.187(b)(3), notify the Illinois EPA in writing of such change. The notification shall include a demonstration of compliance with the newly applicable subsection;
- b. Pursuant to 35 Ill. Adm. Code 218.187(e)(6), all sources subject to the requirements of 35 Ill. Adm. Code 218.187(b) and (d) shall notify the Illinois EPA of any violation of 35 Ill. Adm. Code 218.187(b) or (d) by providing a description of the violation and copies of records documenting the violation to the Illinois EPA within 30 days following the occurrence of the violation;
  - c. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- 16a If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance

Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Illinois EPA  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

It should be noted that this permit has been revised to so as to include operation of the equipment described in Construction Permit 10060065.

It should also be noted that this permit has been revised so as to decrease the permitted Polypropylene/Polyethylene Pellet usage and VOM emissions in blown film manufacturing process in the cast film manufacturing process.

If you have any questions on this permit, please call Jocelyn Stakely at 217/782-2113.

Edwin C. Bakowski, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

ECB:JRS:psj

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the plastic film manufacturing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions well below the levels (e.g., 100 tons/year of VOM, 10 tons/year of single HAP and 25 tons/year for any combination of such HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program.

<u>Equipment</u>	<u>NO<sub>x</sub></u> <u>(T/Yr)</u>	<u>CO</u> <u>(T/Yr)</u>	<u>PM</u> <u>(T/Yr)</u>	<u>VOM</u> <u>(T/Yr)</u>	<u>HAPs</u>	
					<u>Combined</u> <u>(T/Yr)</u>	<u>Single</u> <u>(T/Yr)</u>
Blown Film Manufacturing	----	----	----	5.6	----	----
Cast Film Manufacturing	----	----	----	13.5	----	----
Extraflex Film Manufacturing	----	----	----	2.8	----	----
Wipe Cleaning Process	----	----	----	2.6	----	----
Natural Gas	<u>5.0</u>	<u>4.2</u>	<u>0.4</u>	<u>0.3</u>	<u>----</u>	<u>----</u>
Totals:	5.0	4.2	0.4	24.8	9.0	22.5

ECB:JRS:psj