

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCE - RENEWAL

PERMITTEE

Forbo Adhesives LLC
Attn: John Raney
7440 West DuPont Road
Morris, Illinois 60450

<u>Application No.:</u> 73010338	<u>I.D. No.:</u> 063813AAF
<u>Applicant's Designation:</u> EXPANSION	<u>Date Received:</u> April 5, 2005
<u>Subject:</u> Copolymer Emulsion Plant	
<u>Date Issued:</u> December 8, 2009	<u>Expiration Date:</u> December 8, 2014
<u>Location:</u> 7440 West DuPont Road, Morris, Grundy County	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of ethylene and vinyl acetate loading stations, a liquid ethylene storage tank vented to an ethylene gas storage tank, three (3) vinyl acetate ethylene copolymer reactor lines (Line #1, Line #2, and Line #3) with defoaming tanks and controlled by an air-assisted flare and a carbon adsorber system, two (2) vinyl acetate feed and storage tanks, sixteen (16) blend or product storage tanks, three (3) product recycle tanks, four (4) finished product storage tanks (17-20), one (1) monomer batch tank (Tank #2), tote drum filling station, drum rinse station, continuous monomer pump, drum liquid weight out area, filter roll, raw material storage tanks, light compounding tank, post treatment system, activator tanks, activator handling, dry powder and liquid drum weighing, bicarb tank, dry chemical handling, finishing activator tank, drum powder weight out area, and a 13.4 mmBtu/hour natural gas-fired boiler pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. This federally enforceable state operating permit is issued to limit the emission 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 any single hazardous air pollutants (HAP) and 25 tons/year for any combination of such HAPs). As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of the source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. The 13.4 mmBtu/hour natural gas-fired boiler is subject to the New Source Performance Standards (NSPS) for Small-Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected 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 Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 3a. Pursuant to 35 Ill. Adm. Code 212.123(a), 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 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- 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 35 Ill. Adm. Code 212.321(c).
- 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 215.122, no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 liters (250 gallons), unless such tank is equipped with a permanent submerged loading pipe, submerged fill, or an equivalent device approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code 201 or unless such tank is a pressure tank as described in 35 Ill. Adm. Code 215.121(a) or is fitted with a recovery system as described in 35 Ill. Adm. Code 215.121(b)(2).
- b. Pursuant to 35 Ill. Adm. Code 215.301, 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 source, except as provided in 35 Ill. Adm. Code 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart K shall apply only to photochemically reactive material.

- c. Pursuant to 35 Ill. Adm. Code 215.302, emissions of organic material in excess of those permitted by 35 Ill. Adm. Code 215.301 are allowable if such emissions are controlled by one of the following methods:
 - i. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
 - ii. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere.
- 6. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hour) to exceed 200 ppm, corrected to 50 percent excess air.
- 7. This permit is issued base on the source not being subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63 Subpart FFFF. This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP), and 25 tons/year of any combination of such HAPs.
- 8. This permit is issued based on the three (3) vinyl acetate ethylene copolymer reactor lines (Line #1, Line #2, and Line #3) not being subject to the New Source Performance Standards (NSPS) for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, 40 CFR 60 Subpart RRR. Pursuant to 40 CFR 60.700(a), the provisions of 40 CFR 60 Subpart RRR apply to each affected facility designated in 40 CFR 60.700(b) that is part of a process unit that produces any of the chemicals listed in 40 CFR 60.707 as a product, co-product, by-product, or intermediate, except as provided in 40 CFR 60.700(c).
- 9. Pursuant to 35 Ill. Adm. Code 215.122(c), if no odor nuisance exists the limitations of 35 Ill. Adm. Code 215.122 shall only apply to the loading of volatile organic liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).
- 10a. The flares shall be operated to reduce VOM and HAP emissions by 98%, and shall operate in compliance with 40 CFR 60.18.
 - b. i. Pursuant to 40 CFR 60.18(c)(1) flares shall be designed for and operated with no visible emissions as determined by the methods

specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

- ii. Flares shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f).
- iii. An owner/operator has the choice of adhering to either the heat content specifications in 40 CFR 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR 60.18(c)(4), or adhering to the requirements in 40 CFR 60.18(c)(3)(i).
 - A. I. Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the equation in 40 CFR 60.18(c)(1)(i)(A).
 - II. The actual exit velocity of a flare shall be determined by the method specified in 40 CFR 60.18(f)(4).
 - B. Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f)(3).
- iv. A. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii).
 - B. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
 - C. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

- v. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(6).
 - vi. Flares used to comply with 40 CFR 60.18 shall be steam-assisted, air-assisted, or nonassisted.
 - c. Pursuant to 40 CFR 60.18(e), flares used to comply with provisions of 40 CFR 60 Subpart A shall be operated at all times when emissions may be vented to them.
- 11a. 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 materials or installation of controls, in order to eliminate the odor nuisance.
- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the flare and carbon adsorber system such that the flare and carbon adsorber system are kept in proper working condition and do not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
 - c. The Permittee shall maintain the flare systems in good working condition and shall not operate the copolymer emulsion facility in the event of malfunction or breakdown of the flare system. However, any batch in progress may be completed if the flare is not operating.
 - d. The boiler shall only be operated with natural gas as the fuel. The use of any other fuel in the natural gas requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 12a. Emissions and operation of Reactor Lines #1, #2, and #3 shall not exceed the following limits:

Reactor Line	Throughput		Vinyl Acetate Emissions		VOM Emissions	
	(Batch/Mo)	(Batch/Yr)	(Ton/Mo)	(Ton/Yr)	(Ton/Mo)	(Ton/Yr)
1	400	4,000	0.25	2.5	2.30	23.0
2	365	3,650	0.25	2.5	2.26	22.6
3	365	3,650	0.25	2.5	2.26	22.6
					Total:	68.2

These limits are based on 98% control by the flares, 85% control by the carbon adsorber when in use, and emissions derived from extensive material balance information. Use of the carbon adsorber system for control of the roll filter for each reactor line is optional.

- b. Emissions and operation of the flare shall not exceed the following limits:

Ethylene Combustion		Pollutant	Emission		
(mmscf/Hr)	(mmscf/Yr)		Factor (Lb/mmBtu)	Emissions (Lb/Hr)	(T/Yr)
0.20	58.80	Carbon Monoxide (CO)	0.37	74.00	10.88
		Nitrogen Oxides (NO _x)	0.068	13.60	2.00
		Particulate Matter (PM)	----	0.10	0.44
		Volatile Organic Material (VOM)	0.0196	3.92	0.58

These limits are based on the maximum amount of ethylene vented to and combusted by the flares, the maximum heat content of ethylene to be flared (1,000 Btu/scf), and standard emission factors (Table 13.5-1, AP-42, Fifth Edition, Volume I, September 1991). The PM emission limit is based on negligible, nominal emission rates.

- c. Operation and emissions of the boiler shall not exceed the following limits:

- i. Natural Gas Usage: 0.0277 mmscf/hour, 243 mmscf/year.
- ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor		Emissions	
	(Lbs/mmscf)	(Tons/Mo)	(Tons/Yr)	
Carbon Monoxide (CO)	84.0	2.33	10.21	
Nitrogen Oxides (NO _x)	100.0	2.77	12.15	
Particulate Matter (PM)	7.6	0.02	0.92	
Sulfur Dioxide (SO ₂)	0.6	0.02	0.07	
Volatile Organic Material (VOM)	5.5	0.15	0.67	

These limits are based on the maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- d. This permit is issued based on negligible emissions of VOM from the ethylene gas storage tank, sixteen (16) blend or product storage tanks, three (3) product recycle tanks, and four (4) finished product storage tanks (17-20). For this purpose, emissions from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- e. This permit is issued based on negligible emissions of volatile organic material from the premix tank. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.01 ton/year.
- f. This permit is issued based on negligible emissions of VOM from the liquid drum weighing, drum rinse station, filter roll, continuous

- monomer pump and drum liquid weight out area. For this purpose emissions from each emission unit, 0.01 lb/hour and 0.044 ton/year.
- g. This permit is issued based on negligible emissions of volatile organic material from the light compounding tank. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
 - h. This permit is issued based on negligible emissions of volatile organic material from the raw material storage tanks. For this purpose, emissions from all such emission units shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
 - i. This permit is issued based on negligible emissions of particulate matter from the post treatment system, activator tanks, activator handling, dry powder and liquid drum weight, bicarb tank, dry chemical handling, finishing activator tank, and drum powder weigh out area. For this purpose emissions from each emission unit, shall not exceed nominal emission rates of 0.05 lb/hour and 0.22 ton/year.
 - j. Emissions of vinyl acetate and VOM from the liquid ethylene storage tank shall not exceed 0.2 tons/month and 1.5 tons/year. Throughput shall not exceed 1,300,000 gallons/month and 13,000,000 gallons per year.
 - k. This permit is issued based on negligible emissions of vinyl acetate and VOM from the tote drum filling station and continuous monomer pump. For this purpose emissions from each emission unit, shall not exceed nominal emission rates of 0.05 lb/hour and 0.22 ton/year.
 - l. This permit is issued based on negligible emissions of VOM from the filtering and storage of product. For this purpose, emissions from each process (filtering, storage) shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
13. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP or 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 requirement to obtain a CAAPP permit from the Illinois EPA and requirements under the NESHAP for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63 Subpart FFFF.
14. 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).
- 15a. 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 Conditions 16 and 17 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
16. Pursuant to 40 CFR 60.18(f)(1), Method 22 of Appendix A to 40 CFR Part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
 17. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
 - 18a. Pursuant to 40 CFR 60.18(d), owners or operators of flares used to comply with the provisions of 40 CFR 60 Subpart A shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

- b. Pursuant to 40 CFR 60.18(f)(2), the presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
19. The Permittee shall monitor the carbon bed of the carbon adsorber when in use to ensure that breakthrough is not achieved. Once the monitor indicates the carbon bed needs replacement, reactivated carbon shall be loaded into the carbon absorber.
- 20a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.48c(g)(1), except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
 - c. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
 - d. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48c shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
21. 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.

22. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 23a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions in this permit.
 - i. Records addressing use of good operating practices for the flare and carbon adsorber system:
 - A. Records for periodic inspection of the flare and carbon adsorber system with date, individual performing the inspection, and nature of inspection; and
 - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - ii. Vinyl acetate throughput through the storage tank and the batch tank (gallons/month and gallons/year);
 - iii. Ethylene usage (lbs/month and lbs/year);
 - iv. Data log of the monitor for presence of pilot flame on each flare (Can be by exception);
 - v. Data log of the carbon bed's monitor, the time of each carbon bed change-out, and duration adsorber is in use (hours/year running total).
 - vi. Product manufactured (lbs/month and lbs/year);
 - vii. Number of batches per month and per year;
 - viii. Natural gas consumption for the boiler (mmscf/month and mmscf/year); and

- ix. Monthly and annual emissions of CO, NO_x, PM, SO₂, VOM and HAP 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.
24. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 25a. 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 Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that this permit has been revised to include the operation of the equipment described in Construction Permits 06030074 and 06100024.

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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 Copolymer Emulsion 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 are below the levels, (e.g., 100 tons per year of VOM, 10 tons per year for a single HAP, and 25 tons per year for any combination of such HAP) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					<u>Single HAP</u>	<u>Total HAPs</u>
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>		
Reactor Line 1					23.00	2.50	
Reactor Line 2					22.60	2.50	
Reactor Line 3					22.60	2.50	
Flare	10.88	2.00	0.44		0.58		
Boiler	10.21	12.15	0.92	0.07	0.67		
Ethylene Gas Storage Tank					0.44		
16 Blend/Product Storage Tanks					7.04		
3 Product Recycle Tanks					1.32		
Finished Product Storage Tanks (17-20)					1.76		
Premix Tank					0.01		
Liquid Drum Weighing					0.044		
Drum Rinse Station					0.044		
Filter Roll					0.044		
Continuous Monomer Pump					0.044		
Drum Liquid Weight Out Area					0.044		
Light Compounding Tank					0.44		
Raw Material Storage Tanks					0.44		
Post Treatment System			0.22				
Activator Tanks			0.22				
Activator Handling			0.22				
Dry Powder And Liquid Drum Weight			0.22				
Bicarb Tank			0.22				
Dry Chemical Handling			0.22				
Finishing Activator Tank			0.22				
Drum Powder Weigh Out Area			0.22				
Liquid Ethylene Storage Tank					1.50	1.50	
Tote Drum Filling Station					0.22	0.22	
Continuous Monomer Pump					0.22	0.22	
Filtering of Product					0.44		
<u>Storage of Product</u>					<u>0.44</u>		
Totals	<u>21.09</u>	<u>14.15</u>	<u>3.12</u>	<u>0.07</u>	<u>83.94</u>	<u>9.0</u>	<u>22.5</u>