Illinois Environmental Protection Agency
Bureau of Air, Permit Section
1021 N. Grand Avenue East
P.O. Box 19506
Springfield, Illinois 62794-9506

Project Summary for an Application from Engineered Polymer Solutions, Inc. for Federally Enforceable State Operating Permit (FESOP) for Latex Paint and Coatings Manufacturing Plant Rockford, Illinois

Site Identification No.: 201030AFE
Application No.: 96030206

Schedule

Public Comment Period Begins: February 12, 2014
Public Comment Period Closes: March 14, 2014

Illinois EPA Contacts

Permit Analyst: Jocelyn Stakely
Community Relations Coordinator: Brad Frost
217/782-7027
Brad.frost@illinois.gov

I. INTRODUCTION

An application has been voluntarily submitted by the Engineered Polymer Solutions, Inc. for their latex paint and coatings manufacturing facility in order to voluntarily incorporate federally enforceable limits. These limits would prevent the above facility from being a major source of emissions so that an operating permit does not have to be obtained under the Clean Air Act Permit Program. The proposed limits would be accompanied by recordkeeping requirements to assure that the plant is operated as a non-major source. Unlike the site's current operating permit(s), these conditions would be enforceable by both the State of Illinois and USEPA.

II. SOURCE DESCRIPTION

Engineered Polymer Solutions, Inc. manufactures latex paint and coatings. The manufacturing of coatings involves only mixing of material to achieve the desired final product No Chemical reactions are involved in this process. The manufacturing process is the dispersion of pigment with the addition of solvent for viscosity adjustment.

The equipment associated with air emissions includes the following:

One (1) 3,500 Gallon Resin Storage Tank (RMT-1095);
Five (5) 4,847 Gallon Resin Storage Tanks (RMT-4003, RMT-4004, RMT-4005, RMT-4029, and RMT-4030);
Two (2) 9,700 Gallon Resin Storage Tanks (RMT-4006 and RMT-4007);
One (1) 4,160 Gallon Resin Storage Tank (RMT-4008);
One (1) 5,520 Gallon Resin Storage Tank (RMT-4009);
Three (3) 3,233 Gallon Resin Storage Tanks (RMT-4010, RMT-4011, & RMT-4012);
Two (2) 3,300 Gallon Resin Storage Tanks (RMT-4013 and RMT-4014);
Four (4) 4,700 Gallon Ethylene Glycol Storage Tanks (RMT-4023, RMT-4024, RMT-4025, and RMT-4026);
Four (4) 3,380 Gallon Raw Material Storage Tanks (RMT-4031, RMT-4032, RMT-4033, and RMT-4034);
Four (4) 11,000 Gallon Latex Storage Tanks (RMT-4035, RMT-4036, RMT-4037, and RMT-4038);
Two (2) 5,600 Gallon Raw Material Storage Tanks (RMT-4039 and RMT-4040);
Two (2) 3,150 Gallon Resin Storage Tanks (RMT-4041 and RMT-4042);
One (1) 6,500 Gallon Resin Storage Tank (RMT-4043);
Two (2) 7,500 Gallon Raw Material Storage Tank (RMT-4044 and RMT-4045);
One (1) 10,500 Gallon Raw Material Storage Tank (RMT-4046);
One (1) 10,000 Gallon Raw Material Storage Tank (RMT-4047);
Two (2) 7,200 Gallon Resin Storage Tanks (RPT-1081 and RPT-1083);
Three (3) 4,800 Gallon Resin Storage Tanks (RPT-1082, RPT-1091A, and RPT-1091B);

One (1) 5,400 Gallon Resin Storage Tank (RPT-1084);
Four (4) 7,500 Gallon Resin Storage Tanks (RPT-1085, RPT-1086, RPT-1087, and RPT-1088);
Two (2) 1,570 Gallon Resin Storage Tanks (RPT-2001 and RPT-2002);
Three (3) 11,750 Gallon Resin Storage Tanks (RPT-2003, RPT-2004, and RPT-2008);
One (1) 5,100 Gallon Resin Storage Tank (RPT-2007);
Two (2) Filling Points for Filling Containers with Colorant;
Filling Equipment (FP-6) for Filling Containers with Colorant Components;
One (1) High Speed Dispersion Mixer (CM-14);
Three (1) High Speed Dispersion Mixers (M-23, M-24, and M-25);
Five (5) High Speed Dispersion Mixers (M-3, M-7, M-8, M-27 and M-28) controlled by Dust Collector DC-4;
One (1) High Speed Dispersion Mixer (M-4) controlled by Dust Collectors DC-4 and DC-8);
One (1) High Speed Dispersion Mixer (M-26) controlled by Dust Collector DC-9;
Ten (10) Horizontal Mills (SM-6, SM-7, SM-11, SM-12, SM-1C, SM-7C through SM-10C, SM-13);
Eleven (11) Product Blend Tanks (PT-2C through PT-12C);
Nineteen (19) Product Storage Tanks (PT-1: 4,800 Gallons, PT-2: 2,200 Gallons, PT-3: 4,000 Gallons, PT-4: 4,000 Gallons, PT-5: 4,000 Gallons, PT-6: 4,800 Gallons, PT-7: 5,500 Gallons, PT-8: 8,000 Gallons, PT-9: 6,000 Gallons, PT-10: 6,000 Gallons, PT-11: 4,000 Gallons, PT-14: 1,800 Gallons, PT-16: 6,000 Gallons, PT-17: 6,000 Gallons, PT-18: 8,000 Gallons, PT-19: 5,500 Gallons, PT-31: 4,000 Gallons, PT-74: 4,800 Gallons; and LD-11: 5,000 Gallons);
Three (3) Vacuum Mixers (VM-1 through VM-3);
Six (6) Vacuum Pumps (VP-1 through VP-6);
Six (6) Reducing Tanks (RT-1, RT-2, and RT-4 through RT-7);
One (1) Soil Vapor Extraction System;
One (1) 102 Brake Horse Power Emergency Fire Pump; and
Three (3) Natural Gas Fired Boilers (8.9 mmBtu/hr, 1.0 mmBtu/hr, and 2.1 mmBtu/hr)

The manufacturing operations are primarily a source of volatile organic material (VOM) emissions and hazardous air pollutant (HAP) emissions. The tanks emit VOM emissions. HAP and VOM emissions are uncontrolled. Primary fuel used in the boilers is natural gas. These units are sources of emissions because emissions generated from combustion are Nitrogen oxides (NO_x) and Carbon monoxide (CO).

III. GENERAL DISCUSSION

Federally Enforceable State Operating Permits (FESOPs) are federally enforceable, that is, the terms and conditions of the permits can be enforced by USEPA under federal law, as well as by Illinois government and the public under state law. These permits can establish federally enforceable limitations on the

operation and emissions of a source that restrict the potential emissions of the source.

The source has been operating this plant under a FESOP because the actual emissions of the plant are below the levels at which the plant would be considered a major source under Title V of the federal Clean Air Act. However, in the absence of federally enforceable limitations, the plant's potential emissions would be such that the plant would be considered a major source. The permit acts to restrict the plant potential emissions so that it need not be considered a major source. As a result, the source does not need not obtain a Clean Air Act Permit Program (CAAPP) permit for the plant, as would otherwise be required.

The FESOP limits the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for VOM, 10 tons for an individual HAP and 25 tons for combined HAPs.

IV. APPLICABLE EMISSION STANDARDS

All emission units in Illinois must comply with state emission standards adopted by the Illinois Pollution Control Board. These emission standards represent the basic requirements for sources in Illinois. These regulations limit the amount of VOM that may be in the coatings used. The facility is subject to the specific standards of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Paints and Allied Products Manufacturing, 40 CFR 63 Subparts CCCCCCC. The requirements of the NESHAP apply to major sources of hazardous air pollutants. This source has emission limits in its permit that keep the amount of hazardous air pollutants below major levels therefore the NESHAP regulations do not apply. The board has standards for sources of Volatile Organic Material (VOM). The application shows that the plant is in compliance with applicable state and federal emission standards.

The principal air contaminants of concern are volatile organic material (VOM) and Hazardous Air Pollutants (HAPs) which is created by the mixers, silos, pumps, and tanks. The facility has limited their throughput that will keep the VOM emissions below the major source threshold level of 100 tons per year for PM and 100 tons per year for VOM.

Other emissions of hazardous air pollutants (HAP) are also emitted; however, their levels are also depended on the amount of VOM and will remain below the major source threshold level of 10 ton per year for single HAP and 25 ton per year for combined total HAPs. This plant combusts natural gas and releases small quantities of nitrogen oxides and carbon monoxide due to the incomplete combustion of natural gas.

V. CONTENTS OF THE PERMIT

The permit that the Illinois EPA is proposing to issue would continue to identify the specific emission standards that apply to the emission units at the plant.

The permit would also contain limitations and requirements to assure that this plant is operated as a non-major source. The permit would limit the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for VOM, 10 tons for an individual HAP and 25 tons for combined HAPs. (Annual emissions of other pollutants from the plant are well below the 100 ton major source threshold.)

The permit would also set limitations on requirements to assure that this facility will be operated as a non-major source. The permit sets limitations on Coating Manufacturing Plant emissions. These limitations are consistent with the historical operation and capacity of the facility.

The permit conditions would also continue to require appropriate compliance procedures, including inspection practices as well as recordkeeping and reporting requirements. The source must carry out these procedures on an on-going basis to demonstrate that the plant is being operated within the limitations set by the permit and the plant's emissions are being properly controlled.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that the source has met the requirements for issuance of its permit. The Illinois EPA is therefore proposing to issue the permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.