For the reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is proposed to be amended as follows:

PART 63 — NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et. seq.

2. It is proposed that part 63 be amended by adding subpart W to read as follows:

Subpart W - National Emission Standards for Hazardous Air Pollutant Emissions from Epoxy Resins Production and Non-Nylon Polyamides Production

§ 63.520 Applicability and Designation of Sources.

The provisions of this subpart apply to all new and existing manufacturers of basic liquid epoxy resins and wet strength resins that are either major sources, or that are co-located at facilities that are major sources.

§ 63.521 Definitions.

Terms used in this subpart are defined in the Act, in subpart A of part 63, or in this section as follows:

BLR means basic liquid resins made with diglycidyl ether of bisphenol-A (DGEBPA), used in the manufacture of modified epoxy resins, adhesives, coatings, and other plastics applications.

Equipment leaks means leaking components (valves, pumps, etc.) in piping systems used to transfer fluids containing HAP in the manufacturing process.

Process vents refers to vents on equipment used in the production of epoxy resins and wet strength resins.

Storage tanks means tanks used to store HAP compounds used to manufacture epoxy resins and wet strength resins.

Wastewater refers to aqueous liquid waste streams that are produced from various process steps in the manufacture of epoxy resins and wet strength resins.

Wet strength resins means epichlorohydrin-modified non-nylon polyamide resins, used to increase the tensile strength of paper products.

§ 63.522 Standards for Basic Liquid Resins Manufacturers.

(a) The rate of emissions of hazardous air pollutants from all process vents, storage tanks, and wastewater at existing BLR manufacturing facilities shall not exceed 130 pounds per one million pounds of BLR produced.

(b) The following requirements apply to new sources manufacturing BLR:

(1) All process vents and storage tanks at new BLR manufacturing sources shall be manifolded to a common water scrubber achieving a minimum control efficiency of 99 percent;

(2) All wastewater generated in the process, including water scrubber effluent, shall be routed without potential for volatilization (i.e., in enclosed piping) back to the process; and

(3) The owner or operator must achieve 99 percent control of HAP emissions from wastewater.

(c) All existing and new BLR manufacturing sources shall comply with the requirements of 40 CFR 63.160 through 63.182 to control emissions from equipment leaks.

§ 63.523 Standards for Wet Strength Resins Manufacturers.

(a) Existing sources subject to this subpart that manufacture wet strength resins shall either:

(1) Limit the total emissions of hazardous air pollutants from all process vents, storage tanks, and wastewater at existing wet strength resins manufacturing facilities to 10 pounds per 1 million pounds of wet strength resins produced; or

(2) Comply with the requirements of 40 CFR 63.160 through 63.182 to control emissions from equipment leaks.

(b) New sources shall either:

(1) Meet the following criteria;

(i) Control emissions from reactors with water-cooled condensers;

(ii) Eliminate the production of methanol by-product during the manufacturing process; and

(iii) Eliminate the use of hydrochloric acid in the manufacturing process; or

(2) Comply with the requirements of 40 CFR 63.160 through 63.182 to control emissions from equipment leaks.

§ 63.524 Compliance and Performance Testing.

(a) The owner or operator of any existing source subject to § 63.522 shall, in order to demonstrate initial compliance with the applicable emission limit, perform testing to determine the emission limits for all emission points (excluding equipment leaks); using the methods described below.

(1) The owner or operator shall use the following EPA Test Methods in 40 CFR Part 60, appendix A, to comply with the requirement listed in § 63.522. The owner or operator must perform three one-hour tests; emissions shall be determined as the average of the three test values.

(i) Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is a

pitot tube. No traverse is necessary when using Method 2A or 2D. The control device inlet sampling site for determination of vent stream HAP composition reduction efficiency shall be prior to the control device and after the control device.

(ii) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate. Measurements must be made and recorded every minute.

(iii) Method 25A or Method 18, as appropriate, to determine the concentration of HAP in gas streams. The sampling time for each run will be one hour.

(iv) The emission rate of the process vent or outlet of the control device shall be determined by multiplying concentration and flow rate measurements at simultaneous points throughout the sampling period.

(2) The performance of wastewater treatment systems shall be determined in accordance with the methods described in 40 CFR 63.150(g)(5).

(3) Emissions from storage tanks shall be calculated in accordance with the methods described in 40 CFR 63.150(g)(3).

(b) The owner or operator of an existing facility subject to § 63.522 shall use production data for the annual period preceding the test date, and divide the production total by the hours of actual production during

the same period, to calculate an hourly production rate. For each emission point, the owner or operator shall convert the production rate to a time frame (e.g., monthly, annual) identical to the averaging time of the appropriate compliance test. Using emissions data and production data over an equivalent time period, the owner or operator shall calculate an emission rate, in the form of pounds of HAP emitted per million pounds of product, for each emission point by dividing the emission rate for the emission point by the production rate for the same unit time. For the purpose of demonstrating compliance with the control requirements of this rule, testing required under § 63.524(a) shall be performed at operating conditions that are representative of operating conditions encountered during the annual period from which production data were used to calculate the production rate.

(c) The owner or operator shall calculate the total emissions per product produced by summing the per product estimates for process vents, storage tanks, and wastewater according to the following equation:

$$E = \sum PV + \sum ST + \sum WW$$

where:

E = Emissions, lb HAP/MM lb product

PV = Process vent emissions, lb HAP/MM lb product

ST = Storage tank emissions, lb HAP/MM lb product

WW = Wastewater emissions, lb HAP/MM lb product

(1) The facility will be considered to be in compliance with the standard for process vents, storage tanks, and wastewater if the sum of equation (1) is less than the applicable emission limit from § 63.522.

(d) The owner or operator of any new source subject to §63.522 shall demonstrate compliance using the methods described in this section.

(1) The appropriate test methods from §63.524(a)(1) must be applied to the inlet and outlet gas streams of the common scrubber required by §63.522(a) to obtain emissions data for the purpose of calculating the control efficiency of the scrubber.

(2) The owner or operator shall calculate the control efficiency of the wastewater treatment system using the methodology of 40 CFR 63.150(g)(5).

(e) The owner or operator of any existing source subject to §63.523 shall demonstrate initial compliance by calculating emissions for all emission points (excluding equipment leaks), using the methods described in this section.

(1) Emissions of HAP from reactors with condensers on process vents shall be calculated according to the methodologies described below.

(i) Emissions from vapor displacement due to transfer of material into or out of the reactor shall be calculated according to the following equation:

$$E = \frac{(y_i)(V)(P_T)(MW)}{(R)(T)}$$

where:

E = mass emission rate;

y_i = saturated mole fraction of HAP in the vapor phase;

V = volume of gas displaced from the vessel;

R = ideal gas law constant;

T = temperature of the vessel vapor space; absolute;

P_T = pressure of the vessel vapor space; and

MW = molecular weight of the HAP.

(ii) Emissions from reactor purging shall be calculated using the methodology described in (i), except that for purge flow rates greater than 100 scfm, the mole fraction of HAP will be assumed to be 25 percent of the saturated value.

(iii) Emissions caused by heating of the reactor vessel shall be calculated according to the following methodology:

$$E = \frac{\frac{\sum(P_i)_{T1}}{760-\sum(P_i)_{T1}} + \frac{\sum(P_i)_{T2}}{760-\sum(P_i)_{T2}}}{2} \times \Delta\eta \times MW_{HAP}$$

where:

E = mass of HAP vapor displaced from the vessel being heated up.

$(P_i)_{Tn}$ = partial pressure of each HAP in the vessel headspace at initial (n=1) and final (n=2) temperature.

MW_{HAP} = the average molecular weight of HAP present in the vessel.

The moles of gas displaced is represented by:

$$\Delta\eta = \frac{V}{R}\left[\left(\frac{Pa_1}{T_1}\right) - \left(\frac{Pa_2}{T_2}\right)\right]$$

where:

$\Delta\eta$ = es of gas displaced;

V = ce in the vessel ft ^{3};

R = mmHg ft ^{3}/lb-moles °K;

Pa_1 =

in the vessel, mmHg;

Pa_2 =

l gas pressure, mmHg;

T_1 =

ure of vessel K; and

T_2 =

rature of vessel, K.

The initial pressure of the noncondensable gas in the vessel shall be calculated according to the following equation:

$$Pa_1 = 760 - \sum(P_i)_{T1}$$

where:

Pa_1 = initial partial pressure of gas in the vessel headspace, mmHg; and

$(P_i)_{T1}$ = initial partial pressure of each HAP in the vessel headspace, mmHg, at the initial temperature (T_1).

The average molecular weight of HAP in the displaced gas shall be calculated as follows:

$$MW_{HAP} = \frac{\sum_{i=1}^{n} (mass\ of\ HAP)_i (HAP\ molecular\ weight)_i}{\sum_{i=1}^{n} (mass\ of\ HAP)_i}$$

(2) For processes that do not have condensers or are not controlled processes, direct measurement of emissions is required. The following EPA Test Methods in 40 CFR 60, appendix A, shall be used to comply with the requirements of § 63.523.

(i) Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when using Method 2A or 2D. The control device inlet sampling site for determination of vent stream HAP composition reduction efficiency shall be after the control device.

(ii) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate. Measurements must be made and recorded every minute throughout the batch cycle.

(iii) Method 25A or Method 18, if applicable, to determine the concentration of HAP in gas streams. The sampling time for each run will be one hour. If Method 25A is used, measurements must be made every 15 seconds and the average recorded every minute. If Method 18 is

used, direct injection samples must be taken and analyzed every 3 minutes or three 20-minute composite samples must be taken and analyzed.

(iv) The emission rate of the process vent or outlet of the control device shall be determined by multiplying concentration and flow rate measurements at simultaneous points throughout the sampling period.

(f) The owner or operator of an existing source subject to §63.523 shall calculate emissions from storage tanks using the methodology described in 40 CFR 63.150(g)(3). Annual emissions shall be divided by the number of batches run during the annual period before the date of compliance testing to calculate emissions per batch from storage tanks.

(g) The owner or operator of an existing source subject to §63.523 shall calculate the average production per batch (in units of pounds) using production data for the annual period preceding the compliance test period.

(i) The owner or operator shall calculate an average emission rate per batch as the average of the results from the three test runs. The production-based emission rate shall be calculated by dividing the emissions per batch by the average production per batch.

(ii) Test conditions shall represent the typical operating conditions under which the data used to calculate the production rate were taken.

(iii) Compliance shall be determined according to the methodology described in §63.524(c).

(h) The owner or operator of an existing source subject to §63.523 that implements the requirements of 40 CFR 63.160 through 63.182 must demonstrate the ability of its specific program to meet these requirements in order to achieve initial compliance.

§ 63.525 Monitoring Requirements.

(a) The owner or operator of any existing or new source subject to § 63.522 shall provide evidence of continued compliance with the standard. During initial compliance testing, maximum or minimum operating parameters, as appropriate, shall be established for processes and control devices. An average value shall be calculated for each of the three compliance test runs. If the operating parameter to be established is a maximum, the value of the parameter shall be the maximum of the average values of the three test runs. If the operating parameter to be established is a minimum, the value of the parameter shall be the minimum of the average values of the three test runs. The owner or operator shall operate processes and control devices

within these parameters to ensure continued compliance with the standard.

(1) For facilities using water scrubbers, the owner or operator shall establish a minimum scrubber water flow rate as a site-specific operating parameter which must be measured and recorded every 15 minutes. The facility will be considered to be out of compliance if the scrubber water flow rate is below the minimum flow rate, averaged over any 1-hour period.

(2) For facilities using condensers, the owner or operator shall establish the maximum condenser outlet temperature as a site-specific operating parameter which must be measured and recorded every 15 minutes.

(3) For facilities using carbon adsorbers or having uncontrolled process vents, the owner or operator shall establish the outlet flow rate and HAP concentration as site-specific operating parameters which must be measured and recorded every 15 minutes. The facility will be considered to be out of compliance if the average outlet concentration over any 1-hour period is greater than the value established during the performance test.

(4) For facilities using flares, the presence of the pilot flame shall be monitored every 15 minutes. The facility will be considered to be out of compliance upon loss of pilot flame.

(5) The owner or operator shall establish the following as site-specific operating parameters for wastewater which must be measured and recorded daily: pH, HAP concentration, and flow rate into the treatment system. The following parameters shall be measured and recorded bi-weekly: total suspended solids, and biological oxygen demand. The facility will be considered to be out of compliance if any parameter is outside the range established from initial compliance calculations.

(b) The owner or operator of any existing or new wet strength resins manufacturing facility subject to § 63.523 shall provide evidence of continued compliance with the standard. During initial compliance testing, maximum or minimum operating parameters, as appropriate, shall be established for processes and control devices. An average value shall be calculated for each of the three test runs. If the operating parameter to be established is a maximum, the value of the parameter shall be the maximum of the average values of the three test runs. If the operating parameter to be established is a minimum, the value of the parameter shall be the minimum of the average values of the three test runs. The owner or operator shall operate processes and control

devices within these parameters to ensure continued compliance with the standard.

(1) Facilities with condensers on process vents shall establish the maximum condenser outlet temperature as a site-specific operating parameter which must be measured every 15 minutes. A maximum condenser outlet temperature value must be established for each process step. The facility will be considered to be out of compliance if the average condenser outlet temperature over the duration of the step is greater than the temperature established for that step.

(2) For facilities using water scrubbers, the owner or operator shall establish a minimum scrubber water flow rate as a site-specific operating parameter which must be measured and recorded every 15 minutes. A minimum scrubber water flow rate value must be established for each process step. The facility will be considered to be out of compliance if the average scrubber water flow rate over the duration of the step is below the minimum flow rate established for that step.

(3) For facilities using carbon adsorbers or having uncontrolled process vents, the owner or operator shall establish the outlet flow rate and HAP concentration as site-specific operating parameters which must be measured and recorded every 15 minutes. These parameters must be

established for each step in the process. The facility will be considered to be out of compliance if the outlet HAP concentration over the duration of the step is greater than the value established for that step.

(4) The owner or operator shall establish the HAP concentration, pH and flow rate into the treatment system as site-specific operating parameters for wastewater, which must be measured daily. If a destruction efficiency is claimed, the pH and biological oxygen demand shall be measured and recorded biweekly. The facility will be considered to be out of compliance if any parameter is outside the range established from initial compliance calculations.

§ 63.526 Recordkeeping Requirements.

(a) The owner or operator of any source subject to § 63.522 or § 63.523 who elects to implement the leak detection and repair program specified in 40 CFR 63.160 through 63.182, shall implement the recordkeeping requirements outlined therein. Records shall be retained in accordance with the requirements of 40 CFR 63.10(b)(1).

(b) The owner or operator of any source subject to § 63.522, as well as sources subject to § 63.523 that does <u>not</u> elect to implement the requirements of 40 CFR 63.160 through 60.182, shall maintain records of emission

tests, daily scrubber water flow rate readings, condenser outlet temperature readings, carbon adsorber outlet flow rate and HAP concentration readings, and wastewater HAP concentration, inlet flow rate, and pH. The owner and operator shall also maintain bi-weekly readings of wastewater total suspended solids and biological oxygen demand. Records shall be retained in accordance with the requirements of 40 CFR 63.10(b)(1).

(c) The owner or operator of any source subject to § 63.522 or § 63.523 shall keep records of the purchase of HAP liquids kept in storage tanks. Records shall include the amount of HAP liquid purchased and the date of delivery. Records shall be retained in accordance with the requirements of 40 CFR 63.10(b)(1).

§ 63.527 Reporting Requirements.

(a) The owner or operator of any BLR or wet strength resins manufacturing facility subject to these standards shall fulfill all reporting requirements outlined in the General Provisions to 40 CFR part 63, subpart A, § 63.5 through § 63.10. These reports will be made to the Administrator or delegated State authority.

(b) Owners or operators of affected facilities subject these standards shall include the monitored operating parameter value readings required by § 63.525 in the continuous monitoring system performance report

and summary report required by § 63.10(e). In the case of exceedances, the report must also contain a description and timing of the steps taken to address the cause of the exceedance.