



MEMORANDUM

TO: Andrew Bouchard, U.S. EPA/OAQPS/SPPD – EPA Office of Air Quality Planning and Standards

FROM: Eastern Research Group, Inc. (ERG)

DATE: March 2023

SUBJECT: Proposed Regulation Edits for 40 CFR Part 63 Subpart W: National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production

The attachment to this memorandum, for the convenience of interested parties, presents the redline/strikeout (RLSO) version of National Emission Standards for Hazardous Air Pollutants (NESHAP) subpart W. These amendments are associated with the proposed action titled *New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*.

Attachments:
RLSO of 40 CFR 63, Subpart W

**Subpart W—National Emission Standards for Hazardous Air Pollutants for Epoxy Resins
Production and Non-Nylon Polyamides Production**

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§ 63.520 Applicability and designation of sources.

The provisions of this subpart apply to all existing, new, and reconstructed manufacturers of basic liquid epoxy resins (BLR) and manufacturers of wet strength resins (WSR) that are located at a plant site that is a major source, as defined in section 112(a) of the Clean Air Act. Research and development facilities, as defined in § 63.522, are exempt from the provisions of this subpart. The affected source is also defined in § 63.522. If a change occurs to an existing source that does not constitute reconstruction then the additions have to meet the existing source requirements of the MACT standards. Any reconstruction of an existing source, or construction of a new source, must meet the new source standard. Affected sources are also subject to certain requirements of subpart A of this part, as specified in Table 1 of this subpart.

§ 63.521 Compliance schedule.

(a) Owners or operators of existing affected BLR and WSR sources shall comply with the applicable provisions of this subpart within 3 years of the promulgation date.

(b) New and reconstructed sources subject to this subpart shall be in compliance with the applicable provisions of this subpart upon startup.

(c) All affected sources that commenced construction or reconstruction on or before [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the requirements in § 63.523(d), § 63.524(a)(3), (b)(3), and (c), § 63.525(a), (e), (j), (k), and (l), § 63.527(f) and (g), and § 63.528(a)(4) upon initial startup or on [INSERT date 3 years after date of publication of final rule in the Federal Register], whichever is later. All affected sources that commenced construction or reconstruction after [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the requirements in § 63.523(d), § 63.524(a)(3), (b)(3), and (c), § 63.525(a), (e), (j), (k), and (l), § 63.527(f) and (g), and § 63.528(a)(4) upon initial startup, or on [INSERT date 60 days after date of publication of final rule in the Federal Register], whichever is later.

§ 63.522 Definitions.

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

Administrator means the Administrator of the U.S. Environmental Protection Agency, or any official designee of the Administrator.

Affected source means all HAP emission points within a facility that are related to the production of BLR or WSR, including process vents, storage tanks, wastewater systems, ~~and~~ equipment leaks, and heat exchange systems.

Basic liquid epoxy resins (BLR) means resins made by reacting epichlorohydrin and bisphenol A to form diglycidyl ether of bisphenol-A (DGEBA).

Batch emission episode means a discrete venting episode that may be associated with a single unit operation. For example, a displacement of vapor resulting from the charging of a vessel with HAP will result in a discrete emission episode that will last through the duration of the charge and will have an average flow rate equal to the rate of the charge. If the vessel is then heated, there will also be another discrete emission episode resulting from the expulsion of expanded vessel vapor space. Both emission episodes may occur in the same vessel or unit operation. There are possibly other emission episodes that may occur from the vessel or other process equipment, depending on process operations.

Batch process refers to a discontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of a system vary with time. Addition of raw material and withdrawal of product do not typically occur simultaneously in a batch process.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device or back into the process.

Continuous process means a process where the inputs and outputs flow continuously throughout the duration of the process. Continuous processes are typically steady-state.

Dioxins and furans means total tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

Drain system means the system used to convey wastewater streams from a process unit, product storage tank, or feed storage tank to a waste management unit. The term includes all

process drains and junction boxes, together with their associated sewer lines and other junction boxes, manholes, sumps, and lift stations, down to the receiving waste management unit. A segregated stormwater sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and which is segregated from all other drain systems, is excluded from this definition.

Equipment leaks means, before [INSERT date 3 years after date of publication of final rule in the Federal Register], emissions of hazardous air pollutants from a connector, pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, or instrumentation system in organic hazardous air pollutant service. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], equipment leaks means emissions of hazardous air pollutants from a connector, pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system in organic hazardous air pollutant service.

Heat Exchange System means any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system.

In organic hazardous air pollutant or in organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of § 63.180(d) of subpart H of this part. The provisions of § 63.180(d) of subpart H of this part also specify how to determine that a piece of equipment is not in organic HAP service.

Pressure relief device or valve means a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid

safety hazards or equipment damage. A pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices. Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.

Process vent means a point of emission from a unit operation. Typical process vents include condenser vents, vacuum pumps, steam ejectors, and atmospheric vents from reactors and other process vessels.

Production-based emission rate means a ratio of the amount of HAP emitted to the amount of BLR or WSR produced.

Research and development facility means laboratory operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

Storage tank means a tank or other vessel that is used to store liquids that contain one or more HAP compounds.

Unit operation means those processing steps that occur within distinct equipment that are used, among other things, to prepare reactants, facilitate reactions, separate and purify products, and recycle materials. There may be several emission episodes within a single unit operation.

Waste management unit means any component, piece of equipment, structure, or transport mechanism used in storing, treating, or disposing of wastewater streams, or conveying wastewater between storage, treatment, or disposal operations.

Wastewater means aqueous liquid waste streams exiting equipment at an affected source.

Wastewater system means a system made up of a drain system and one or more waste management units.

Wet strength resins (WSR) means polyamide/epichlorohydrin condensates which are used to increase the tensile strength of paper products.

§ 63.523 Standards for basic liquid resins manufacturers.

(a) Owners or operators of existing affected BLR sources shall operate sources such that the rate of emissions of hazardous air pollutants from all process vents, storage tanks, and wastewater systems combined shall not exceed 130 pounds per 1 million pounds of BLR produced, and comply with the dioxin and furans emissions limit for process vents specified in paragraph (e) of this section.

(b) Owners or operators of new or reconstructed affected BLR sources shall reduce uncontrolled emissions from the sum of uncontrolled process vents, storage tanks, and wastewater systems by 98 percent, or limit the total emissions from these emission points to 5,000 pounds per year.

(1) For process vents, uncontrolled emissions are defined as gaseous emission streams past the last recovery device.

(2) For storage tanks, uncontrolled emissions are defined as emissions calculated according to the methodology specified in § 63.150(g)(3).

(3) For wastewater systems, uncontrolled emissions are the total amount of HAP discharged to the drain system.

(c) Owners or operators of existing, new, or reconstructed affected BLR sources shall comply with the requirements of subpart H of this part to control emissions from equipment leaks.

(d) For each existing, new, or reconstructed affected BLR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator must comply with the requirements of § 63.104 of subpart F of this part for heat exchange systems, with the exceptions noted in paragraphs (d)(1) through (d)(8) of this section.

(1) When the term “chemical manufacturing process unit” is used in § 63.104 of subpart F of this part, the term “existing, new, or reconstructed affected BLR source” shall apply for the purposes of this subpart.

(2) When the phrase “a chemical manufacturing process unit meeting the conditions of §63.100(b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in §63.100(c)” is used in the first sentence of § 63.104(a) of subpart F of this part, the term “an existing, new, or reconstructed affected BLR source” shall apply for the purposes of this subpart. When the phrase “a chemical manufacturing process unit meeting the conditions of §63.100(b)(1) through (b)(3),” is used in the last sentence of § 63.104(a) of subpart F of this part, the term “an existing, new, or reconstructed affected BLR source” shall apply for purposes of this subpart.

(3) When § 63.104 of subpart F of this part refers to Table 4 of subpart F of this part or Table 9 of subpart G of this part, the owner or operator is required to consider all hazardous air pollutants.

(4) When § 63.104(c)(3) of subpart F of this part specifies the monitoring plan retention requirements, and when § 63.104(f)(1) of subpart F of this part refers to the record retention

requirements in § 63.103(c)(1) of subpart F of this part, the requirements in § 63.527(d) shall apply, for the purposes of this subpart.

(5) When § 63.104(f)(2) of subpart F of this part requires information to be reported in the Periodic Reports required by § 63.152(c) of subpart G of this part, the owner or operator shall instead report the information specified in § 63.104(f)(2) of subpart F of this part in the Periodic Reports required by § 63.528(a), for the purposes of this subpart.

(6) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.521(c).

(7) Substitute “Beginning no later than the compliance dates specified in §63.521(c),” for each occurrence of “Beginning no later than the compliance dates specified in §63.100(k)(10),”.

(8) § 63.104(k) of subpart F of this part does not apply. Instead for each existing, new, or reconstructed affected BLR source, beginning no later than the compliance dates specified in § 63.521(c), owners and operators must not inject water into or dispose of water through any heat exchange system in an affected source if the water is considered wastewater as defined in § 63.522.

(e) For each existing, new, or reconstructed affected BLR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator of a process vent must reduce emissions of dioxins and furans (toxic equivalency basis) to a concentration of 0.054 nanograms per standard cubic meter on a dry basis corrected to 3 percent oxygen.

§ 63.524 Standards for wet strength resins manufacturers.

(a) In addition to the requirements specified in paragraph (c) of this section, and except as specified in paragraph (a)(3) of this section, ~~O~~owners or operators of existing affected WSR sources shall either:

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

(2) Comply with the requirements of subpart H of this part to control emissions from equipment leaks.

(3) For each existing affected WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator shall comply with both paragraphs (a)(1) and (a)(2) of this section and must reduce emissions of dioxins and furans (toxic equivalency basis) from each process vent to a concentration of 0.054 nanograms per standard cubic meter on a dry basis corrected to 3 percent oxygen.

(b) In addition to the requirements specified in paragraph (c) of this section, and except as specified in paragraph (b)(3) of this section, Owners or operators of new or reconstructed affected WSR sources shall either:

(1) Limit the total emissions of hazardous air pollutants from all process vents, storage tanks, and wastewater systems to 7 pounds per 1 million pounds of wet strength resins produced; or

(2) Comply with the requirements of subpart H of this part to control emissions from equipment leaks.

(3) For each new or reconstructed affected WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator shall comply with both paragraphs (b)(1) and (b)(2) of this section and must reduce emissions of dioxins and furans (toxic equivalency basis) from each process vent to a concentration of 0.054 nanograms per standard cubic meter on a dry basis corrected to 3 percent oxygen.

(c) For each existing, new, or reconstructed affected WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator shall comply with the requirements of § 63.104 of subpart F of this part for heat exchange systems, with the exceptions noted in paragraphs (d)(1) through (d)(8) of this section.

(1) When the term “chemical manufacturing process unit” is used in § 63.104, the term “existing, new, or reconstructed affected WSR source” shall apply for the purposes of this subpart.

(2) When the phrase “a chemical manufacturing process unit meeting the conditions of §63.100(b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in §63.100(c) of this subpart” is used in the first sentence of § 63.104(a), the term “an existing, new, or reconstructed affected WSR source” shall apply for the purposes of this subpart. When the phrase “a chemical manufacturing process unit meeting the conditions of §63.100(b)(1) through (b)(3),” is used in the last sentence of § 63.104(a), the term “an existing, new, or reconstructed affected WSR source” shall apply for purposes of this subpart.

(3) When § 63.104 of subpart F of this part refers to Table 4 of subpart F of this part or Table 9 of subpart G of this part, the owner or operator is required to consider all hazardous air pollutants.

(4) When § 63.104(c)(3) of subpart F of this part specifies the monitoring plan retention requirements, and when § 63.104(f)(1) of subpart F of this part refers to the record retention requirements in § 63.103(c)(1) of subpart F of this part, the requirements in § 63.527(d) shall apply, for the purposes of this subpart.

(5) When § 63.104(f)(2) of subpart F of this part requires information to be reported in the Periodic Reports required by § 63.152(c) of subpart G of this part, the owner or operator shall instead report the information specified in § 63.104(f)(2) of subpart F of this part in the Periodic Reports required by § 63.528(a), for the purposes of this subpart.

(6) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.521(c).

(7) Substitute “Beginning no later than the compliance dates specified in §63.521(c),” for each occurrence of “Beginning no later than the compliance dates specified in §63.100(k)(10),”.

(8) § 63.104(k) of subpart F of this part does not apply. Instead for each existing, new, or reconstructed affected WSR source, beginning no later than the compliance dates specified in § 63.521(c), owners and operators must not inject water into (or dispose of water through) any heat exchange system in an affected source if the water is considered wastewater as defined in § 63.522.

§ 63.525 Compliance and performance testing.

(a) The owner or operator of any existing affected BLR source shall, in order to demonstrate ~~initial~~ compliance with the applicable emission limits, determine the emission rate from all process vent, storage tank, and wastewater system emission points using the methods described below. Except as specified in paragraph (l) of this section, c~~C~~ompliance tests shall be performed under normal operating conditions. Beginning no later than the compliance dates specified in § 63.521(c), conduct subsequent performance tests no later than 60 calendar months after the previous performance test.

(1) Except as specified in paragraph (m) of this section, T~~T~~he owner or operator shall use the EPA Test Methods from 40 CFR part 60, appendix A, listed in paragraphs (a)(1) (i) through

(iii) of this section, to determine emissions from process vents. Testing of process vents on equipment operating as part of a continuous process will consist of conducting three 1-hour runs. Gas stream volumetric flow rates shall be measured every 15 minutes during each 1-hour run. Organic HAP or TOC concentration shall be determined from samples collected in an integrated sample over the duration of each 1-hour test run, or from grab samples collected simultaneously with the flow rate measurements (every 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. If the flow of gaseous emissions is intermittent, determination of emissions from process vents shall be performed according to the methods specified in paragraph (e) of this section. For process vents with continuous gas streams, the emission rate used to determine compliance shall be the average emission rate of the 3 test runs. For process vents with intermittent emission streams, the calculated emission rate or the emission rate from a single test run may be used to determine compliance.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. A traverse shall be conducted before and after each 1-hour sampling period. No traverse is necessary when using Method 2A or 2D to determine flow rate.

(ii) Method 2, 2A, 2C or 2D of 40 CFR part 60, appendix A, as appropriate, shall be used for the determination of gas stream volumetric flow rate. If Method 2 or 2C is used, the velocity measurements shall be made at a single point, in conjunction with the traverse, to establish an average velocity across the stack.

(iii) Method 25A and/or Methods 18 and 25A of 40 CFR part 60, appendix A, as appropriate, ~~shall~~must be used to determine the concentration of HAP in the streams. The

ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(iv) Initial determination of de minimis status for process vents may be made by engineering assessment, as specified in § 63.526(a)(1)(iv).

(2) Emissions from wastewater treatment systems shall be determined in accordance with the methods described in 40 CFR part 63, appendix C.

(3) Emissions from storage tanks shall be calculated in accordance with the methods specified in § 63.150(g)(3).

(b) The owner or operator of any existing affected BLR source shall determine a production-based emission rate for each emission point by dividing the emission rate of each emission point by the BLR production rate of the source. The production rate shall be based on normal operations.

(1) The production-based emission rate for process vents shall be calculated by dividing the average emission rate by the average production rate.

(2) The production-based emission rate for storage tanks shall be calculated by dividing annual emissions for each storage tank emission point by the production rate for a one-year period. The production rate shall be calculated using the same data used to calculate the production-based emission rate in paragraph (b)(1) of this section, converted to an annual rate.

(3) The production-based emission rate for wastewater systems shall be calculated by dividing annual emissions for each wastewater system emission point by the production rate for

one-year period. The production rate shall be calculated using the same data used to calculate the production-based emission rate in paragraph (b)(1) of this section, converted to an annual rate.

(c) The owner or operator of an existing affected BLR source shall calculate the total emissions per product produced by summing the production-based emissions for all process vent, storage tank, and wastewater system emission points according to the following equation:

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

Where:

E	=	emissions, pounds (lb) HAP per million (MM) lb product;
PV	=	process vent emissions, lb HAP/MM lb product;
ST	=	storage tank emissions, lb HAP/MM lb product; and
WW	=	wastewater system emissions, lb HAP/MM lb product.

The source is in compliance with the standard for process vents, storage tanks, and wastewater systems if the sum of the equation is less than the applicable emission limit from § 63.523(a).

(d) The owner or operator of any new or reconstructed affected BLR source shall demonstrate compliance using the methods described in this section.

(1) Any owner or operator who elects to comply with § 63.523(b) by achieving 98 percent control of emissions from process vents, storage tanks, and wastewater systems shall demonstrate compliance according to the requirements of paragraphs (d)(1) (i) through (iv) of this section.

(i) The owner or operator shall perform testing as specified in paragraph (a)(1) of this section to determine controlled and uncontrolled emissions from process vents. Sampling points

for determining uncontrolled emissions shall be located based on the definition of uncontrolled process vents in § 63.523(b)(1).

(ii) The owner or operator shall calculate controlled and uncontrolled emissions from storage tanks in accordance with the methods specified in § 63.150(g)(3).

(iii) The owner or operator shall determine controlled and uncontrolled emissions from wastewater systems using the methodology of 40 CFR part 63, appendix C. Uncontrolled emission calculations shall be consistent with the definition of uncontrolled wastewater system emissions in § 63.523(b)(3).

(iv) The owner or operator shall calculate the percent reduction in emissions from process vents, storage tanks, and wastewater systems combined. The affected source is in compliance if the emission reduction is greater than or equal to 98 percent.

(2) Any owner or operator who elects to comply with § 63.523(b) by limiting HAP emissions from process vents, storage tanks, and wastewater systems to 5,000 pounds per year or less shall demonstrate compliance according to the requirements of paragraphs (d)(2) (i) and (ii) of this section.

(i) Emissions from process vents, storage tanks, and wastewater systems shall be determined according to paragraphs (a) (1) through (3) of this section. Emissions shall be converted to annual emissions. Annual emission calculations shall reflect production levels representative of normal operating conditions.

(ii) The owner or operator shall calculate total emissions from all process vent, storage tank, and wastewater system emission points. The affected source is in compliance with the standard if total emissions are less than or equal to 5,000 lb/yr.

(3) To demonstrate compliance with the process vent dioxins and furans emission limit, the owner or operator must use the procedures of paragraph (m) of this section.

(e) The owner or operator of any existing, new, or reconstructed WSR source that ~~chooses to comply with~~ is subject to the emission limit for process vents, storage tanks, and wastewater systems shall demonstrate ~~initial~~ compliance by determining emissions for all process vent, storage tank, and wastewater systems emission points using the methods described in this section. The owner or operator of any existing, new, or reconstructed WSR source that is subject to the process vent dioxins and furans emission limit must demonstrate initial compliance by following the procedures in paragraph (e)(3) of this section. Beginning no later than the compliance dates specified in § 63.521(c), conduct subsequent performance tests no later than 60 calendar months after the previous performance test.

(1) Emissions of HAP reactor process vents shall be calculated for each batch emission episode according to the methodologies described in paragraph (e)(1) of this section.

(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 paragraph (e)(1)(i) of this section, except that for purge flow rates greater than 100 standard cubic feet per minute (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:

$$E = \frac{\frac{\sum (P_i)_{T1}}{Pa_1} + \frac{\sum (P_i)_{T2}}{Pa_2}}{2} \times \Delta\eta \times MW_{HAP}$$

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;
 Pa_1 = initial gas pressure in the vessel;
 Pa_2 = final gas pressure; and
 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:

$\Delta\eta$ = number of lb-moles of gas displaced;
V = volume of free space in the vessel;

R	=	ideal gas law constant;
P _{a1}	=	initial gas pressure in the vessel;
P _{a2}	=	final gas pressure;
T ₁	=	initial temperature of vessel; and
T ₂	=	final temperature of vessel.

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

$$P_{a1} = P_{atm} - \sum (P_{ic})_{T1}$$

Where:

P _{a1}	=	initial partial pressure of gas in the vessel headspace;
P _{atm}	=	atmospheric pressure; and
(P _{ic}) _{T1}	=	initial partial pressure of each condensable volatile organic compound (including HAP) in the vessel headspace, at the initial temperature (T ₁).

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

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

Where n is the number of different HAP compounds in the emission stream.

(2) Emissions of HAP from process vents may be measured directly. The EPA Test Methods listed in paragraph (e)(2) (i) through (iii) of this section, from 40 CFR part 60, appendix A, shall be used to demonstrate compliance with the requirements of § 63.524 by direct measurement. Testing shall be performed for every batch emission episode of the unit operation.

Gas stream volumetric flow rates shall be measured at 15-minute intervals, or at least once during each batch emission episode. Organic HAP or TOC concentration shall be determined from samples collected in an integrated sample over the duration of each episode, or from grab samples collected simultaneously with the flow rate measurements (every 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. Test conditions shall represent the normal operating conditions under which the data used to calculate the production rate are taken.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. A traverse shall be conducted before and after each sampling period. No traverse is necessary when using Method 2A or 2D.

(ii) Method 2, 2A, 2C or 2D of 40 CFR part 60, appendix A, as appropriate, shall be used for the determination of gas stream volumetric flow rate. If Method 2 or 2C is used, the velocity measurements shall be made at a single point than can be used, in conjunction with the traverse, to establish an average velocity across the stack.

(iii) Method 25A and/or Methods 18 and 25A of 40 CFR part 60, appendix A, as appropriate, ~~shall~~must be used to determine the concentration of HAP in the streams. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(iv) The owner or operator may choose to perform tests only during those periods of the episode in which the emission rate for the entire episode can be determined, or when the

emissions are greater than the average emission rate of the episode. The owner or operator who chooses either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances, and process stoichiometry. Previous test results may be used provided the results are still relevant to the current process vent stream conditions.

(v) For batch emission episodes of duration greater than 8 hours, the owner or operator is required to perform a maximum of 8 hours of testing. The test period must include the period of time in which the emission rate is predicted by the emission profile to be greater than average emission rate for the batch emission episode.

(3) To demonstrate compliance with the process vent dioxins and furans emission limit, the owner or operator must use the procedures of paragraph (m) of this section. Testing shall be performed for each unit operation.

(f) The owner or operator of any affected WSR source that ~~chooses to comply with~~ subject to the emissions limit for process vents, storage tanks, and wastewater systems shall calculate emissions from storage tanks in accordance with the methods specified in § 63.150(g)(3).

(g) The owner or operator of any affected WSR source that ~~chooses to comply with~~ subject to the emission limit for process vents, storage tanks, and wastewater systems shall calculate emissions from wastewater treatment systems (if applicable) in accordance with the methods described in 40 CFR part 63, appendix C.

(h) The owner or operator of any affected WSR source that ~~chooses to comply with~~ subject to the emission limit for process vents, storage tanks, and wastewater systems shall

calculate the average amount of WSR product manufactured per batch, using data from performance tests or from emission calculations, as applicable, to determine the average WSR production per-batch production data for an annual period representing normal operating conditions.

(1) The owner or operator shall calculate an average emission rate per batch as the average of the results from the performance tests or calculations. The production-based emission rate shall be calculated by dividing the emissions per batch by the average production per batch.

(2) Compliance shall be determined according to the methodology described in paragraph (c) of this section. The source is in compliance with the standard for process vents, storage tanks, and wastewater systems if the sum of the equation in paragraph (c) of this section is less than the applicable emission limit from § 63.524.

(i) The owner or operator of any affected BLR source or any affected WSR source that ~~chooses to comply with~~ this subject to the requirements of subpart H of this part must demonstrate the ability of its specific program to meet the compliance requirements therein to achieve initial compliance.

(j) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), owners and operators of sources as defined in § 63.520 shall comply with the requirements of this subpart at all times, except during periods of nonoperation of the source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

(k) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), at all times, owners and operators must operate and maintain any source, including associated air pollution control equipment 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 owners and operators to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

(l) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator may not conduct performance tests during periods of malfunction. Owners and operators must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, owners and operators must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(m) To demonstrate compliance with the process vent dioxins and furans emission limit, the owner or operator must conduct a performance test using the procedures in paragraphs (m)(1) through (m)(6) of this section. Conduct subsequent performance tests no later than 60 calendar months after the previous performance test.

(1) The performance test must consist of three test runs. Collect at least 3 dry standard cubic meters of gas per test run.

(2) Use Method 1 or 1A of 40 CFR part 60, appendix A-1 to select the sampling sites at the sampling location. The sampling location must be at the outlet of the final control device.

(3) Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2.

(4) Use Method 4 of 40 CFR part 60, appendix A-3 to convert the volumetric flowrate to a dry basis.

(5) Measure the concentration of each tetra- through octa-chlorinated dioxin and furan congener emitted using Method 23 at 40 CFR part 60, appendix A-7.

(i) For each dioxin and furan congener, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 2 of this subpart. For determination of toxic equivalency, zero may be used for congeners with a concentration less than the estimated detection limit (EDL). For congeners with estimated maximum pollutant concentration (EMPC) results, if the value is less than the EDL, zero may be used. Otherwise, the EMPC value must be used in the calculation of toxic equivalency.

(ii) Sum the products calculated in accordance with paragraph (m)(5)(i) of this section to obtain the total concentration of dioxins and furans emitted in terms of toxic equivalency.

(6) The concentration of dioxins and furans shall be corrected to 3 percent oxygen. Use Method 3A of 40 CFR part 60, appendix A to determine the oxygen concentration (%O_{2d}). Method 3A of 40 CFR part 60, appendix A must be run concurrently with Method 23 of 40 CFR part 60, appendix A-7. The concentration corrected to 3 percent oxygen (C_c) shall be computed using the following equation:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c = Concentration of dioxins and furans corrected to 3 percent oxygen, dry basis, nanograms per standard cubic meter.

C_m = Concentration of dioxins and furans, dry basis, nanograms per standard cubic meter.

%O_{2d} = Concentration of oxygen, dry basis, percent by volume.

§ 63.526 Monitoring requirements.

(a) The owner or operator of any existing, new, or reconstructed affected BLR source shall provide evidence of continued compliance with the standard. During ~~the initial~~each compliance demonstration, maximum or minimum operating parameters, as appropriate, shall be established for processes and control devices that will indicate the source is in compliance. If the operating parameter to be established is a maximum, the value of the parameter shall be the average of the maximum values from each of the three test runs. If the operating parameter to be established is a minimum, the value of the parameter shall be the average of the minimum values from each of the three test runs. Parameter values for process vents with intermittent emission streams shall be determined as specified in paragraph (b)(1) of this section. The owner or operator shall operate processes and control devices within these parameters to ensure continued compliance with the standard. A de minimis level is specified in paragraph (a)(1) of this section. Monitoring parameters are specified for various process vent control scenarios in paragraphs (a) (2) through (~~6~~7) of this section.

(1) For affected BLR sources, uncontrolled emission points emitting less than one pound per year of HAP are not subject to the monitoring requirements of paragraphs (a) (2) through (6) of this section. The owner or operator shall use the methods specified in § 63.525(a), as applicable, or as specified in paragraph (a)(1)(i) of this section, to demonstrate which emission points satisfy the de minimis criteria, to the satisfaction of the Administrator.

(i) For the purpose of determining de minimis status for emission points, engineering assessment may be used to determine process vent stream flow rate and/or concentration for the representative operating conditions expected to yield the highest flow rate and concentration.

Engineering assessment includes, but is not limited to, the following:

(A) Previous test results provided the tests are representative of current operating practices at the process unit.

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(C) Maximum flow rate, HAP emission rate, concentration, or other relevant parameter specified or implied within a permit limit applicable to the process vent.

(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations,

(2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,

(3) Estimation of HAP concentrations based on saturation conditions.

(ii) All data, assumptions, and procedures used in the engineering assessment shall be documented in accordance with § 63.527(c).

(2) For affected sources 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 affected source will be considered to be out of

compliance if the scrubber water flow rate, averaged over any continuous 24-hour period, is below the minimum value established during the ~~initial~~most recent compliance demonstration.

(3) For affected sources using condensers, the owner or operator shall establish the maximum condenser outlet gas temperature as a site-specific operating parameter which must be measured and recorded every 15 minutes. The affected source will be considered to be out of compliance if the condenser outlet gas temperature, averaged over any continuous 24-hour period, is greater than the maximum value established during the most recent~~initial~~ compliance demonstration.

(4) For affected sources using carbon adsorbers or having uncontrolled process vents, the owner or operator shall establish a maximum outlet HAP concentration as the site-specific operating parameter which must be measured and recorded every 15 minutes. The affected source will be considered to be out of compliance if the outlet HAP concentration, averaged over any continuous 24-hour period, is greater than the maximum value established during the most recent~~initial~~ compliance demonstration.

(5) For affected sources using flares, the presence of the pilot flame shall be monitored every 15 minutes. The affected source will be considered to be out of compliance upon loss of pilot flame.

(6) Wastewater system parameters to be monitored are the parameters specified under 40 CFR part 414, subpart E. The affected source will be considered to be out of compliance with this subpart W if it is found to be out of compliance with 40 CFR part 414, subpart E.

(7) For affected sources using sorbent injection, the owner or operator shall establish both a minimum sorbent injection rate and minimum carrier gas flow rate flow rate as site-specific operating parameters which must be measured and recorded every 15 minutes. The affected

source will be considered to be out of compliance if the sorbent injection rate or the carrier gas flow rate flow rate, averaged over any continuous 24-hour period, is below the minimum values established during the most recent compliance demonstration.

(b) The owner or operator of any existing, new, or reconstructed affected WSR source that ~~chooses to comply with~~is subject to the emission limit for process vents, storage tanks, and wastewater systems and/or is subject to the dioxins and furans emission limit for process vents shall provide evidence of continued compliance with the standard. As part of ~~the initial~~each compliance demonstrations for batch process vents, test data or compliance calculations shall be used to establish a maximum or minimum level of a relevant operating parameter for each unit operation. The parameter value for each unit operation shall represent the worst case value of the operating parameter from all episodes in the unit operation. The owner or operator shall operate processes and control devices within these parameters to ensure continued compliance with the standard.

(1) For batch process vents, the level shall be established in accordance with paragraphs (b)(1) (i) through (iv) of this section if compliance testing is performed.

(i) If testing is used to demonstrate ~~initial~~ compliance, the appropriate parameter shall be monitored during all batch emission episodes in the unit operation.

(ii) An average monitored parameter value shall be determined for each of the batch emission episodes in the unit operation.

(iii) If the level to be established for the unit operation is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values determined in paragraph (b)(1)(ii) of this section.

(iv) If the level to be established for the unit operation is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values determined in paragraph (b)(1)(ii) of this section.

(2) Affected sources with condensers on process vents shall establish the maximum condenser outlet gas temperature as a site-specific operating parameter, which must be measured every 15 minutes, or at least once for batch emission episodes less than 15 minutes in duration. The affected source will be considered to be out of compliance if the maximum condenser outlet gas temperature, averaged over the duration of the batch emission episode or unit operation, is greater than the value established during the most recent~~initial~~ compliance demonstration.

(3) For affected sources 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, or at least once for batch emission episodes less than 15 minutes in duration. The affected source will be considered to be out of compliance if the scrubber water flow rate, averaged over the duration of the batch emission episode or unit operation, is below the minimum flow rate established during the most recent~~initial~~ compliance demonstration.

(4) For affected sources using carbon adsorbers or having uncontrolled process vents, the owner or operator shall establish a maximum outlet HAP concentration as the site-specific operating parameter which must be measured and recorded every 15 minutes, or at least once for batch emission episodes of duration shorter than 15 minutes. The affected source will be considered to be out of compliance if the outlet HAP concentration, averaged over the duration of the batch emission episode or unit operation, is greater than the value established during the most recent~~initial~~ compliance demonstration.

(5) For affected sources using flares, the presence of the pilot flame shall be monitored every 15 minutes, or at least once for batch emission episodes less than 15 minutes in duration. The affected source will be considered to be out of compliance upon loss of pilot flame.

(6) Wastewater system parameters to be monitored are the parameters specified by 40 CFR part 414, subpart E. The affected source will be considered to be out of compliance with this subpart W if it is found to be out of compliance with 40 CFR part 414, subpart E.

(7) For affected sources using sorbent injection, the owner or operator shall establish both a minimum sorbent injection rate and minimum carrier gas flow rate as site-specific operating parameters which must be measured and recorded every 15 minutes. The affected source will be considered to be out of compliance if the sorbent injection rate or the carrier gas flow rate, averaged over any continuous 24-hour period, is below the minimum values established during the most recent compliance demonstration.

(c) Periods of time when monitoring measurements exceed the parameter values do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility is operated in accordance with § 63.6(e)(1). For each existing, new, or reconstructed affected BLR and WSR source, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(d) The owner or operator of any affected WSR source that ~~chooses to comply with~~ subject to the requirements of subpart H of this part shall meet the monitoring requirements of subpart H of this part.

§ 63.527 Recordkeeping requirements.

(a) The owner or operator of any affected BLR source shall keep records of daily average values of equipment operating parameters specified to be monitored under § 63.526(a) or

specified by the Administrator. Records shall be kept in accordance with the requirements of applicable paragraphs of § 63.10 of subpart A of this part, as specified in the General Provisions applicability table of this subpart. The owner or operator shall keep records up-to-date and readily accessible.

(1) A daily (24-hour) average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(2) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status in § 63.9(h) of subpart A of this part. It may be from midnight to midnight or another continuous 24-hour period.

(3) In the event of an excursion, the owner or operator must keep records of each 15-minute reading during the period in which the excursion occurred.

(b) The owner or operator of any affected WSR source ~~that elects to comply with~~subject to the emission limit for process vents, storage tanks, and wastewater systems and/or subject to the dioxins and furans emission limit for process vents shall keep records of values of equipment operating parameters specified to be monitored under § 63.526(b) or specified by the Administrator. The records that shall be kept are the average values of operating parameters, determined for the duration of each unit operation. Records shall be kept in accordance with the requirements of applicable paragraphs of § 63.10 of subpart A of this part, as specified in the General Provisions applicability table in this subpart. The owner or operator shall keep records up-to-date and readily accessible. In the event of an excursion, the owner or operator must keep records of each 15-minute reading for the entire unit operation in which the excursion occurred.

(c) The owner or operator of any affected BLR source, as well the owner or operator of any affected WSR source ~~that chooses to comply with~~that is subject to the emission limit for process vents, storage tanks, and wastewater systems, who demonstrates that certain process vents are below the de minimis cutoff for continuous monitoring specified in § 63.526(a)(1)(i), shall maintain up-to-date, readily accessible records of the following information to document that a HAP emission rate of less than one pound per year is maintained:

(1) The information used to determine de minimis status for each de minimis process vent, as specified in § 63.526(a)(1)(i);

(2) Any process changes as defined in § 63.115(e) of subpart G of this part that increase the HAP emission rate;

(3) Any recalculation or measurement of the HAP emission rate pursuant to § 63.115(e) of subpart G of this part; and

(4) Whether or not the HAP emission rate increases to one pound per year or greater as a result of the process change.

(d) The owner or operator of any affected BLR source, as well as the owner or operator of any affected WSR source ~~who elects to implement~~subject to the leak detection and repair program specified in subpart H of this part, shall implement the recordkeeping requirements outlined therein. All records shall be retained for a period of 5 years, in accordance with the requirements of 40 CFR 63.10(b)(1).

(e) Any excursion from the required monitoring parameter, unless otherwise excused, shall be considered a violation of the emission standard.

(f) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator of any affected

BLR source, as well the owner or operator of any affected WSR source subject to the emission limit for process vents, storage tanks, and wastewater systems, must keep the records specified in paragraphs (f)(1) through (f)(3) of this section each pressure relief device, as defined in § 63.522.

(1) The start and end time and date of each pressure release to the atmosphere.

(2) An estimate of the mass quantity in pounds of each organic HAP released.

(3) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.

(g) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), the owner or operator of any affected BLR source, as well the owner or operator of any affected WSR source subject to the emission limit for process vents, storage tanks, and wastewater systems, must keep the records specified in paragraphs (g)(1) through (g)(3) of this section each maintenance vent release. A process vent is considered a maintenance vent if the process vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service.

(1) Identification of the maintenance vent and the equipment served by the maintenance vent.

(2) The date and time the maintenance vent was opened to the atmosphere.

(3) An estimate of the mass in pounds of organic HAP released during the entire atmospheric venting event.

§ 63.528 Reporting requirements.

(a) The owner or operator of any affected BLR source, as well as the owner or operator of any affected WSR source that ~~elects to comply with~~ is subject to the emission limit for process

vents, storage tanks, and wastewater systems and/or is subject to the dioxins and furans emission limit for process vents, shall comply with the reporting requirements of applicable paragraphs of § 63.10 of subpart A of this part, as specified in the General Provisions applicability table in this subpart. The owner or operator shall also submit to the Administrator, as part of the quarterly excess emissions and continuous monitoring system performance report and summary report required by § 63.10(e)(3) of subpart A of this part, the following recorded information. On and after [INSERT date three years after date of publication of final rule in the Federal Register] or once the reporting template for this subpart has been available on the CEDRI website for 1 year, whichever date is later, owners and operators must submit all subsequent reports following the procedure specified in § 63.9(k) of subpart A of this part, except any medium submitted through mail must be sent to the attention of the Polymers and Resins Sector Lead. Owners and operators must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under § 63.9(i) and § 63.10(a) of subpart A of this part, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If a report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces the requirements in § 63.10(e)(3)(v), § 63.10(e)(3)(vi)(L), and § 63.10(e)(3)(vi)(M) of subpart A of this part to submit the date of the report and the name, title, and signature of the responsible official who is certifying the accuracy of the report.

(1) Reports of monitoring data, including 15-minute monitoring values as well as daily average values or per-unit operation average values, as applicable, of monitored parameters for

all operating days or unit operations when the average values were outside the ranges established in the Notification of Compliance Status or operating permit, including reports specified in paragraph (a)(4) of this section.

(2) Reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data, including reports specified in paragraph (a)(4) of this section. An excursion means any of the three cases listed in paragraph (a)(2)(i) or (a)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraph (a)(2)(i) or (a)(2)(ii) of this section, this is considered a single excursion for the control device. In the report, include the identification of the source, start date, start time, duration in hours, and monitored parameter(s) meeting the excursion criteria.

(i) When the period of control device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data, as defined in paragraph (a)(2)(iii) of this section, for at least 75 percent of the operating hours.

(ii) When the period of control device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (a)(2) (i) and (ii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour.

(3) Whenever a process change, as defined in § 63.115(e) of subpart G of this part, is made that causes the emission rate from a de minimis emission point to become a process vent with an emission rate of one pound per year or greater, the owner or operator shall submit a

report within 180 calendar days after the process change. The report may be submitted as part of the next summary report required under § 63.10(e)(3) of subpart A of this part. The report shall include:

- (i) A description of the process change; and
- (ii) The results of the recalculation of the emission rate.

(4) For each existing, new, or reconstructed affected BLR and WSR source, beginning no later than the compliance dates specified in § 63.521(c), for each excursion that is not an excused excursion, the report must include a list of the affected sources or equipment, the monitored parameter, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, the cause of the excursion (including unknown cause, if applicable), as applicable, and the corrective action taken. Include the start date, start time, and duration in hours of each excursion.

(5) For pressure relief device subject to § 63.527(f), report each pressure release to the atmosphere, including pressure relief device identification name or number, the start date, start time, and duration (in minutes) of the pressure release; and an estimate of the mass quantity in pounds of each organic HAP released.

(6) For heat exchangers subject to § 63.104 of subpart F of this part, the information specified in § 63.104(f)(2) of subpart F of this part.

(b) The owner or operator of any affected BLR source, as well as the owner or operator of any affected WSR source who ~~elects to implement~~ is subject to the leak detection and repair program specified in subpart H of this part, shall implement the reporting requirements outlined therein. Copies of all reports shall be retained as records for a period of 5 years, in accordance with the requirements of 40 CFR 63.10(b)(1).

(c) The owner or operator of any affected BLR source, as well as the owner or operator of any affected WSR source that ~~elects to comply with~~ this subject to the emission limit for process vents, storage tanks, and wastewater systems shall include records of ~~wastewater system~~ all monitoring parameters in the Notification of Compliance Status and summary reports required by subpart A of this part.

(d) Beginning no later than [INSERT date 60 days after date of publication of final rule in the Federal Register], owners and operators must submit performance test reports in accordance with this paragraph. Unless otherwise specified in this subpart, within 60 days after the date of completing each performance test required by this subpart, owners and operators must submit the results of the performance test following the procedures specified in § 63.9 (k) of subpart A of this part. Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, owners and operators may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

§ 63.529 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA

Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (45) of this section.

(1) Approval of alternatives to the requirements in §§ 63.520, 63.521, 63.523, and 63.524. Where these standards reference another rule, the cited provisions in that rule will be delegated according to the delegation provisions of that rule.

(2) Approval of major alternatives to test methods for under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

Table 1 to Subpart W of Part 63 - General Provisions Applicability to Subpart W

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
§ 63.1(a)(1)	Yes	Yes	Yes	Additional terms defined in § 63.522.
§ 63.1(a)(2)	Yes	Yes	Yes	
§ 63.1(a)(3)	Yes	Yes	Yes	
§ 63.1(a)(4)	Yes	Yes	Yes	Subpart W specifies applicability of each paragraph in subpart A to subpart W.
§ 63.1(a)(5)	N/A	N/A	N/A	Reserved.
§ 63.1(a)(6)	Yes	Yes	Yes	
§ 63.1(a)(7)	Yes	Yes	Yes	
§ 63.1(a)(8)	No	No	No	Discusses State programs.
§ 63.1(a)(9)	N/A	N/A	N/A	Reserved.
§ 63.1(a)(10)	Yes	Yes	Yes	
§ 63.1(a)(11)	Yes	Yes	Yes	
§ 63.1(a)(12)-(14)	Yes	Yes	Yes	
§ 63.1(b)(1)	No	No	No	§ 63.521 of subpart W specifies applicability.
§ 63.1(b)(2)	Yes	Yes	Yes	
§ 63.1(b)(3)	Yes	Yes	Yes	
§ 63.1(c)(1)	Yes	Yes	Yes	Subpart W specifies applicability of each paragraph in subpart A to sources subject to subpart W.
§ 63.1(c)(2)	No	No	No	Area sources are not subject to subpart W.
§ 63.1(c)(3)	N/A	N/A	N/A	Reserved.
§ 63.1(c)(4)	Yes	Yes	Yes	
§ 63.1(c)(5)	Yes	Yes	No	Subpart H specifies applicable notification requirements.
§ 63.1(c)(6)	Yes	Yes	Yes	
§ 63.1(d)	N/A	N/A	N/A	Reserved.
§ 63.1(e)	Yes	Yes	Yes	
§ 63.2	Yes	Yes	Yes	Additional terms are defined in § 63.522 of subpart W; when

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
				overlap between subparts A and W occurs, subpart W takes precedence.
§ 63.3	Yes	Yes	No	Other units used in subpart W are defined in that subpart; units of measure are spelled out for subpart H.
§ 63.4(a)(1)-(3)	Yes	Yes	Yes	
§ 63.4(a)(4)	N/A	N/A	N/A	Reserved.
§ 63.4(a)(5)	Yes	Yes	Yes	
§ 63.4(b)	Yes	Yes	Yes	
§ 63.4(c)	Yes	Yes	Yes	
§ 63.5(a)	Yes	Yes	Yes	Except replace the terms “source” and “stationary source” in § 63.5(a)(1) of subpart A with “affected source”.
§ 63.5(b)(1)	Yes	Yes	Yes	
§ 63.5(b)(2)	N/A	N/A	N/A	Reserved.
§ 63.5(b)(3)	Yes	Yes	Yes	
§ 63.5(b)(4)	Yes	Yes	Yes	
§ 63.5(b)(5)	Yes	Yes	Yes	
§ 63.5(b)(6)	Yes	Yes	Yes	
§ 63.5(c)	N/A	N/A	N/A	Reserved.
§ 63.5(d)(1)(i)	Yes	Yes	Yes	
§ 63.5(d)(1)(ii)	Yes	Yes	Yes	
§ 63.5(d)(1)(iii)	Yes	Yes	Yes	
§ 63.5(d)(2)	Yes	Yes	Yes	
§ 63.5(d)(3)-(4)	Yes	Yes	Yes	
§ 63.5(e)	Yes	Yes	Yes	
§ 63.5(f)(1)	Yes	Yes	Yes	Except replace “source” in § 63.5(f)(1) of subpart A with “affected source”.
§ 63.5(f)(2)	Yes	Yes	Yes	
§ 63.6(a)	Yes	Yes	Yes	

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
§ 63.6(b)(1)-(2)	No	No	No	Subpart W specifies compliance dates.
§ 63.6(b)(3)-(4)	Yes	Yes	Yes	
§ 63.6(b)(5)		Yes	No	Subpart H includes notification requirements.
§ 63.6(b)(6)	N/A	N/A	N/A	Reserved.
§ 63.6(b)(7)	No	Yes	No	Sources subject to subpart H must comply according to the schedule in § 63.520 of subpart W for new sources subject to subpart H.
§ 63.6(c)(1)-(2)	Yes	Yes	Yes	Except replace “source” in § 63.6(c)(1)-(2) of subpart A with “affected source”.
§ 63.6(c)(3)-(4)	N/A	N/A	N/A	Reserved.
§ 63.6(c)(5)	Yes	Yes	Yes	
§ 63.6(d)	N/A	N/A	N/A	Reserved.
§ 63.6(e)(1)(i)	Yes See Comment			<u>Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register]. See § 63.525(k) for general duty requirement.</u>
<u>§ 63.6(e)(1)(ii)</u>	<u>See Comment</u>			<u>Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].</u>
<u>§ 63.6(e)(1)(iii)</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
<u>63.6(e)(2)</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Reserved.</u>
<u>63.6(e)(3)</u>	<u>See Comment</u>			<u>Yes, before [INSERT date 3 years after date of publication of</u>

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
				<u>final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].</u>
§ 63.6(f)(1)	Yes	Yes	Yes	
§ 63.6(f)(2)(i)-(ii)	Yes	Yes	Yes	
§ 63.6(f)(2)(iii)	Yes	Yes	Yes	
§ 63.6(f)(2)(iv)	Yes	Yes	Yes	
§ 63.6(f)(3)	Yes	Yes	Yes	
§ 63.6(g)	Yes	Yes	Yes	An alternative standard has been proposed for WSR; however, <u>a</u> A ffected sources will have the opportunity to demonstrate other alternatives to the Administrator.
§ 63.6(h)	No	No	No	Subpart W does not contain any opacity or visible emissions standards.
§ 63.6(i)(1)	Yes	Yes	Yes	
§ 63.6(i)(2)	Yes	Yes	Yes	Except replace “source” in § 63.6(2) (i) and (ii) of subpart A with “affected source”.
§ 63.6(i)(3)	Yes	Yes	Yes	
§ 63.6(i)(4)(i)	Yes	Yes	Yes	
§ 63.6(i)(4)(ii)	Yes	Yes	Yes	
§ 63.6(i)(5)-(14)	Yes	Yes	Yes	
§ 63.6(i)(15)	N/A	N/A	N/A	Reserved.
§ 63.6(i)(16)	Yes	Yes	Yes	
§ 63.6(j)	Yes	Yes	Yes	
§ 63.7(a)(1)	Yes	Yes	No	Subpart H specifies required testing and compliance procedures.
§ 63.7(a)(2)(i)-(vi)	Yes	Yes	No	Subpart H specifies that test results must be submitted in the

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment leak standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
				Notification of Compliance Status due 150 days after the compliance date.
§ 63.7(a)(2)(vii)-(viii)	N/A	N/A	N/A	Reserved.
§ 63.7(a)(2)(ix)	Yes	Yes	Yes	
§ 63.7(a)(3)	Yes	Yes	Yes	
<u>§ 63.7(a)(4)</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
§ 63.7(b)(1)	Yes	Yes	Yes	
§ 63.7(b)(2)	Yes	Yes	Yes	
§ 63.7(c)	No	No	No	
§ 63.7(d)	Yes	Yes	Yes	Except replace “source” in § 63.7(d) of subpart A with “affected source”.
§ 63.7(e)(1)	Yes, <u>before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].</u>			<u>See § 63.525(l).</u> Subpart W also contains test methods specific to BLR and WSR sources.
§ 63.7(e)(2)	Yes	Yes	Yes	
§ 63.7(e)(3)	Yes	Yes	No	Subpart H specifies test methods and procedures.
§ 63.7(f)	Yes	Yes	No	Subpart H specifies applicable methods and provides alternatives.
§ 63.7(g)(1)	Yes	Yes	No	Subpart H specifies performance test reporting. <u>Additionally, this subpart specifies how and when the performance test results are reported for BLR and WSR.</u>
§ 63.7(g)(2)	N/A	N/A	N/A	Reserved.
§ 63.7(g)(3)	Yes	Yes	Yes	
§ 63.7(h)(1)-(2)	Yes	Yes	Yes	
§ 63.7(h)(3)(i)	Yes	Yes	Yes	

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment leak standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
§ 63.7(h)(3)(ii)-(iii)	Yes	Yes	Yes	
§ 63.7(h)(4)-(5)	Yes	Yes	Yes	
§ 63.8(a)(1)	Yes	Yes	Yes	
§ 63.8(a)(2)	Yes	Yes	Yes	
§ 63.8(a)(3)	N/A	N/A	N/A	Reserved.
§ 63.8(a)(4)	Yes	Yes	Yes	
§ 63.8(b)(1)	Yes	Yes	Yes	
§ 63.8(b)(2)	Yes	Yes	No	Subpart H specifies locations to conduct monitoring.
§ 63.8(b)(3)	Yes	Yes	Yes	
§ 63.8(c)(1)(i)	Yes, before <u>[INSERT date 3 years after date of publication of final rule in the Federal Register]</u> . No, beginning on and after <u>[INSERT date 3 years after date of publication of final rule in the Federal Register]</u> .			
§ 63.8(c)(1)(ii)	Yes	Yes	Yes	
§ 63.8(c)(1)(iii)	Yes, before <u>[INSERT date 3 years after date of publication of final rule in the Federal Register]</u> . No, beginning on and after <u>[INSERT date 3 years after date of publication of final rule in the Federal Register]</u> .			
§ 63.8(c)(2)-(3)	Yes	Yes	Yes	
§ 63.8(c)(4)-(8)	No	No	No	Subpart W specifies monitoring frequencies.
§ 63.8(d)	No	No	No	
§ 63.8(e)	No	No	No	
§ 63.8(f)(1)	Yes	Yes	Yes	
§ 63.8(f)(2)	Yes	Yes	Yes	
§ 63.8(f)(3)	Yes	Yes	Yes	
§ 63.8(f)(4)	Yes	Yes	Yes	
§ 63.8(f)(5)	Yes	Yes	Yes	

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
§ 63.8(f)(6)	Yes	Yes	No	
§ 63.8(g)	Yes	Yes	Yes	
§ 63.9(a)	Yes	Yes	Yes	
§ 63.9(b)(1)(i)-(ii)	Yes	Yes	Yes	
§ 63.9(b)(1)(iii)	Yes	Yes	Yes	
§ 63.9(b)(2)	Yes	Yes	Yes	
§ 63.9(b)(3)	Yes	Yes	Yes	
§ 63.9(b)(4)	Yes	Yes	Yes	
§ 63.9(b)(5)	Yes	Yes	Yes	
§ 63.9(c)	Yes	Yes	Yes	
§ 63.9(d)	Yes	Yes	Yes	
§ 63.9(e)	No	No	No	
§ 63.9(f)	No	No	No	
§ 63.9(g)	No	No	No	
§ 63.9(h)(1)-(3)	Yes	Yes	No	Separate Notification of Compliance Status requirements are specified for subpart H.
§ 63.9(h)(4)	N/A	N/A	N/A	Reserved.
§ 63.9(h)(5)-(6)	Yes	Yes	No	Subpart H specifies Notification of Compliance Status requirements.
§ 63.9(i)	Yes	Yes	Yes	
§ 63.9(j)	Yes	Yes	Yes	
§ 63.9(k)	Yes	Yes	Yes	Only as specified in § 63.9(j).
§ 63.10(a)	Yes	Yes	Yes	
§ 63.10(b)(1)	Yes	Yes	Yes	
§ 63.10(b)(2)	No	No	No	Subparts H and W specify recordkeeping requirements.
§ 63.10(b)(3)	Yes	Yes	Yes	
§ 63.10(c)(1)-(6)	No	No	No	
§ 63.10(c)(7)-(8)	Yes	Yes	Yes	

Reference	Applies to subpart W			Comment
	BLR	WSR	WSR alternative equipment <u>leak</u> standard, and BLR equipment leak standard (40 CFR part 63, subpart H)	
§ 63.10(c)(9)-(15)	No	No	No	
§ 63.10(d)(1)	Yes	Yes	No	Subpart H specifies performance test reporting requirements.
§ 63.10(d)(2)	Yes No	Yes No	No	<u>This subpart and</u> Subpart H <u>specify</u> ies performance test reporting requirements.
§ 63.10(d)(3)	No	No	No	
§ 63.10(d)(4)	Yes	Yes	Yes	
§ 63.10(d)(5)	Yes, <u>before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].</u>			
§ 63.10(e)(1)-(2)	No	No	No	
§ 63.10(e)(3)	Yes	Yes	No	<u>Except that on and after [INSERT date three years after date of publication of final rule in the Federal Register], the reports shall be submitted according to and in the format required by § 63.528(a).</u>
§ 63.10(e)(4)	No	No	No	
§ 63.10(f)	Yes	Yes	Yes	
§ 63.11-63.15	Yes	Yes	Yes	

Table 2 to Subpart W of Part 63 —Toxic Equivalency Factors

<u>Dioxin and Furan Congener</u>	<u>Toxic Equivalency Factor</u>
<u>1,2,3,7,8-pentachlorodibenzo-p-dioxin</u>	<u>1</u>
<u>1,2,3,4,7,8-hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>
<u>1,2,3,7,8,9-hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>
<u>1,2,3,6,7,8-hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>

<u>1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin</u>	<u>0.01</u>
<u>octachlorodibenzo-p-dioxin</u>	<u>0.0003</u>
<u>2,3,7,8-tetrachlorodibenzofuran</u>	<u>0.1</u>
<u>2,3,4,7,8-pentachlorodibenzofuran</u>	<u>0.3</u>
<u>1,2,3,7,8-pentachlorodibenzofuran</u>	<u>0.03</u>
<u>1,2,3,4,7,8-hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,6,7,8-hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,7,8,9-hexachlorodibenzofuran</u>	<u>0.1</u>
<u>2,3,4,6,7,8-hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,4,6,7,8-heptachlorodibenzofuran</u>	<u>0.01</u>
<u>1,2,3,4,7,8,9-heptachlorodibenzofuran</u>	<u>0.01</u>
<u>Octachlorodibenzofuran</u>	<u>0.0003</u>