QUESTIONS AND ANSWERS (Q & A's) FOR THE PULP AND PAPER NESHAP (40 CFR Part 63, Subpart S)

September 22, 1999

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Introduction

National Emission Standard(s) for Hazardous Air Pollutants (NESHAP)

For more information on the Pulp and Paper NESHAP, visit the web site at: www.epa.gov/ttn/uatw/pulp/pulppg.html

This document provides implementation information by supplying answers to frequently asked questions on the Pulp and Paper NESHAP (40 CFR 63, subpart S). This document is the first edition and will be updated from time to time with additional or changes to questions and answers (Q&As). We will change and update this document without public notice. You should check the pulp and paper NESHAP website for copies and updates of this document, as well as additional information on this NESHAP.

When using this document, remember that it is for information purposes only. It is not legally binding and does not replace the NESHAP for application of the rule to any specific mill.

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Questions and answers are organized and presented by section of the NESHAP.

§63.440 Applicability

Q1. If I put an LVHC gas into an existing HVLC collection system, does that make the HVLC system subject to the 3-year compliance schedule? [§63.440(d)]

Existing Source Compliance Dates:

LVHC system:
April 16, 2001

HVLC system:
April 17, 2006

Only the HVLC streams in the rule get the extended compliance schedule.

LVHC systems are:
- digester systems
- turpentine recovery systems
- evaporator systems
- steam stripper systems
- any other system serving one of these functions

HVLC systems are:
- pulp washing systems
- oxygen delignification systems
- applicable decker, knotter, and screen systems (see rule for specific applicability requirements.)

Yes. You may collect a named LVHC gas (e.g., a digester vent gas) in the HVLC collection system. However, if you capture LVHC and HVLC gases in the same collection system, then that collection system must meet the standard within 3 years (April 16, 2001).

The NESHAP names the equipment vents included in the LVHC and HVLC gas collection systems only for the purposes of specifying the regulatory requirements, including compliance dates. The NESHAP does not specify which collection system (i.e., LVHC or HVLC) must be used to capture and convey the specific equipment emissions or which collection system is more appropriate for a particular vent. Accordingly, the NESHAP does not preclude LVHC gases from being captured and conveyed in the HVLC gas collection system (or vice versa). However, the extended compliance period (April 17, 2006) specified in §63.440(d)(1) is applicable only to the named HVLC gases. Specifically, you could capture and convey the emissions from a digester system vent to a control device using the LVHC or HVLC gas collection system. However, any collection system that collects gases from the digester system vents, or any other named LVHC system vents, must meet the standard within 3 years (April 16, 2001).

We provided the extended compliance period for the named equipment in the HVLC system to encourage the maximum degree of overall multimedia pollution reduction and to encourage mills to consider pollution prevention techniques with considerable environmental benefits, such as oxygen delignification and low-flow washers.

Q2. If I am participating in the VATIP, how do I determine the maximum level of chlorine and hypochlorite that I can use and how do

I demonstrate compliance with this maximum application rate? [§63.440(d)(3)(ii)(B)(*1*)]

VATIP = Voluntary Advanced Technology Incentives Program.

This program under the Effluent Limitations Guidelines allows mills additional compliance time in exchange for achieving greater water pollutant reductions. The NESHAP also provides an extended compliance period for mills participating in the VATIP as long as certain conditions are met.

To calculate the maximum application rates of chlorine and hypochlorite for the 90-day period before June 15, 1998 you should consider the actual application rates of chlorine and hypochlorite during this period. You should also consider the annual chlorine and hypochlorite usage patterns if you produce different grades of pulp, since the application rates of chlorine and hypochlorite may vary depending on the grade of pulp being produced. Also, you may want to use a statistical analysis of the application rates or usage to determine the appropriate maximum application rates of chlorine and hypochlorite. Since the target application rate is based on a 90-day period, to demonstrate continuous compliance with the maximum application rate provision, the daily application rates of chlorine and hypochlorite must be based on a 90-day rolling average.

We believe that individual mills could be encouraged to explore and install advanced technologies that have the ability to surpass the environmental protection that would be provided by compliance with the promulgated baseline BAT effluent limitations guidelines and NSPS. Accordingly, the effluent limitations guidelines contain a Voluntary Advanced Technology Incentives Program (VATIP, or the Incentives Program) for direct discharging mills in the bleached paper grade kraft and soda subcategories. To accommodate this program, the NESHAP establishes a two-phased standard for existing source paper grade kraft and soda bleach mills that elect to participate. The first phase for existing source MACT requires no increase in the existing HAP emission levels from the paper grade bleaching system (i.e., no backsliding) during the initial period when the mill is working toward meeting its Incentives Program requirements. The NESHAP states [§63.440(d)(3)(ii)(B)(*1*)] that the owner or operator of a bleaching system must not increase the application rate of

HAP = Hazardous Air Pollutant

chlorine or hypochlorite in the bleaching system above the average daily rates used over the three months before June 15, 1998. The restriction on chlorine and hypochlorite application rates extends from April 15, 1998 (promulgation of the NESHAP) until the mill demonstrates compliance with the bleaching system requirements (by April 15, 2004).

Each bleaching system will be different due to site specific parameters such as end product, product variability, and wood type. Therefore, you should provide data to demonstrate the appropriate statistical method for your bleaching system to your permit agency for determining and monitoring compliance with this option.

§63.441 Definitions

Q1. Do I have to control emissions from remote turpentine storage tanks under the NESHAP? [§63.441]

Tanks used to store turpentine after the decanting process are not subject to the NESHAP, but may be subject to new source performance standards (40 CFR 60 subpart Kb) and any applicable State and local regulations.

Turpentine consists primarily of alpha and beta pinenes which have a vapor pressure of 0.67 kpa (0.097 psi) at 30°C.

No. The NESHAP does not require you to control turpentine storage tanks used to store recovered turpentine. Turpentine recovery systems are included in the definition of LVHC system and are required to be controlled under the standards for the pulping system at kraft, soda, and semi-chemical processes [§63.443(a)(1)(i)]. We define the turpentine recovery system as all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. Storage tanks subject to the NESHAP are those tanks that store intermediate products and are part of the recovery process upstream of the decanting process.

§63.443 Standards for the Pulping System at Kraft, Soda, and Semi-Chemical Processes

Q1. What is the purpose of the combined knotter and screen applicability cutoff? [§63.443(a)(1)(ii)(C)]

At some mills, it is difficult to distinguish between knotter and screen systems.

The existing source applicability cutoff for combined knotter and screen systems applies only when you cannot distinguish emissions between the two systems. If you can measure the emissions from the knotter system and the screen system separately, then the applicability cutoffs for each system must be used.

The NESHAP [§63.443(a)(1)(ii)] requires that knotters be controlled if their HAP emissions exceed 0.1 pounds per ton of oven-dried pulp (lb/ton ODP), and that screens be controlled if their HAP emissions exceed 0.2 lb/ton ODP.

The preamble (63 FR 18521) states that if distinguishing between the knotter system and the screening system at your mill is difficult, then the NESHAP applies if uncontrolled HAP emissions exceed 0.3 lb/ton of ODP across the combined knotter and screen system [§63.443(a)(1)(ii)(C)].

Q2. Does the 20 parts per million by volume (ppmv) control option apply to control devices other than thermal oxidizers? [§63.443(d)(2)]

For pulping system vents at kraft, semi-chemical, and soda mills, the NESHAP contains four different control requirement options.

No. The 20 ppmv alternative emission limit applies only to thermal oxidizers and cannot be used for other control devices such as scrubbers, boilers, lime kilns, recovery furnaces, and process heaters. In the NESHAP [§63.443(d)], we provided four alternative emission limits for pulping system vents. One alternative is to reduce the total HAP concentration at the outlet of a thermal oxidizer to 20 ppmv or less, corrected to 10 percent oxygen on a dry basis. As stated in the preamble (63 FR 18531), the 20 ppmv limit only applies to thermal oxidizers, and represents the performance achieved by well operated thermal oxidizer on low concentration vent systems. The

As defined in §63.441, a thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

only emission limit option for you if you use control devices other than a thermal oxidizer is to demonstrate 98 percent reduction of total HAP.

Q3. Do the excess emission allowances apply to individual pieces of process equipment vents or only to control devices? [§63.443(e) & 63.446(g)]

For HVLC and LVHC gas control devices, the excess emission allowances apply when control devices are inoperable or when operating parameters cannot be maintained at the required levels.

Excess emission allowances do not apply to individual pieces of process equipment. As stated in the preamble (63 FR 18529) and specified in the rule [§63.443(e) & 63.446(g)], the excess emission allowances apply only to emissions from control devices. The NESHAP provides the following levels of excess emission allowances: (1) 1 percent for control devices used for LVHC gases; (2) 4 percent for control devices used for HVLC gases or combined HVLC and LVHC gases; and (3) 10 percent for steam strippers and other equipment serving the same function used to treat kraft pulping process condensates. These excess emission allowance levels were based on data for control devices used on the pulp and paper industry. For control devices used for LVHC and HVLC gases, these excess emission allowances are in addition to the allowances provided under the startup, shutdown, and malfunction plan. However, the 10 percent excess emission allowance for steam strippers and other equipment includes any down time associated with startup, shutdown, and malfunction. If the emissions or condensates from a piece of regulated equipment are not collected and sent to a control device, then you would be in violation with the collection requirements specified in §63.443(c) and §63.446(d).

See interpretative amendment [63 FR 49455-59, September 16, 1998] for additional information on the 10% excess emissions allowance for steam strippers and other equipment serving the same function.

§63.444 Standards for the Pulping System at Sulfite Processes

At this time, no Q&A's are provided for this section.

§63.445 Standards for the Bleaching System

At this time, no Q&A's are provided for this section.

§63.446 Standards for Kraft Pulping Process Condensates

Q1. If you send the required amount of HAP mass in the pulping process condensates to treatment, does it matter which streams are collected? [§63.447(c)]

By segregating condensate streams containing the greatest amount of HAPs and treating only those high HAP streams, an equivalent emission reduction can be achieved at a lower cost.

You may collect and send to treatment any subset of the named regulated condensate streams, as long as the subset chosen meets the minimum requirements of the two condensate segregation options. However, if you do not choose one of the condensate segregation options, then you must control all of the named condensate streams.

The NESHAP for kraft pulping process condensates (§63.446) requires condensate streams from the following systems to be collected in a closed collection system and treated: digester system, turpentine recovery system, evaporator system, LVHC collection system, and HVLC collection system. The condensate collection requirements [§63.446(c)] in the NESHAP provide two options for minimizing the condensate volume that you must treat (called condensate segregation options in the preamble at 63 FR 18509). The first option is to collect the total condensates from the LVHC and HVLC collection systems and the condensates that contain 65 percent of the total HAP mass from the digester, turpentine recovery, and

§63.446 Standards for Kraft Pulping Process Condensates (Continued)

evaporator systems. The second option (mass loading option) requires mills to collect and control condensate streams from the regulated sources that make up 7.2 pounds of HAP per ton of ODP at unbleached mills and 11.1 pounds of HAP per ton of ODP at bleached mills.

The HAP mass loading must be demonstrated by only using condensates from the named regulated condensate streams. For example, assume that a bleached mill collects the condensate streams from the digester system, LVHC collection system, and the turpentine recovery system, and that these combined condensate streams contain a HAP mass loading of 12 pounds per ton of ODP. Since the HAP mass of the combined streams in the above example total more than 11.1 pounds per ton of ODP, the collection requirements of §63.446(c) have been met. The mill is not required to collect and treat any more condensate streams from the regulated equipment once the HAP mass loading criteria has been achieved. However, as specified in the NESHAP, the minimum HAP collection requirement can only be met by collecting condensate streams that are named regulated condensate streams.

§63.447 Clean Condensate Alternative

At this time, no Q&A's are provided for this section.

§63.450 Standards for Enclosures, and Closed-Vent Systems

Q1. Are leaks from pressure relief valves, rupture discs, or any other part of a closed-vent system included in the excess emission allowance calculations? [§63.450(c)]

For process vents, excess emissions allowances pertain only to emissions from control device vents and do not include leaks from the closed-vent system.

The control device excess emission allowances provided in the NESHAP do not apply to leaks from closed-vent systems. If you find a leak in your closed-vent system, then you trigger the repair and recordkeeping requirements. However, the leaks are not counted in the control device excess emission allowances.

As specified in §63.450(c) of the NESHAP, each component of a closed-vent system operated at positive pressure before a control device must be designed and operated with no detectable leaks. A leak is defined by an instrument reading of greater than 500 ppmv above background. You must conduct monthly visual inspections of your closed-vent-collection system [§63.453(k)(2)] and an annual leak test [§63.453(k)(3)]. If you see any visual defects or detect any leaks above 500 ppmv, including leaks from rupture discs and pressure relief valves, then you must follow the requirements for repair specified in §63.453(k)(6). Failure to follow the repair procedures is a violation of the standard for the closed-vent collection system.

§63.453 Monitoring

Q1. Do I have to continuously monitor the inlet gas flow to my gas scrubber? [§63.453(c)(2)]

Sulfite pulping systems and bleaching systems at all mills may use gas scrubbers to control HAP emissions.

You may monitor the operation of the fan used to convey vent gases to the gas scrubber as an equivalent procedure to monitoring the inlet gas flow rate at the gas scrubber.

The NESHAP [§63.453(c)(2)] requires you to continuously monitor the gas flow rate and influent flow rates into gas scrubbers used to control

HAP emissions from sulfite pulping system vents and bleaching system vents. However, industry representatives are concerned that accurate flow rate monitors have not been demonstrated in a chlorinated environment and other alternatives should be allowed. As stated in the proposal preamble (58 FR 66147), our intent of the monitoring requirement is to ensure that the liquid-to-gas ratio of the gas scrubber is maintained at or above the levels established during the performance test. Increasing the liquid-to-gas ratio, by either increasing the influent flow rate or reducing the vent gas flow rate, improves the HAP removal efficiency of the gas scrubber.

Gas flow rate is a direct function of the speed of the fan used to convey vent gas streams to the gas scrubber. The fans used to convey vent gases to gas scrubbers are typically operated at constant speeds, therefore, the operation of these fans would be a reliable monitoring parameter. However, if the fan speed drops below the level measured during the performance, gas scrubber performance should improve because the liquid-to-gas ratio of the gas scrubber increases when the gas flow drops.

Therefore, we will allow you to monitor fan operation instead of gas flow rate as long as a successful initial performance test of the gas scrubber is conducted while the fan is operating at maximum speed. Allowable monitoring parameters of fan operation include fan motor amperage, on/off status, or rotational speed of the fan. Any of these methods could be used to satisfy the monitoring requirements for the gas scrubber inlet gas flow rate specified in §63.453(c)(2). If you choose to monitor fan operation, you are still required to satisfy all the applicable monitoring, recordkeeping, and reporting requirements of the NESHAP (see §63.453, §67.454, and §63.455) and the general provisions to the NESHAP (see §63.8 and §63.10). For example, as specified in §63.453(n), you must continuously record the fan operation parameter (e.g., fan motor amperage) during the initial performance test to determine the appropriate parameter value and

§63.453 Monitoring (Continued)

you must provide for the permitting agency's approval the rationale for the selected parameter value, the monitoring frequency, and averaging time. With regard to recordkeeping, you to maintain records of all required measurements (e.g., fan motor amperage) needed to demonstrate compliance with the standard, as specified in §63.10(b)(2)(vii) of the NESHAP general provisions.

We understand that operational changes such as replacing fan motors or blades must be made. However, if the operation of the fan or collection system changes after the initial performance test, you must demonstrate, to the satisfaction of the permitting authority, that the gas flow rate has not increased as a result of changes to the fan or you must conduct another performance test to insure that the gas scrubber is meeting the emission limit.

§63.454 Recordkeeping Requirements

At this time, no Q&A's are provided for this section.

§63.455 Reporting Requirements

At this time, no Q&A's are provided for this section.

§63.457 Test Methods and Procedures

At this time, no Q&A's are provided for this section.

§63.458 Delegation of Authority

At this time, no Q&A's are provided for this section.

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