



WHITEPAPER

Get Ready, More Pulp Mill Air Emission Standards¹

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On April 21, 2020, the U.S. Court of Appeals for the District of Columbia Circuit [ordered](#) the U.S. Environmental Protection Agency (EPA) to include additional emission standards for hazardous air pollutants (HAPs) emitted from regulated combustion sources at pulp mills. The petitioners successfully argued EPA knew additional HAPs were being emitted at pulp mills. In 2017 EPA did not regulate those pollutants. The [2017 Rule](#) remains in effect while EPA sets limits for the additional HAPs. The first periodic performance test for existing sources is required by October 13, 2020. If testing must be delayed because of COVID-19, you may be able to obtain relief under EPA's April 22, 2020, [interim final rule](#) for Part 75 facilities.

Background

On April 15, 1998, EPA proposed emission standards for HAPs at pulp mills. These included emissions from new and existing chemical recovery processes at kraft, soda, sulfite and stand-alone semi-chemical pulp mills. The rule was updated by EPA on January 12, 2001, and October 11, 2017 (the "2017 Rule"). **Table 1** below includes the currently regulated emission sources and standards.

¹ 40 CFR 63, Subpart MM; Kraft, Soda, Sulfite, and Stand-Alone Semi-Chemical Pulp Mills (MACT II): National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources ([40 CFR 63.860 et seq.](#))

Table 1. Summary of 2017 Promulgated Standards for Pulp Mills (NESHAP Subpart MM, 40 CFR 63.862).

Subcategory	Emission Point	HAP Metals Standard		Gaseous Organic HAP Standard	
		Existing Source	New Source	Existing Source	New Source
Kraft and soda mill ^(a)	Recovery furnace (NDCE & DCE)	PM ≤ 0.10 gr/dscm at 8% O ₂	PM ≤ 0.034 gr/dscm at 8% O ₂	No std.	Gaseous organic HAP ≤ 0.012 kg/Mg BLS as MeOH
	Smelt dissolving tank (SDT)	PM ≤ 0.10 kg/Mg BLS	PM ≤ 0.06 kg/Mg BLS	No std. ^(b)	No std. ^(b)
	Lime kiln	PM ≤ 0.15 gr/dscm at 10% O ₂	PM ≤ 0.023 gr/dscm at 10% O ₂	No std. ^(b)	No std. ^(b)
Sulfite mill	Sulfite combustion unit	PM ≤ 0.092 gr/dscm at 8% O ₂	PM ≤ 0.046 gr/dscm at 8% O ₂	No std. ^(b)	No std. ^(b)
Stand-alone semi-chemical mill	Semi-chemical combustion unit	No std.	No std.	Gaseous organic HAP ≤ 1.49 kg/Mg BLS as THC or 90% reduction	Gaseous organic HAP ≤ 1.49 kg/Mg BLS as THC or 90% reduction

Abbreviations: BLS = Black liquor solids, DCE = Direct contact evaporator, g/dscm = Grams per dry standard cubic meter, kg/Mg = Kilograms per megagram, MeOH = Methanol, NDCE = Nondirect contact evaporator, No std. = No standard, PM = Particulate matter, and THC = Total hydrocarbons.

Notes:

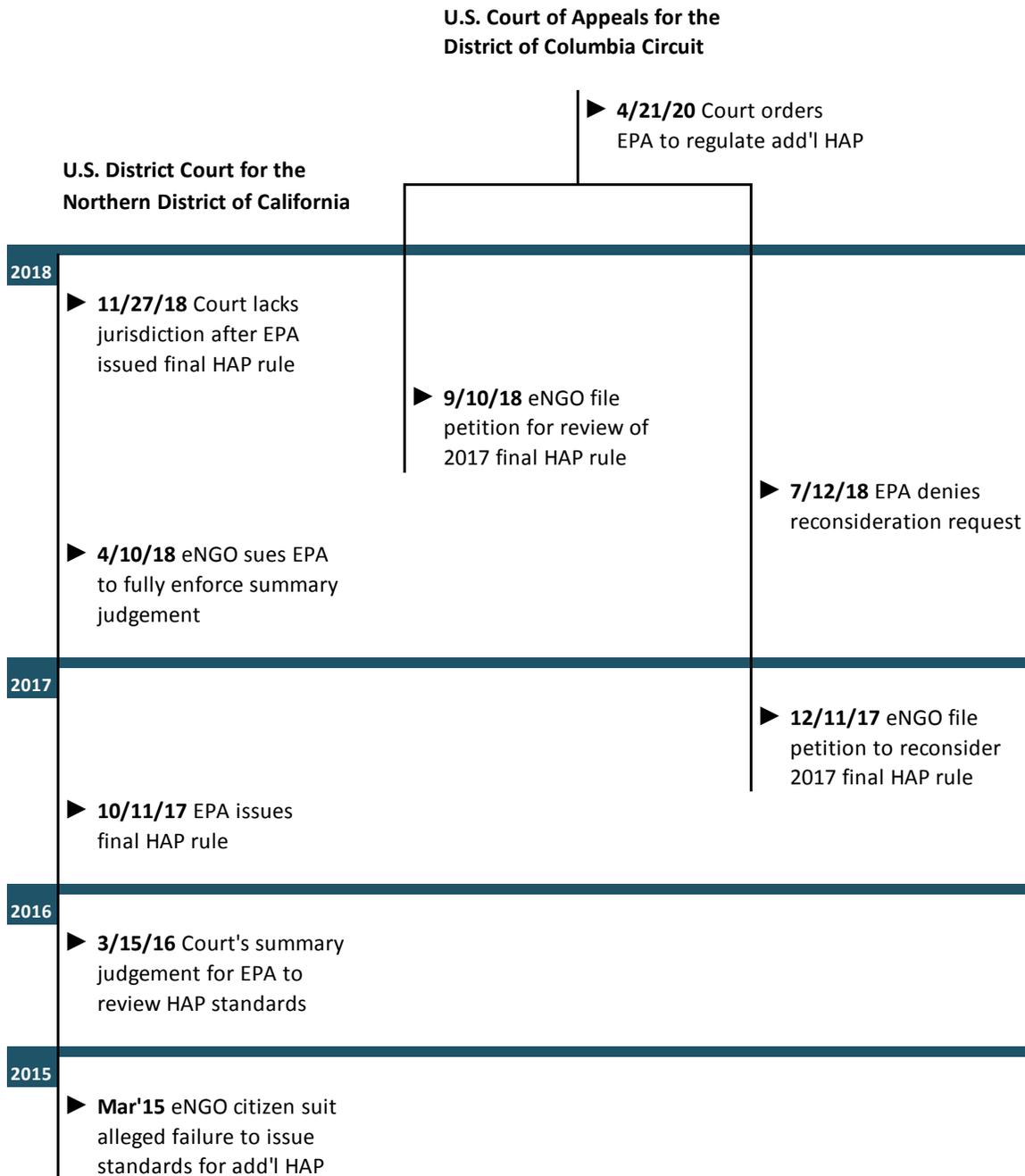
(a) = Existing kraft and soda mill sources may establish an alternate HAP metals standard or "bubble"

(b) = Emissions of gaseous organic HAPs regulated by NESHAP Subpart S (40 CFR 63.440 *et seq.*) for non-combustion sources

In 2009 the Natural Resources Defense Council *et al.* petitioned EPA to set emission standards for HAPs not covered by the 2001 Rule. These HAPs involved constituents such as mercury, dioxins, polycyclic organic matter, benzene, toluene, ethylbenzene, xylene, naphthalene, 1,3-butadiene, formaldehyde, acetaldehyde, hydrogen chloride, and hydrogen fluoride. EPA did not respond to this petition and the petitioners did not follow-up.

Environmental non-governmental organizations challenged EPA's 2001 and 2017 Rules in district court and the court of appeals. A summary of recent litigation and rule-making is provided below in **Figure 1**.

Figure 1. Summary of Recent Litigation and Rule-Making for Pulp Mills.



Abbreviations: eNGO = Environmental non-governmental organization, EPA = U.S. Environmental Protection Agency, and HAP - Hazardous air pollutants.

District Court Litigation

In March 2015, the Sierra Club *et al.* filed a citizen suit in U.S. District Court for the Northern District of California challenging EPA's failure to review and promulgate emission standards for additional HAPs emitted at pulp mills. On March 15, 2016, the district court issued a summary judgement requiring EPA to review and either revise the emission standards or issue a determination that such a revision was not necessary. On October 17, 2017, EPA promulgated a final rule for pulp mills; however, it did not contain emission standards for the additional HAPs. On April 10, 2018, the Sierra Club *et al.* sued EPA to fully enforce the March 15, 2016, summary judgement. On November 27, 2018, the district court ruled that it no longer had jurisdiction over this matter. The court stated that after EPA took final action by promulgating the 2017 Rule; future review needed to be channeled through the court of appeals.

Appellate Court Litigation

On December 11, 2017, Earthjustice *et al.* petitioned EPA to reconsider the 2017 Rule. EPA denied the reconsideration request on July 12, 2018. On September 10, 2018, Crossett Concerned Citizens for Environmental Justice *et al.* filed a petition for review of the 2017 Rule. The U.S. Court of Appeals for the District of Columbia Circuit consolidated the Earthjustice *et al.* and Concerned Citizens for Environmental Justice *et al.* cases. On April 21, 2020, the appellate court [ordered](#) EPA to include additional emission standards for HAPs emitted from regulated combustion sources at pulp mills.

Deep Dive into Rule and Litigation History

April 21, 2020 - The U.S. Court of Appeals for the District of Columbia Circuit consolidated Case No. 17-1257 (filed 12/11/17) and 18-1245 (filed 9/10/18). The court [granted](#) the petition for review of the 2017 Rule and remanded EPA without vacatur to set limits on the additional HAPs emitted by pulp mill combustion sources.

October 31, 2019 – EPA proposed to clarify operating limits for smelt dissolving tank (SDT) scrubbers and [corrected cross-reference errors](#) between NESHAP Subpart MM (40 CFR 63.860 *et seq.*) and NSPS Subpart BBa (40 CFR 60.280a *et seq.*) for kraft pulp mills ([84 FR 58,356](#))

November 27, 2018 – The U.S. District Court for the Northern District of California [ruled](#) it no longer had jurisdiction over the matter filed by Sierra Club *et al.* in March 2015. After EPA took final action by promulgating the 2017 Rule ([82 FR 47,328; 10/11/17](#)), future reviews must be channeled through the court of appeals.

September 10, 2018 – Crossett Concerned Citizens for Environmental Justice *et al.* filed with the Court of Appeals (Case No. 18-1245) a [petition](#) for review of 2017 Rule. On July 12, 2018, EPA had denied a similar petition filed by the Sierra Club *et al.* on December 11, 2017, in District Court.

July 12, 2018 - EPA denied December 11, 2017, petition filed by Earthjustice *et al.* ([83 FR 32,213](#)).

April 10, 2018 - Sierra Club *et al.* sued EPA in District Court to fully enforce the March 15, 2016, summary judgement. The parties agreed that EPA had complied with review and revisions provision of [42 USC 7412\(f\)\(2\)](#) but not the emission standard provisions of [42 USC 7412\(d\)\(6\)](#).

December 11, 2017 - Earthjustice *et al.* submits a [petition](#) to USEPA and files with the Court of Appeals (Case No. 17-1257) to reconsider the 2017 Rule.² Plaintiff alleged pulp mills emit a variety of HAPs not regulated by the 2017 Rule including mercury, dioxins, polycyclic organic matter (POM), benzene, toluene, ethylbenzene, xylene, naphthalene, 1,3-butadiene, formaldehyde, acetaldehyde, hydrogen chloride, and hydrogen fluoride.

October 11, 2017 – EPA promulgates final rule ([82 FR 47,328](#)). EPA determined that risks from pulp mill emissions were acceptable and that the standards provided an ample margin of safety. Final rule included revisions to opacity monitoring provisions and the addition of requirements to maintain

² Letter from Earthjustice to EPA (see Docket ID No. [EPA-HQ-OAR-2014-0741-0275](#)); dated December 11, 2017. U.S. Court of Appeals for the District of Columbia Circuit, Case No. 17-1257.

proper operation of the electrostatic precipitator (ESP) automatic voltage control (AVC), a requirement to conduct 5-year periodic emissions testing, submittal of electronic reports; revisions to provisions addressing periods of startup, shutdown, and malfunction (SSM), and technical and editorial changes.

December 30, 2016 – EPA completes risk and technology review (RTR) and proposes amendments to the 2001 Rule ([81 FR 97,046](#)).³

March 15, 2016 – District Court issued a summary judgement requiring EPA to review and either to revise the emission standards [[42 USC 7412\(d\)\(6\)](#) and [7412\(f\)\(2\)](#)] or issue a determination that such a revision is not necessary.⁴ This should have been completed by October 1, 2017.

March 2015 – Sierra Club *et al.* filed a citizen suit in District Court, against EPA challenging EPA’s failure to comply with [42 USC 7412\(d\)\(6\)](#) and [7412\(f\)\(2\)](#).

February 2011 –EPA sends Information Collection Request (ICR) to pulp mills.

January 14, 2009 – Natural Resources Defense Council & Sierra Club submit a petition for rulemaking to EPA, urging EPA to set the emission limits for HAPs not covered by 2001 Rule.⁵

May 6, 2004 – As a follow-up to the February 18, 2003, amendments, EPA published a series of technical corrections to be consistent with the text shifts made in the amendments ([69 FR 25,321](#)).

July 18, 2003 – EPA received adverse comments on seven provisions in the February 18, 2003, direct final rule. EPA’s withdrawal notice was not published before the May 19, 2003, effective date of those provisions. This action deleted the challenged provisions and corrected errors. ([68 FR 42,603](#))

May 8, 2003 – EPA made a correction to the February 18, 2003, amendments to move up the effective date of certain incorporated-by-reference provisions ([68 FR 24,653](#)).

³ EPA did not propose any changes to 42 USC 7412(f)(2). Under 42 USC 7412(d)(6) EPA proposed opacity monitoring provisions, additional electrostatic precipitator (ESP) parameter monitoring provisions, clarifying the monitoring for combined ESP/wet scrubber controls, and alternative monitoring for smelt dissolving tank (SDT) wet scrubbers. EPA also proposed a requirement for 5-year periodic emissions testing; revisions to provisions addressing periods of startup, shutdown, and malfunction (SSM); and technical and editorial changes.

⁴ Sierra Club v. McCarthy, No. 15-cv-01165-HSG, 2016 WL 1055120 (N.D. Cal. Mar. 15, 2016)

⁵ Pet’n of Natural Resources Defense Council & Sierra Club to Adm’r Stephen L. Johnson.

February 18, 2003 – EPA proposed clarifications to the emission standards and consolidated monitoring and testing requirements. EPA also added a site-specific compliance alternative for one pulp mill ([68 FR 7,735](#)).

February 18, 2003 – EPA published direct final rule to clarify and consolidate the monitoring and testing requirements and EPA added a site-specific alternative standard for one pulp mill ([68 FR 7,706](#)).

August 6, 2001 - EPA published a correction ([66 FR 41,086](#))

July 19, 2001 – EPA published technical corrections ([66 FR 37,591](#)).

January 12, 2001 – EPA promulgated a final rule for the emission of HAPs from chemical recovery processes at kraft, soda, sulfite, and stand-alone semi-chemical pulp mills. The regulated HAPs include gaseous organic HAP and HAP metals ([66 FR 3,180](#)).

April 15, 1998 – EPA proposed standards to reduce HAP emissions from new and existing sources used in chemical recovery processes at kraft, soda, sulfite, and stand-alone semi-chemical pulp mills ([63 FR 18,754](#)).