ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 11-1113

DESERT CITIZENS AGAINST POLLUTION and SIERRA CLUB,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

ON PETITION FOR REVIEW OF FINAL ACTION BY THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BRIEF FOR RESPONDENT

IGNACIA S. MORENO
Assistant Attorney General
Environment & Natural Resources Div.

JERED J. LINDSAY
United States Department of Justice
Environment & Natural Resources Div.
P.O. Box 23986
Washington D.C. 20026-3986
(202) 514-9277

Counsel for Respondent EPA
Dated: November 8, 2011

OF COUNSEL:

AMY HUANG BRANNING
Office of General Counsel
U.S. Environmental Protection Agency
Washington, D.C. 20460

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), Respondent United States Environmental Protection Agency ("EPA") states as follows:

A. Parties, Intervenors, and Amici

All parties and intervenors are identified in Petitioners' brief.

B. Rulings Under Review

References to the ruling at issue in this Court accurately appear in the Petitioners' brief.

C. Related Cases

Respondent is unaware of any related cases.

Respectfully submitted,

/s/ *Jered Lindsay*
Jered Lindsay
United States Department of Justice
Environmental Defense Section
Counsel for Respondent EPA

Dated: November 8, 2011

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MISCELLEOUS

GLOSSARY

CAA	Clean Air Act or Act
EPA	Environmental Protection Agency
HAPs	Hazardous Air Pollutants
NESHAP	National Emissions Standards for Hazardous Air Pollutants

JURISDICTIONAL STATEMENT

Petitioners Desert Citizens Against Pollution and the Sierra Club (collectively "Petitioners") challenge the United States Environmental Protection Agency's ("EPA's") promulgation of national emissions standards for certain processes at gold mine ore processing and production facilities pursuant to section 112(c)(6), 42 U.S.C. § 7412(c)(6), of the Clean Air Act ("CAA" or the "Act"). *See* National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category; and Addition to Source Category List for Standards; Final Rule, 76 Fed. Reg. 9450 (Feb. 17, 2011) ("Final Rule"). This Court has jurisdiction pursuant to 42 U.S.C. § 7607(b)(1).

STATUTES AND REGULATIONS

All applicable statutes, etc., are contained in the Petitioners' Brief or in the addendum to EPA's brief.

ISSUES PRESENTED

This case concerns EPA's regulation of mercury from certain processes at gold mine ore processing and production facilities that are area sources within the meaning of section 112 of the Clean Air Act. 42 U.S.C. § 7412. The threshold provision at issue in this case is section 112(c)(6), 42 U.S.C. § 7412(c)(6), which directs the EPA to establish emission standards for sources of seven specified hazardous air pollutants, which Congress singled out for regulation, to ensure that at least ninety percent of the aggregate emissions of those seven pollutants is subject to emission standards. Against this background, this case presents the following issues:

1. Whether, despite the fact that Congress expressly focused section 112(c)(6) on seven specified pollutants, the Act nonetheless should be read as unambiguously requiring EPA to establish emission standards for *all* hazardous air pollutants emitted by area sources subject to section 112(c)(6).

2. Whether, despite the fact that the regulation at issue in this case clearly limited the listed area source category to the specifically defined thermal processes that occur after ore crushing for which EPA set standards, EPA can be compelled to set emission standards for other processes at gold mine ore processing and production facilities that are outside the listed source category based solely on Petitioners' contrary, and insupportable, reading of the regulation.

3. Whether, notwithstanding that EPA was not legally required to set standards for sources of fugitive emissions that were not part of the listed area source category, EPA nonetheless reasonably assessed the evidence in the administrative record when it concluded that it lacked sufficient data regarding

fugitive emissions and declined to include sources of such emissions as part of the source category listed for regulation pursuant to section 112(c)(6).

STATEMENT OF THE CASE

The Final Rule sets standards for mercury emissions from thermal processes at gold mine ore processing and production facilities. Petitioners, a coalition of environmental advocacy groups, generally contend that the Final Rule should have been broader in scope. However, as discussed herein, the Final Rule was adopted by EPA following years of detailed study and analysis, is well-supported by the administrative record, and is entirely consistent with the pertinent provisions of the Act.

STATEMENT OF FACTS

I. Overview of Gold Mine Ore Processing and Production Operations

Some of Petitioners' regulatory challenges turn on factual issues concerning how EPA defined the portions of gold mine ore processing and production facilities subject to the Final Rule. Accordingly, we provide below an overview of these operations, including an explanation of certain technical terms that are relevant to the issues presented in this case.

All gold mine operations in the United States begin by mining ores. In this first step, gold-bearing ore is extracted through blasting, drilling, and general earthmoving. *See* RTI Int'l, *Evaluation of Mercury Emissions from U.S. Gold MiningOperations* (Aug. 2007), EPA-HQ-OAR-2010-0239-0100, at 5 [hereinafter "RTI Evaluation"] (JAXX). In addition to gold, the mined ore naturally contains mercury in various concentrations. 75 Fed. Reg. 22,470, 22,472 (Apr. 28, 2010) (JAXX). "Because gold and mercury belts can often be found in close proximity, gold ores commonly contain mercury in the form of mercury sulfide." RTI at 1 (JAXX). Thus, mercury enters the gold production process naturally, from the start.

The mined ore is then crushed before undergoing a variety of processes to extract the gold. Crushing and grinding the ore produces ore particles that are smaller and of a consistent size. RTI Evaluation at 5 (JAXX). After crushing and grinding, some of the ore may go through pretreatment processes that are used to prepare the ore for the subsequent step of cyanide leaching to remove impurities. *Id.* at 6 (JAXX). The leaching process is inhibited by the presence of certain impurities in the mined ore, so some facilities use roasting or autoclaving to remove these inhibitory compounds. *Id.* An ore roasting operation uses an industrial furnace to combust and oxidize organic carbon and sulfide mineral, and during this process mercury sulfide is converted to elemental mercury and sulfur dioxide. *Id.* If the mercury is not captured or controlled, it is released to the atmosphere. *Id.* An autoclave uses highly pressurized and heated oxygen to treat the gold ore and remove sulfide minerals. *Id.* Mercury can also be emitted during this process if it is not captured or controlled. *Id.*

Next, the ore undergoes some type of leaching process using a dilute cyanide solution to isolate and bind the gold. 75 Fed. Reg. at 22,472 (JAXX). Lower grade oxide ores generally undergo a heap leaching process, whereby the ore is spread over large areas and dilute cyanide solution is slowly dripped through and collected on liners and channels. *Id.* at 22,473 (JAXX).

The resulting solution of cyanide bound with gold is then concentrated through adsorption onto activated carbon.[1] This process produces a "loaded" carbon, containing both gold and mercury. 75 Fed. Reg. at 22,474 (JAXX). The absorbed and concentrated gold and mercury are then stripped from the carbon through desorption resulting in a more concentrated gold solution. *Id.* at 22,475

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[1] After leaching, some facilities use non-carbon concentrate processes to recover gold from the cyanide solution. One process uses zinc powder to precipitate gold because zinc has a higher affinity for cyanide ions than does gold. RTI Evaluation at 7 (JAXX). This precipitation and filtration processes takes place in closed cells and the concentrate is then treated like the carbon-processed concentrate described below. *Id.*; 75 Fed. Reg. at 22,476 (JAXX).

(JAXX).[2] The concentrated gold solution is transferred to pregnant solution storage tanks ("preg tanks") before undergoing additional processing to further concentrate and isolate the gold. *Id.* This concentrated solution contains mercury that can be emitted from the tank as vapor if not controlled. *Id.*

One process used to concentrate the gold, electrowinning, achieves gold separation using an electric potential to plate the gold in the solution onto a cathode. 75 Fed. Reg. at 22,475 (JAXX). If not controlled, elemental mercury can vaporize and escape during this process. RTI Evaluation at 7 (JAXX). The result is a gold-bearing sludge material that must undergo further processing. 75 Fed. Reg. at 22,475/2 (JAXX). If the resulting sludge has a significant mercury content it can be treated in a "retort" to remove mercury and other impurities. *Id.* The mercury retort process heats the concentrate under vacuum pressure to vaporize mercury. *Id.* The mercury vapor is pulled through a condenser where it forms liquid mercury, which is removed. *Id.* at 22,475/3 (JAXX). The last step in the gold ore processing – before the gold is shipped off to commercial refineries – is

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[2] In order to be reused, the carbon used in the adsorption-desorption process is regenerated using carbon kilns. 76 Fed. Reg. at 9487 (JAXX). After the gold is removed during the stripping process, the remaining compounds are heated with steam present, and carbon is captured and quenched when it exits the kiln. 75 Fed. Reg. at 22,475.

smelting. This occurs in melt furnaces where the concentrate is heated to 1500° C. *Id.* Most of the remaining mercury is volatized in the melt furnace as elemental mercury or oxidized mercury, which is typically vented and subject to controls. *Id.*

EPA has estimated that the thermal processes and components discussed above that occur after ore crushing – including roasting operations (i.e, ore dry grinding, ore preheating, roasting, and quenching), autoclaves, carbon kilns, electrowinning, preg tanks, mercury retorts, and furnaces – contributed approximately 4.4 tons of mercury to the atmosphere in 1990. 75 Fed. Reg. at 22,471-472 (JAXX-XX). The Final Rule establishes maximum achievable control technology ("MACT") standards for mercury emitted from these thermal processes and components. Mercury is a highly potent, bioaccumulative neurotoxin that Congress singled out for control. 76 Fed. Reg. at 9458/1 (JAXX). At full implementation of the standards in the Final Rule, EPA estimates that mercury emissions from the listed source category will be reduced by 0.73 tons per year from current emissions levels. *Id.* at 9451 (JAXX).

II. STATUTORY AND REGULATORY BACKGROUND

A. Statutory Background

The Clean Air Act is intended to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare." 42 U.S.C.

§ 7401(b)(1). One way the Act does this is through section 112's requirement that EPA promulgate regulations establishing standards to reduce emissions of hazardous air pollutants, or "HAPs."[3] *See* 42 U.S.C. § 7412. In the 1990 amendments to the Act, Congress listed 189 hazardous air pollutants, including mercury compounds. 42 U.S.C. § 7412(b)(1).[4] Congress then established a multi-step process for the regulation of hazardous air pollutants under section 112, 42 U.S.C. § 7412.

The first step in the process is the listing of categories of major and area sources of hazardous air pollutants for regulation. 42 U.S.C. § 7412(c). A "major source" is a stationary source or group of stationary sources at a single location and under common control that emits or has the potential to emit ten tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. 42 U.S.C. § 7412(a)(1). A "stationary source" of hazardous air pollutants is any building, structure, facility or installation that emits or may emit any air pollutant. 42 U.S.C. § 7412(a)(3). Any stationary source that is not a major source is an "area source." *Id.* § 7412(a)(2).

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[3] HAPs are pollutants that "present, or may present, . . . a threat of adverse human health effects . . . or adverse environmental effects." 42 U.S.C. § 7412(b)(2).

[4] At the same time, Congress authorized EPA to list additional hazardous air pollutants. 42 U.S.C. § 7412(b)(2).

The listing of a source category is a condition precedent to the second step of the process – the requirement to promulgate emission standards under section 112(d), 42 U.S.C. § 7412(d).[5] EPA has no discretion as to whether to list categories of major sources. Instead, section 112(c)(1) required EPA to publish a list of all major source categories within one year after the effective date of the 1990 amendments. 42 U.S.C. § 7412(c)(1).

In addition to requiring the listing and regulation of all major sources of hazardous air pollutants, section 112(c) requires EPA to list and regulate certain area source categories under specified circumstances. 42 U.S.C. § 7412(c). First, section 112(c)(3) requires EPA to list "each category or subcategory of area sources which the Administrator finds presents a threat of adverse effects to human health or the environment." 42 U.S.C. § 7412(c)(3). Additionally, subsections (c)(6) and (c)(3) set out two numeric goals that EPA must meet in regulating certain hazardous air pollutants. 42 U.S.C. § 7412(c)(3), (c)(6).

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[5] EPA has explained that "[a] 'category' of sources is a group of sources having some common features suggesting that they should be regulated in the same way and on the same schedule." Initial List, 57 Fed. Reg. 31,576, 31,578/3 (July 16, 1992). *See also* S. Rep. No. 101-228, at 166 (1989), *reprinted in* 1990 U.S.C.C.A.N. 3385, 3551 ("In establishing categories, the Administrator may take into account factors such as industrial or commercial category, facility size, type of process and other characteristics of sources which are likely to affect the feasibility and effectiveness of air pollution control technology.").

1. Section 112(c)(6)

Section 112(c)(6) requires EPA to take action with respect to seven specific persistent, bioaccumulative hazardous air pollutants. 42 U.S.C. § 7412(c)(6). Specifically, the section states:

> (6) Specific pollutants
> With respect to alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans and 2,3,7,8-tetrachlorodibenzo-p-dioxin, the Administrator shall, not later than 5 years after November 15, 1990, list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4) of this section. Such standards shall be promulgated not later than 10 years after November 15, 1990. This paragraph shall not be construed to require the Administrator to promulgate standards for such pollutants emitted by electric utility steam generating units.

42 U.S.C. § 7412(c)(6).

Section 112(c)(6), 42 U.S.C. § 7412(c)(6), thereby establishes two distinct obligations. First, EPA is required to list sufficient source categories to ensure that sources accounting for at least ninety percent of the aggregate emissions of each of these specific pollutants are subject to regulation. Second, EPA is required to establish emission standards applicable to these sources pursuant to section 112(d)(2) or (d)(4), 42 U.S.C. § 7412(d)(2), (4).

Similar to section 112(c)(6), section 112(c)(3) requires that EPA list sufficient sources categories "to ensure that sources accounting for 90 percent of the area source emissions of the 30 hazardous air pollutants that EPA has identified as "[presenting] the greatest threat to public health in the largest number of urban areas" are subject to standards. 42 U.S.C. § 7412(c)(3).[6]

2. Section 112(d) Emission Standards

For source categories listed pursuant to section 112(c)(6), the Act requires EPA to set emission standards pursuant to section 112(d)(2) or (4), 42 U.S.C. § 7412(d)(2), (4). Section 112(d)(2) and (d)(4) define how to set standards. Under section 112(d)(2), EPA imposes emission standards that require "the maximum degree of reduction in emissions of the [HAPs]" that EPA concludes are achievable based on a consideration of factors identified in the statute. 42 U.S.C. § 7412(d)(2). These are referred to as "maximum achievable control technology" or

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[6] Section 112(c)(3) references 112(k)(3)(B), which requires EPA to "identify not less than 30 hazardous air pollutants which, as the result of emissions from area sources, present the greatest threat to public health in the largest number of urban areas," and "identify the source categories or subcategories emitting such pollutants … [assuring] that sources accounting for 90 per centum or more of the aggregate emissions of each of the 30 identified hazardous air pollutants are subject to standards pursuant to subsection (d) of this section." 42 U.S.C. § 7412(k)(3)(B).

"MACT." EPA is also required to establish MACT standards for *all* major sources of hazardous air pollutants. *See* 42 U.S.C. § 7412(c)(1).

Setting a MACT standard is a complex, multi-step process. The MACT standards for existing sources must be at least as stringent as the average emissions limitation achieved by the best performing 12 percent of existing sources (for which the Administrator has emissions information) for source categories with thirty or more sources, or the best performing five sources (for which the Administrator has or could reasonably obtain emissions information) for source categories with less than thirty sources. 42 U.S.C. § 7412(d)(3)(A)-(B). This level of minimum stringency is called the "MACT floor." For new sources, MACT standards must be at least as stringent as the control level achieved in practice by the best controlled similar source. *Id.* § 7412(d)(3). EPA also must consider more stringent ''beyond-the-floor" control options. When considering beyond-the-floor options, EPA must consider not only the maximum achievable degree of reduction in emissions of hazardous air pollutants, but must take into account costs, energy, and non-air environmental impacts when doing so. *See Cement Kiln Recycling Coal. v. EPA*, 255 F.3d 855, 857-58 (D.C. Cir. 2001). Section 112(d)(4) authorizes EPA to set a health-based standard for a limited set of hazardous air pollutants for which a health threshold has been established, and that standard must provide for "an ample margin of safety." 42 U.S.C. § 7412(d)(4).

B. Regulatory Background

1. Regulatory History of the Rule

As described above, section 112(c)(6) of the Act requires that EPA list categories and subcategories of sources ensuring that sources accounting for not less than ninety percent of the aggregate emissions of each of the seven specified hazardous air pollutants, including mercury,[7] are subject to standards under section 112(d)(2) or (d)(4). 42 U.S.C. § 7412(c)(6). In 1998, EPA published a notice entitled "Source Category Listing for Section 112(d)(2) Rulemaking Pursuant to Section 112(c)(6) Requirements," 63 Fed. Reg. 17,838, 17,839 (Apr. 10, 1998), which explained, among other things, which source categories EPA determined it needed to list, at that time, to reach the ninety percent requirement for the seven hazardous air pollutants including mercury. *Id.* at 17,839.[8]

The 1998 listing of source categories necessary to reach the ninety percent requirement for mercury did not include gold mine ore processing and processing sources. 75 Fed. Reg. at 22,471/3 (JAXX). At that time, there was very little available information on mercury emissions from area sources at gold mine ore

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[7] Mercury is the only section 112(c)(6) HAP emitted from gold mine ore processing and production facilities. *See* EPA-HQ-OAR-2010-0239-0405 (JAXX-XX).

[8] In 2002, EPA modified the section 112(c)(6) list and removed several categories. 67 Fed. Reg. 68,124 (Nov. 8, 2002).

processing and production facilities. *Id.* Since the 1998 notice, new data have become available on mercury emissions from the sources related to the thermal processes at gold mine facilities, thereby allowing EPA to estimate that those sources emitted about 4.4 tons of mercury in baseline year 1990. *Id*. at 22,471-472 (JAXX-XX).[9] Specifically, the estimated 4.4 tons of mercury emissions for gold mine ore processing and production are based on emissions from thermal process equipment such as roasters, autoclaves, carbon kilns, pregnant storage solution tanks ("preg tanks"), electrowinning, melt furnaces, and mercury retorts. *Id.* EPA determined that the regulation of the 4.4 estimated tons of mercury emissions from thermal process sources was necessary to meet section 112(c)(6)'s ninety percent requirement for mercury. 76 Fed. Reg. at 9458/1 (JAXX). Accordingly, EPA proposed a rule that called for the listing of those thermal processes that account for the 4.4 ton estimate, and established MACT standards for controlling mercury emissions from those thermal processes. 75 Fed. Reg. at 22,472 (JAXX).

EPA also concluded that the gold mine ore processing and production facilities were not "major sources." 42 U.S.C. § 7412(a)(1). In performing this assessment, EPA evaluated both actual emissions from gold mine facilities, as well

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[9] EPA developed a 1990 baseline emission inventory in order to determine the sources of each of the seven HAP specified in section 112(c)(6) and to determine which categories need to be regulated to address the 90 percent target for each of the seven HAP. 63 Fed. Reg. at 17,839.

as the facilities' potential to emit hazardous air pollutants. 76 Fed. Reg. at 9457-459 (JAXX-XX). Petitioners do not challenge EPA's finding that there are no major source gold mine ore processing and production facilities.

2. The Area Source Category Listed for Regulation

On December 16, 2010, the EPA Administrator signed the Final Rule and, consistent with the proposed rule, the Final Rule explained that the gold mine ore processing and production area source category covers:

> the thermal processes that occur after ore crushing, including roasting operations (i.e., ore dry grinding, ore preheating, roasting, and quenching), autoclaves, carbon kilns, electrowinning, preg tanks, mercury retorts, and furnaces.

76 Fed. Reg. at 9458/1 (JAXX).

There are four types of thermal process that are defined as the "affected sources": 1) ore pretreatment processes;[10] 2) carbon processes with mercury retorts;[11] 3) carbon processes without mercury retorts;[12] and 4) non-carbon

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[10] *Ore pretreatment processes* means the affected source that includes roasting operations and autoclaves that are used to pre-treat gold mine ore at gold mine ore processing and production facilities prior to the cyanide leaching process. 76 Fed Reg. at 9488 (JAXX).

[11] *Carbon processes with mercury retorts* means the affected source that includes carbon kilns, preg tanks, electrowinning cells, mercury retorts, and melt furnaces at gold mine ore processing and production facilities that use activated carbon, or resins that can be used as a substitute for activated carbon, to recover (adsorb) gold from the pregnant cyanide solution. 76 Fed Reg. at 9487 (JAXX).

concentrate processes.[13] *Id.* at 9480 (codified at 40 C.F.R. § 63.11640) (JAXX). Each of the four "affected sources" is further defined at 40 C.F.R. § 63.11651. 76 Fed. Reg. at 9487-9488 (JAXX).

The category listing in the Final Rule does not include sources of fugitive emissions such as tailings ponds, leach fields and waste rock piles. 76 Fed. Reg. at 9458/1. In addition to explaining that emissions from these sources were not included in the estimated 4.4 tons of mercury emissions from the thermal processes making up the area source category, EPA explained that it did not have sufficient information regarding mercury emissions from these area sources to list them for regulation in their own right or to develop emission standards for these emissions. *Id*.

3. Mercury Emission Standards

For each of affected sources listed for regulation in the Final Rule, EPA established emission standards for both new and existing sources. An affected

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[12] *Carbon processes without mercury retorts* means the affected source that includes carbon kilns, preg tanks, electrowinning cells, and melt furnaces, but has no retorts, at gold mine ore processing and production facilities that use activated carbon, or resins that can be used as a substitute for activated carbon, to recover (adsorb) gold from the pregnant cyanide solution. 76 Fed Reg. at 9487 (JAXX).

[13] *Non-carbon concentrate processes* means the affected source that includes mercury retorts and melt furnaces at gold mine ore processing and production facilities that use the Merrill-Crowe process or other processes and do not use carbon (or resins that substitute for carbon) to recover (adsorb) gold from the pregnant cyanide solution. 76 Fed Reg. at 9488 (JAXX).

source is defined as an existing source if it commenced construction or reconstruction of the affected source on or before April 28, 2010. 76 Fed. Reg. at 9480/2 (JAXX). If construction or reconstruction of the affected source commenced after April 28, 2010, the source is defined as a "new affected source." *Id.*

For ore pretreatment processes, EPA set a standard of 127 pounds of mercury per million tons of ore processed for existing sources, and 84 lbs/million tons of ore for new sources. 76 Fed. Reg. at 9451-452, 9480 (40 C.F.R. § 63.11645(a), (e)) (JAXX-XX). For carbon processes with mercury retorts, EPA set a standard of 2.2 pounds of mercury per ton of concentrate processed for existing sources, and 0.8 lbs Hg/ton of concentrate for new sources. 40 C.F.R. § 63.11645(b), (f) (JAXX). For carbon processes without mercury retorts, EPA set a standard of 0.17 lbs Hg/ton of concentrate for existing sources, and 0.14 lbs Hg/ton of concentrate for new sources. 40 C.F.R. § 63.11645(c), (g) (JAXX). Finally, for non-carbon concentrate processes, EPA set a standard of 0.2 pounds of mercury per ton of concentrate processed for existing sources, and 0.1 lbs Hg/ton of concentrate for new sources. 40 C.F.R. § 63.11645(d), (h) (JAXX).

The Final Rule also establishes several requirements for monitoring, including a requirement that each facility conduct annual mercury emissions tests at all emissions stacks. 76 Fed. Reg. at 9483-487 (JAXX). The emission standards and monitoring requirements described above have not been challenged in this petition for review.

SUMMARY OF ARGUMENT

In section 112(c)(6), Congress singled out seven specific bioaccumulative hazardous air pollutants and required EPA to ensure they did not escape the stringent section 112(d)(2) or (d)(4) emission standards – even if they are not emitted from major sources. 42 U.S.C. § 7412(c)(6). Specifically, section 112(c)(6) requires sources accounting for ninety percent of the aggregate emissions of each of these seven pollutants to be subject to standards pursuant to section 112(d)(2) or (d)(4).

Petitioners argue that under section 112(c)(6), EPA's decision to list an area source category in order to satisfy the Act's ninety percent requirement for regulation of specific hazardous pollutants (such as mercury) triggers an obligation to establish emission standards for all other hazardous air pollutants the source might emit. But no text in section 112(c)(6) compels such a result. In the absence of any language directing EPA to regulate all hazardous air pollutants emitted from sources listed pursuant to section 112(c)(6), EPA reasonably interprets section 112(c)(6) to allow it to specifically target only those pollutants emitted from an area source category that must be regulated to achieve the ninety percent requirement in section 112(c)(6) when establishing MACT emission standards.

Accordingly, in this instance, EPA established MACT emission standards pursuant to section 112(d)(2) for the section 112(c)(6) pollutant, mercury.

Section 112(c)(6)'s listing of specific pollutants, and its reference to "standards *for such pollutants*," confirms the reasonableness of EPA's interpretation that, when acting pursuant to section 112(c)(6), it must regulate only those listed pollutants that the Agency needs to meet the ninety percent requirement. *See* 42 U.S.C. § 7412(c)(6) (emphasis added). Further, when the listing requirement of section 112(c)(6), which is focused on achieving a ninety percent regulation goal for certain specified pollutants, is compared to the automatic listing requirement for major sources in 112(c)(1), the reasonableness of EPA's interpretation that it may target those section 112(c)(6) pollutants needed to satisfy the ninety percent requirement is confirmed.

Petitioners also argue that EPA's choice is foreclosed by unambiguous statutory text in section 112(d)(2), 42 U.S.C. § 7412(d)(2), but no language in that provision speaks directly to which sources or pollutants must be subject to emission standards. Instead, section 112(d)(2) describes how emission standards must be established – when required by another section. To the extent section 112(c)(6) or (d)(2) can be read to address which pollutants must be included, those provisions are ambiguous, and Petitioners have failed to show that EPA's interpretation is unreasonable.

Petitioners argue that unless section 112(c)(6) and (d)(2) are read to require the regulation of *all* hazardous air pollutants from *all* listed area sources, EPA would be allowed to pick and choose which hazardous air pollutants to regulate. Pet. Br. at 24-25. But EPA is not doing the picking here. Congress identified seven specific pollutants and directed EPA to meet the ninety percent requirement for each of those pollutants.

Petitioners' second major argument concerning fugitive emissions fares no better than the first. First, Petitioners' argument is based on a faulty reading of the preamble's description of the listed area source category and the regulatory text in the Final Rule. EPA did not, as Petitioners argue, define the source category to include "leach piles and other operations that generate gold mine facilities' fugitive emissions." Pet. Br. at 19. Instead, EPA limited the area source category listed for regulation to the thermal processes that occur after ore crushing, including roasting operations (i.e., ore dry grinding, ore preheating, roasting, and quenching), autoclaves, carbon kilns, electrowinning, preg tanks, mercury retorts, and furnaces. 76 Fed. Reg. at 9458/1 (JAXX); *see also* 76 Fed. Reg. at 9480/2 (to be codified as 40 C.F.R. § 63.11640(b)) (defining the specific "affected sources").

Petitioners ignore the regulatory text defining affected sources and the express statements EPA made in both the proposed rule and Final Rule preambles that clearly set forth EPA's decision not to include all sources of mercury emissions at gold mine facilities in the area source category listing. Thus, Petitioners' competing interpretation of the regulation must fail, especially in light of the level of deference owed to EPA's interpretation of its own regulation. *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (agency's interpretation of its own regulation is "controlling unless 'plainly erroneous or inconsistent with the regulation'") (citation omitted).

Because EPA did not include sources of fugitive mercury emissions such as the mining pits, waste rock dumps, heap leach pads, and tailings facilities in the listed source category, section 112(d)(2) does not require EPA to develop emission standards for those sources as a matter of law. Furthermore, and in any event, EPA fully assessed the evidence in the record concerning fugitive emissions and reasonably concluded that it lacked sufficient data regarding such emissions to include sources of such emissions in the listed source category.

Petitioners disagree with EPA's assessment. However, where, as here, Petitioners challenge EPA's technical judgment in the context of the Act's technical complex statutory scheme, Petitioners' mere disagreement with EPA's conclusions is insufficient to meet Petitioners' high burden under the arbitrary or capricious standard of review. EPA's Final Rule is rational, supported by the record, and should be upheld.

STANDARD OF REVIEW

This Court must uphold EPA's Final Rule unless Petitioners show it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. § 7607(d)(9)(A). "The scope of review under the 'arbitrary and capricious' standard is narrow and a court is not to substitute its judgment for that of the agency." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). *See also FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1810 (2009); *Bluewater Network v. EPA*, 370 F.3d 1, 11 (D.C. Cir. 2004). If EPA "acted within its delegated statutory authority, considered all of the relevant factors, and demonstrated a reasonable connection between the facts on the record and its decision, [the court] will uphold its determination." *Ethyl Corp.* v. EPA, 51 F.3d 1053, 1064 (D.C. Cir. 1995).

EPA's statutory interpretation must be reviewed pursuant to the standards announced in *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984). Under *Chevron*, the Court first inquires whether Congress "has directly spoken to the precise question at issue," in which case the Court "must give effect to the unambiguously expressed intent of Congress." *Id.* 842-43. If the statute is "silent or ambiguous with respect to the specific issue," the Court must defer to the agency's interpretation so long as it is "based on a permissible construction of the statute." *Id.* at 843. Particular deference is given to an agency's interpretation of a statute it administers when the statute is complex and within the agency's expertise, such as the CAA. *United States v. Mead Corp.*, 533 U.S. 218, 227-31 (2001); *NRDC v. EPA*, 571 F.3d 1245, 1251 (D.C. Cir. 2009).

When an agency's action relies on scientific or technical information touching upon the agency's area of expertise, a reviewing court applies "an extreme degree of deference." *Am. Farm Bureau Fed'n v. EPA*, 559 F.3d 512, 519 (D.C. Cir. 2009) (citation omitted).[14]

Finally, in reviewing an agency's interpretation of its own regulations, the courts give "controlling weight" to the agency's interpretation "unless it is plainly erroneous or inconsistent with the regulation." *Thomas Jefferson Univ. v. Shalala*, 512 U.S. 504, 512 (1994) (internal quotation marks and citations omitted); *see also, e.g., Talk America, Inc. v. Mich. Bell Tel. Co.*, 131 S. Ct. 2254, 2260-61 (2011); *Auer*, 519 U.S. at 461.

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[14] *See Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983)*; see also, e.g., West Virginia v. EPA*, 362 F.3d 861, 867-68 (D.C. Cir. 2004) (citation omitted) ("agency determinations based on highly complex and technical matters are entitled to great deference"); *Huls America Inc. v. Browner*, 83 F.3d 445, 452 (D.C. Cir. 1996) ("[W]e will give an extreme degree of deference to the agency when it is evaluating scientific data within its technical expertise.") (citation and internal quotations omitted).

ARGUMENT

I. EPA REASONABLY INTERPRETS SECTION 112(c)(6) TO REQUIRE REGULATION OF THE SPECIFIC POLLUTANT EMITTED BY THE AREA SOURCE CATEGORY THAT IS NEEDED TO MEET THE NINETY PERCENT REQUIREMENT IN SECTION 112(c)(6).

EPA interprets section 112(c)(6), 42 U.S.C. § 7412(c)(6), to authorize the establishment of emission standards for mercury – one of the seven specifically listed section 112(c)(6) pollutants – from certain area sources located at gold mine facilities without compelling the establishment of emission standards for all other hazardous air pollutants the area source may emit. 76 Fed. Reg. at 9457 (JAXX). Under the applicable standard of review, EPA's interpretation "governs if it is a reasonable interpretation of the statute – not necessarily the only possible interpretation, nor even the interpretation deemed *most* reasonable by the courts." *Entergy Corp. v. Riverkeeper, Inc.*, 129 S. Ct. 1498, 1505 (2009) (citing *Chevron*, 467 U.S. at 843-44).

A. EPA's Interpretation of Section 112(c)(6) to Allow Targeted Regulation of the Specific 112(c)(6) Pollutants Necessary to Satisfy the Ninety Percent Requirement Is Consistent with the Statutory Text and Purpose of that Provision.

On its face, the text of section 112(c)(6) sets a specific numeric goal and commands sufficient regulation of seven specific pollutants to reach that goal.

Section 112(c)(6) begins by identifying seven specific pollutants, including mercury, and then directs EPA to:

> "list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4)"

42 U.S.C. § 7412(c)(6). The subsection's targeted focus is even evident in the title, "specific pollutants." *Id.*

While the Petitioners are correct that the quoted text requires "sources" of these seven pollutants to be "subject to standards" as necessary to meet the numeric goals, the text does *not* explicitly define which pollutants must be "subject to standards" for a section 112(c)(6) listed source category. Petitioners argue that this language must require standards for all hazardous air pollutants regulated under section 112, but no text in section 112(c)(6) compels this result. *See* Pet. Br. at 24-25, 27-28; 42 U.S.C. § 7412(c)(6).

In the absence of any language indicating that EPA must treat all hazardous air pollutants emitted from sources listed pursuant to section 112(c)(6) the same, EPA reasonably interpreted the ambiguous language to require section 112(d)(2) standards for only those specific section 112(c)(6) pollutants that EPA determines must be regulated to achieve section 112(c)(6)'s ninety percent requirement. Here, EPA determined that it was necessary to establish emission standards for mercury emitted from the thermal processes at gold mine processing and production facilities in order to ensure that ninety percent of mercury emissions are subject to standards under subsection (d)(2) or (d)(4).

The last sentence of section 112(c)(6) confirms the reasonableness of EPA's interpretation that the subsection does not require EPA to establish MACT standards for all hazardous air pollutants, but instead only those specific section 112(c)(6) pollutants emitted from the source category that EPA determines must be regulated to achieve the ninety percent requirement. Clarifying EPA's authority under the subsection, the Act states, "[t]his paragraph shall not be construed to require the Administrator to promulgate standards *for such pollutants* [the seven listed] emitted by electric utility steam generating units." 42 U.S.C. § 7412(c)(6). (emphasis added). The sentence's focus on "standards for such pollutants" demonstrates that Congress contemplated that EPA would use its section 112(c)(6) authority to target those pollutants that are needed to achieve the ninety percent requirement, rather than any and all hazardous air pollutants a section 112(c)(6) source might emit. This provides further statutory evidence supporting the EPA's interpretation of the Act, and rebuts Petitioners' assertion that the text *clearly* demonstrates Congress' intent to regulate all hazardous air pollutants from section 112(c)(6) area source categories. *See* Pet. Br. at 23.

The reasonableness of EPA's interpretation is also evident when one compares the different source category listing approaches established by Congress in section 112(c). Section 112(c)(1) automatically subjects major sources to emission standards when they fall within the definition of a major source, i.e., if a certain amount of hazardous air pollutants are emitted from sources in the category on an annual basis. 42 U.S.C. § 7412(a)(1). Thus, in section 112(c)(1), Congress set no benchmarks or goals and left no questions unanswered; all major sources must be listed, and all hazardous air pollutants from those major sources must be subject to emission standards. 42 U.S.C. § 7412(c)(1); see *National Lime Ass'n v. EPA*, 233 F.3d 625, 634 (D.C. Cir. 2000) (discussed *infra* pp. 34-36).

By contrast, in section 112(c)(6) and (c)(3), Congress established a source category listing approach based on numeric goals for the control of specific hazardous air pollutants.[15] Under this approach, Congress charged EPA with the responsibility of determining which source categories need to be regulated for those specific pollutants in order to (a) ensure that sources accounting for 90 per centum of the aggregate emissions of each of the thirty "urban" hazardous air pollutants identified by EPA are subject to standards under section 112, 42 U.S.C.

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[15] Pursuant to section 112(c)(3), EPA may also list a category of area sources if it determines that it presents a threat of adverse effects to human health or the environment in a manner that warrants regulation under section 112. 42 U.S.C. § 7412(c)(3). Section 112(c)(3) is not at issue in this case.

§ 7412(c)(3), (k)(3)(B)[16] and (b) ensure that "sources accounting for not less than 90 per centum of the aggregate emissions of [the seven 112(c)(6) pollutants] are subject to standards under subsection (d)(2) or (d)(4)," *id.* § 7412(c)(6). Thus, unlike the listing of major sources pursuant to section 112(c)(1), these two numeric goal-driven listing provisions are focused on addressing specific problems – the thirty urban hazardous air pollutants and the seven persistent bioaccumulative hazardous air pollutants.

Petitioners ignore the similarities between the listing requirements for the seven section 112(c)(6) hazardous air pollutants and the thirty urban hazardous air pollutants in section 112(c)(3). According to Petitioners, Congress intended to allow EPA to "pick and choose which hazardous air pollutants it would regulate," but only for section 112(c)(3) area source categories for which EPA establishes generally available control technologies or management practices (i.e., GACT) pursuant to section 112(d)(5), 42 U.S.C. § 7412(d)(5). *See* Pet. Br. at 27. Petitioners argue that because section 112(c)(6) requires standards pursuant to section 112(d)(2) or (4), Congress must have meant to require regulation of all

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[16] Section 112(c)(3) and (k)(3)(B) of the CAA require that EPA identify 30 HAP that, as a result of area source emissions, present the greatest threat to public health in the largest number of urban areas. 42 U.S.C. § 7412(c)(3), (k)(3)(B). These thirty hazardous air pollutants, which are identified in the Urban Strategy, 64 Fed. Reg. 38,706 (July 19, 1999), are commonly referred to the "urban HAP."

hazardous air pollutants. But, as described in more detail in response to Petitioners' section 112(d)(2) argument below, section 112(d)(2) does not prescribe which hazardous air pollutants must be regulated; rather, section 112(d)(2) and (d)(5) specify only the *level* of control to be achieved. And the question presented by this petition is not what level of control is required; it is which pollutants must be regulated.

On this question, the statutory charges of section 112(c)(3) and (c)(6) are indistinguishable. Both subsections require "sources" to be "subject to" either "standards," 42 U.S.C. § 7412(c)(6), or "regulation," *id.* § 7412(c)(3). Neither explicitly states which pollutants must be subject to "standards" or "regulation." *See* 42 U.S.C. § 7412(c)(3), (6). Thus, EPA has interpreted its charge to be identical with respect to the thirty urban hazardous air pollutants under section 112(c)(3) and with the seven specific hazardous air pollutants listed in section 112(c)(6), that is, regulate or establish standards for those pollutants emitted by the source category that are necessary to achieve the ninety percent requirements. *See* 76 Fed. Reg. at 9457 (JAXX) (explaining the similar charges in section 112(c)(3) and (c)(6)); *see also Sierra Club v. Johnson* 444 F.Supp.2d 46, 49-50 (D.D.C., 2006) ("EPA's duties with respect to hazardous air pollutants listed under [section 112(c)(6)] are identical to its duties with respect to the 30 most dangerous HAPs under Sections 112(c)(3) and 112(k)(3)(B)").

The legislative history of the 1990 amendments to the Clean Air Act also supports EPA's view. As noted by Petitioners (Pet. Br. at 8-9), the Senate Report indicates that Congress was particularly concerned about persistent toxic pollutants that bioaccumulate in biota and, in response, singled out the seven specific persistent organics or heavy metals in section 112(c)(6) for MACT emission standards. S. Rep. No. 101-228, at 154-155 (1989).

Additionally, explanatory language in the conference report of the 1990 Clean Air Act amendments suggests that Congress intended targeted regulation of only the specific pollutants necessary to achieve the ninety percent requirement. Although the report does not discuss section 112(c)(6), in its discussion of the thirty urban hazardous air pollutants singled out for regulation pursuant to section 112(c)(3), the conference report explains that "EPA must list sufficient source categories to assure that 90% of the *emissions of the 30 most serious area source pollutants are regulated*." H.R. Conf. Rep. No. 101-952, at 340 (1990), *reprinted in* 1 A Legislative History of the Clean Air Act Amendments of 1990, at 1790 (Comm. Print 1993) (emphasis added). Thus, according to the Conference Report, Congress expected EPA to regulate the emissions of the thirty specific pollutants, not all emissions from the area sources. As discussed above, while the text of both section 112(c)(3) and (c)(6) require the regulation of "sources," neither subsection specifies on its face whether all pollutants emitted from the "sources" should be subject to regulation. Therefore, the above quoted Conference Report language supports EPA's reading of the ambiguous language in both section 112(c)(3) and (c)(6) as requiring targeted standards for the "emissions of [the specifically listed] pollutants" that EPA determines must be regulated to achieve the ninety percent requirements in both subsections.

Because step one of *Chevron* does not compel Petitioners' reading of the statute, and EPA's interpretation is consistent with the statutory text and purpose of section 112(c)(6), EPA's interpretation is a reasonable one and therefore should be upheld.

B. Section 112(d)(2) Does Not Require Emission Standards for All Hazardous Air Pollutants Emitted from Area Source Categories Listed For Regulation Pursuant to Section 112(c)(6).

Petitioners also contend that section 112(d)(2)'s reference to "the entire list of hazardous air pollutants enumerated in § 112(b) . . . . directs EPA to set standards for all such pollutants, not just one or some." Pet. Br. at 25. This argument fails for several reasons.

First, section 112(d)(2) does not specifically reference section 112(b), as alleged by Petitioners, but instead refers to developing emissions standards for "[HAPs] subject to this section." 42 U.S.C. § 7412(d)(2). As discussed above, in addition to the comprehensive list of hazardous air pollutants in section 112(b), 42 U.S.C. § 7412(b), Congress listed seven specific pollutants in section 112(c)(6), and directed EPA to list thirty hazardous air pollutants under section 112(c)(3). Thus, when establishing emission standards for sources listed pursuant to section 112(c)(6), EPA reasonably interprets the phrase "[HAPs] subject to this section" to refer to the section 112(c)(6) pollutants emitted from the listed source category that must be regulated to satisfy the ninety percent requirement in section 112(c)(6). 42 U.S.C. § 7412(d)(2).

Petitioners isolate a single phrase in section 112(d)(2) ("the hazardous air pollutants subject to this section") and attempt to give it the broadest possible meaning. Pet. Br. at 25. However, "[t]he words of the statute should be read in context, the statute's place in the overall statutory scheme should be considered, and the problem Congress sought to solve should be taken into account to determine whether Congress has foreclosed the agency's interpretation." *NRDC v. EPA*, 489 F.3d 1364, 1373 (D.C. Cir. 2007) (internal quotations omitted). When section 112(d)(2) is read together with section 112(c)(6), and in light of the purpose of section 112(c)(6), the reasonableness of EPA's interpretation (that it must establish section 112(d)(2) standards for only the section 112(c)(6) pollutant or pollutants necessary to reach the ninety percent requirement) is confirmed.

Second, Petitioners rely on section 112(d)(2) to answer a question that is addressed in section 112(c)(6), that is, which sources and which pollutants must be regulated. Section 112(d)(2) describes a particular method or type of emission standard, MACT, providing:

> "Emission standards *promulgated under* this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section. . ."

42 U.S.C. § 7412(d)(2) (emphasis added).

The first core component of that provision is the phrase "[e]mission standards *promulgated under* this subsection," which, rather than instructing EPA when to utilize this section, tells EPA what to do when it does. When EPA is required by some provision of the Act to promulgate emission standards pursuant to section 112(d)(2), they must be MACT. Section 112(d)(2) continues on to explain how a MACT standard is developed. *See* 42 U.S.C. § 7412(d)(2). Because section 112(d)(2) does not specify what "pollutants" are to be regulated, we must look back to the provision that sent us there in the first place – here, section 112(c)(6). And, as described above, EPA reasonably interpreted section 112(c)(6) to require section 112(d)(2) standards for only those specific section 112(c)(6) pollutants that EPA determines must be regulated to achieve section 112(c)(6)'s ninety percent requirement. Thus, Petitioners' reliance on section 112(d)(2) to determine which pollutants EPA must regulate essentially puts the cart before the horse.

None of the cases cited by Petitioners to argue that EPA must "set standards for each hazardous air pollutant when it promulgates § 112(d)(2) standards" compels such a result here. Pet. Br. at 24-25. In *National Lime Ass'n v. EPA*, 233 F.3d 625 (D.C. Cir. 2000), this Court reviewed EPA's regulation of a *major* source category, which was listed pursuant to section 112(c)(1), not 112(c)(6).

The major sources at issue in *National Lime* "released over ten tons of hydrogen chloride ('HCl') annually, qualifying them as major sources of hazardous air pollutants for which the CAA required the Agency to set emission standards." 233 F.3d at 629-30. As major sources, EPA was required to list the category and develop emission standards pursuant to section 112(c)(1) and (d). The major sources also emitted "significant levels of HAP metals, dioxin/furan, mercury, and organic HAPs other than dioxin/furan." *Id.* at 630. When establishing the MACT floors for the hazardous air pollutants, EPA established MACT floors of "no control" for HCl (the pollutant that triggered the major source listing), mercury, and total hydrocarbons (a surrogate for organic HAPs other than dioxin/furan), based on its conclusion that no kiln uses control technologies for these hazardous air pollutants. *Id*. at 633. The *National Lime* Court rejected the argument that EPA was excused from establishing emission standards because no "technology-based pollution control devices" exist to control those hazardous air pollutants. *Id.* at 634. The Court concluded that:

> "Nothing in the statute even suggests that EPA may set emission levels only for those listed HAPs controlled with technology. To the contrary, the statute lists over one hundred specific HAPs, 42 U.S.C. § 7412(b)(1), and requires EPA to 'promulgate regulations establishing emission standards for each category or subcategory of major sources ... of hazardous air pollutants listed for regulation.' [42 U.S.C.] § 7412(d)(1)."

Id. at 633.

The coverage of section 112(c)(6) was not before the Court in *National Lime*. Indeed, the *National Lime* Court did not base its holding on section 112(c)(6) or (d)(2), the two subsections Petitioners claim plainly require EPA to regulate all hazardous air pollutants from area sources listed pursuant to section 112(c)(6). Instead, the Court cited section 112(d)(1) as requiring EPA to "'promulgate regulations establishing emission standards for each category or subcategory of major sources . . . of hazardous air pollutants listed for regulation.'" *Id.* at 633 (citation omitted). As Petitioners note, *National Lime's* quotation of 112(d)(1) omitted the phrase "and area sources" after "major sources." Pet. Br. at 31. Petitioners argue, however, that this omission is irrelevant because "this case in no way turns on the distinction between major and area sources." *Id.* at 31-32.

Petitioners' view requires the Court to ignore the plain and obvious difference between section 112(c)(6) and the provision under which EPA listed the major source category in *National Lime*, section 112(c)(1). While the text of section 112(c)(1), 42 U.S.C. § 7412(c)(1), requires the listing of major sources of "the air pollutants listed pursuant to subsection (b)," section 112(c)(6) explicitly lists seven pollutants targeted by Congress for regulation. *See* 42 U.S.C. § 7412(c)(6). The unique listing requirements of section 112(c)(6) were not before the Court in *National Lime*; thus, the Court had no occasion to interpret section 112(d)(1)'s application to area sources listed pursuant to section 112(c)(6).

The other two cases on which Petitioners rely – *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007)[17] and *Mossville Envtl. Action Now v. EPA*, 370 F.3d 1232, 1236 (D.C. Cir. 2004)[18] – are similarly inapposite. Like *National Lime,* both cases address major sources listed for regulation pursuant to section 112(c)(1) – not area sources listed pursuant to section112(c)(6). And neither case interprets section 112(d)(2) as mandating emission standards for all hazardous air pollutants. In fact, neither case even suggests that section 112(d)(2) is a source of guidance on which hazardous air pollutants must be regulated.

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[17] In *Sierra Club*, EPA had set "no emissions reductions floors" for existing small tunnel brick kilns because the best performers "used no air pollution control technology and because changes in non-technology factors were not 'appropriate' or 'viable.'" 479 F.3d at 883.

[18] In the statutory background section of *Mossville Envtl. Action Now*, the Court did quote the *National Lime* passage relied on by Petitioners, 370 F.3d at 1236, but the issue in that case was whether EPA could utilize a surrogate in establishing a MACT standard, and the Court held that EPA had not adequately demonstrated a correlation between the surrogate and the HAPs emitted by the source. *Id.* at 1242-43.

In sum, EPA's reading of section 112(d)(2), in light of the source category listing instructions in section 112(c)(6), provides meaning to each provision and its unique role in the overall statutory structure. And even if it were not clear that section 112(d)(2)'s role is limited to describing how to establish MACT standards, as outlined above, under the considerable deference accorded to EPA, the Court need only find "that EPA's understanding of this very 'complex statute' is a sufficiently rational one to preclude a court from substituting its judgment for that of EPA." *Chem. Mfrs. Ass'n v. NRDC, Inc.*, 470 U.S. 116, 125 (1985) (citation omitted). At the very least, EPA's choice to apply section 112(d)(2) standards only to mercury emissions from the thermal processes at issue here, which EPA determined must be regulated to achieve the ninety percent requirement in section 112(c)(6), is a rational reconciliation of the requirements of those two subsections.

II. EPA IS NOT REQUIRED TO REGULATE FUGITIVE MERCURY EMISSIONS THAT ARE EMITTED FROM SOURCES OUTSIDE THE AREA SOURCE CATEGORY LISTED FOR REGULATION.

Petitioners' second category of challenges to the Final Rule is framed as a challenge to EPA's alleged failure to regulate fugitive emissions of mercury and other hazardous air pollutants from gold mine facilities. Pet. Br. at 34. However, at bottom, these arguments boil down to a challenge to the scope of the listed source category, which EPA has clarified both in the Final Rule and the accompanying preambles to include only the thermal processes that occur after ore crushing, which includes roasting operations, autoclaves, carbon kilns, electrowinning, preg tanks, mercury retorts, and furnaces – and not waste rock dumps, heap leach pads, and tailings impoundments. 76 Fed. Reg. at 9450, 9458, 9480/2 (to be codified as 40 C.F.R. § 63.11640(b)) (JAXX, XX, XX) (defining the specific "affected sources" subject to regulation).

Each of Petitioners' arguments related to fugitive emissions is predicated on the false assumption that EPA actually defined the listed area source category more broadly than the thermal processes that occur after ore crushing, covering the entire gold mine facility, including mining pits, waste rock dumps, heap leach pads, and tailings facilities. *See* Pet. Br. at 38-39. Petitioners further argue that because EPA allegedly included sources of fugitive emissions in this area source category, EPA was required pursuant to section 112(d)(2) or (h) to establish emission standards for those emissions. Pet. Br. at 34-35, 38-39.

Petitioners do not argue that EPA lacks discretion to determine the scope of the source category listing under section112(c)(6). Rather, Petitioners offer a competing interpretation of EPA's own regulation. And in such challenges, EPA's interpretation of its own regulation is entitled to the highest level of deference under *Auer v. Robbins*, 519 U.S. at 461 (agency's interpretation of its own regulation is "controlling unless 'plainly erroneous or inconsistent with the regulation'") (citation omitted).

Because EPA did not include the sources of fugitive mercury emissions, such as waste rock dumps, heap leach pads, and tailings impoundments, when it listed this source category pursuant to section 112(c)(6), the Act does not require it to develop emission standards for those sources. And, in any event, the record demonstrates that EPA carefully considered the relevant data and information concerning fugitive emissions and reasonably concluded that it did not have sufficient data to include those fugitive emission sources for regulation at this time.

A. The Listed Area Source Category Does Not Include the Sources of Fugitive Mercury Emissions Identified by Petitioners.

In section 112(c)(6), Congress left it to EPA's discretion to identify which source categories to list. The only restriction placed on EPA was to list sufficient categories to account for at least ninety percent of the emissions of the seven specific 112(c)(6) pollutants. *See* 42 U.S.C. § 7412(c)(6). Using the discretion granted to it by the Act, EPA determined that it was necessary to regulate the mercury emissions from "the area source category cover[ing] the thermal processes that occur after ore crushing, including roasting operations . . ., autoclaves, carbon kilns, electrowinning, preg tanks, mercury retorts, and furnaces." 76 Fed. Reg. at 9458/1. *See also* 75 Fed. Reg. 22,472, 22,473/2.[19]

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[19] Beginning in the preamble of the proposed rule, EPA has consistently provided clarifying language limiting the scope of the area source category to the following (continued . . .)

To clarify the scope of the source category listed for regulation, section 112 standards include a description of the "affected sources," specifying the collection of equipment, activities, or both, that is included in a source category for which a section 112(d) standard or other relevant standard is established pursuant to section 112. 76 Fed. Reg. at 9480 (JAXX); *see also* 40 C.F.R. § 63.2.

In this rule, "affected sources" are defined as:

> each collection of 'ore pretreatment processes' at a gold mine ore processing and production facility, each collection of 'carbon processes with mercury retorts' at a gold mine ore processing and production facility, each collection of 'carbon processes without mercury retorts' at a gold mine ore processing and production facility, and each collection of 'non-carbon concentrate processes' at a gold mine ore processing and production facility, as defined in § 63.11651.

76 Fed. Reg. at 9480/2 (codified at 40 C.F.R. §63.11640(b)). In 40 C.F.R. § 63.11651, EPA provides additional definitions of each of the processes listed as "affected sources," describing exactly which components of the facilities are subject to regulation. 76 Fed. Reg. at 9487-488 (JAXX-XX). As described above, *supra* pp. 15-16, the sources included in the definitions of the four affected sources cover the thermal processes that occur after ore crushing, and none of the affected

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processes: roasting operations, autoclaves, carbon regeneration kilns, electrowinning cells, pregnant solution tanks, mercury retorts, and melt furnaces. 75 Fed. Reg. 22,473/2 (JAXX).

sources includes sources of fugitive emissions, such as waste rock dumps, heap leach pads, and tailings impoundments. *Id.*

Petitioners dismiss or ignore the regulatory definition of “affected sources” and EPA’s specific preamble statements describing the scope of this source category. Instead Petitioners focus their attention on more broadly worded regulatory text in 40 C.F.R. § 63.11640(a), defining gold mine ore processing and production facilities, to argue that the listed source category must be the entire facility, that is, “any industrial facility engaged in the processing of gold mine ore that uses any of [several listed] processes.” Pet. Br. at 38 (quoting 40 C.F.R. § 63.11651). According to Petitioners, this definition includes the sources of fugitive emissions, such as waste rock dumps, heap leach pads, and tailings impoundments, and thus, EPA must establish emission standards for those emissions. Pet. Br. at 38-39.

As described above, the preamble language and plain text of 40 C.F.R. § 63.11640(b) belie Petitioners’ attempt to portray the source category listed for regulation as the entire gold mine facility. *See* 76 Fed. Reg. at 9480 (JAXX). Petitioners are correct that the definition of “gold mine ore processing and production facilities,” *read alone*, is not limited to the specific processes listed in § 63.11640(b). However, “gold mine ore processing and production facilities” is not the area source category listed for regulation. In 40 C.F.R. § 63.11640, entitled

"Am I subject to this subpart?," EPA starts by casting a wide net to ensure that the entire potentially regulated community, i.e., all gold mine ore processing and production facilities, are on notice of the requirements of this rule. 76 Fed. Reg. at 9480/2 (40 C.F.R. § 63.11640(a)) ("You are subject to this subpart if you own or operate a gold mine ore processing and production facility as defined in § 63.11651, that is an area source"). But that is not all EPA wrote. Rather, the regulation continues in 40 C.F.R. § 63.11640(b) to clarify that the area source categories *subject to regulation* are the "affected sources." 76 Fed. Reg. at 9480/2 (emphasis added) (JAXX). Thus, reading the entire regulatory text defeats Petitioners' interpretation that the area source category listed for regulation includes the entire gold mine ore processing and production facility.

Petitioners also note that the preamble to the Final Rule begins with a broad summary statement that, on its face, places no limitations on the area source category. Specifically, EPA summarized that it "is adding the gold mine ore processing and production area source category to the list of source categories to be regulated under Section 112(c)(6)." 76 Fed. Reg. at 9450 (JAXX). This preamble statement, with nothing more, might leave one to assume that EPA intended to list gold mine ore processing and production facilities in their entirety. But such an interpretation based on an introductory summary statement cannot survive in light of the specific and detailed preamble language clearly limiting the area source category to the specifically listed thermal processes and the regulatory text defining those sources as the affected sources subject to regulation in 40 C.F.R. § 63.11640(b).

Petitioners do not argue that their preferred, broader definition of the source category listing is required by the statute, or that EPA's discretion in defining area source categories is limited. Instead, Petitioners argue that because they have identified a reading of the regulation that suggests EPA listed a broader source category than EPA intended, EPA must be compelled to establish emission standards for all sources that fall within Petitioners' more expansive interpretation of EPA's regulation. *See* Pet. Br. at 38-39. However, EPA's interpretation of its own regulation, limiting the area source category to the thermal processes that occur after ore crushing, 76 Fed. Reg. at 9458/1 (JAXX), is entitled to controlling weight. *See Associated Builders & Contractors, Inc. v. Herman*, 166 F.3d 1248, 1254 (D.C. Cir. 1999) (citation omitted) (An agency's interpretation of its own regulations is entitled to a high degree of deference, and must be given "controlling weight unless it is plainly erroneous or inconsistent with the regulation.") (citation omitted).

EPA does not dispute that *if* it had included the sources of fugitive mercury emissions in the listed area source category, section 112(d)(2) would require EPA to establish emission standards for those emissions. However, as shown above, EPA did not include the sources of fugitive mercury emissions identified by Petitioners such as mining pits, waste rock dumps, heap leach pads, and tailing facilities, in the listed area source category. *See* Pet. Br. at 38. Because listing a source category is a condition precedent to the requirement to set standards pursuant to section 112(d)(2), EPA appropriately did not set standards for the fugitive emissions at issue. Thus, Petitioners' argument that section 112(d)(2) requires regulation of the fugitive mercury emission sources is without merit.

B. EPA's Assessment of the Data Related to Fugitive Emissions and Decision Not to List Sources Such As Mining Pits, Waste Rock Dumps, Heap Leach Pads, and Tailing Facilities Was Reasonable.

As explained above, Congress left it to EPA to identify which source categories to list for regulation to meet the ninety percent requirement in section 112(c)(6). Here, EPA reasonably determined that it needed to list the thermal processes that occur after ore crushing to achieve the ninety percent requirement. Nonetheless, EPA still reviewed and analyzed the data concerning fugitive emissions from sources such as mining pits, waste rock dumps, heap leach pads, and tailing facilities, and determined that it lacked sufficient data concerning these emissions to warrant listing these sources under section 112(c)(6).

Petitioners attack EPA's scientific and technical judgments regarding fugitive emissions data and thus have a particularly high burden to prevail. *See City of Waukesha v. EPA*, 320 F.3d 228, 247 (D.C. Cir. 2003) (agency entitled to "extreme degree of deference" when evaluating technical and scientific matters within its expertise). As explained below, Petitioners fail to demonstrate that EPA was arbitrary or that EPA failed to consider important information in deciding the scope of the listed source category. Petitioners simply disagree with EPA's conclusions. However, under the deferential review standard, the Court must defer to EPA's conclusions if they are reasonable and supported by the record, even if Petitioners or the Court would arrive at a different conclusion. *NRDC v. EPA*, 902 F.2d 962, 971 (D.C. Cir. 1990) ("It is simply not the court's role to 'second-guess the scientific judgments of the EPA.'") (citation omitted).

1. EPA Reasonably Declined to List Sources of Fugitive Emissions After Concluding That it Lacked Sufficient Data.

Because the fugitive emission sources discussed above were not included in the proposed source category listing, several commenters included a discussion of fugitive emissions in their submissions to the agency, and the record shows that EPA thoroughly considered these comments and the data in the record. Petitioners rely on partial quotations from the preamble and isolated snapshots of the record to suggest that EPA simply refused to consider or ignored the data that were submitted. *See* Pet. Br. at 39, 41-43.

EPA did not, as Petitioners claim, simply conclude "that it had '*no data* on fugitive mercury emissions at gold mine facilities.'" Pet. Br. at 41 (quoting 76

Fed. Reg. at 9458/1) (emphasis added by Petitioners). Instead, in the text immediately preceding the partial quotation reproduced by Petitioners, EPA made clear that it had no data "[*o*]*ther than the recent preliminary research*," which EPA discussed and explained why, at the time, such research was insufficient. *See* 76 Fed. Reg. at 9458/1 (explaining the research was preliminary).

The soundness of EPA's technical determination regarding the insufficiency of the data from the area sources of fugitive mercury emissions is confirmed by the record. Particularly illustrative on this point are the conclusions regarding fugitive emissions contained in a comprehensive report commissioned by EPA and performed by RTI International, summarizing that:

> There remains a significant lack of emissions test data from a variety of gold mining processes. While stack test data are becoming available from thermal processes as a result of the Nevada Mercury Control Program (described in the Section 5), fugitive emission sources are more difficult to characterize. There is incredible uncertainty regarding the significance of fugitive sources, such as grinding and milling operations, heap leaching, and tailing ponds, on a facility's overall mercury emissions.

RTI Evaluation at 23 (JAXX).

A thorough reading of the materials relied upon by Petitioners also confirms the reasonableness of EPA's assessment. For example, Petitioners note that in a report by Greg Jones & Glenn Miller, *Mercury and Modern Gold Mining in Nevada*, draft final report to EPA Region IX (Mar. 2005), EPA-HQ-OAR-2010-0239- 0130 [hereinafter "Jones & Miller] (JAXX), the authors stated that

"'Mercury can be photochemically released from soils as elemental mercury into the atmosphere,' and waste rock dumps, tailings impoundments, and heap leach piles are sources of mercury emissions." Pet. Br. at 40 (quoting Jones & Miller at 3 (JAXX)). However, Jones & Miller continued to explain that this type of fugitive emissions of mercury is "reported to be relative minor" and that "methods for measurement of this volatized mercury do not appear to be well-tested." Jones & Miller at 13 (JAXX). Later in the same report, the authors reiterate that little is known about photochemically triggered fugitive emissions – the exact conclusion Petitioners fault EPA for reaching – stating that "a relatively unknown component is the amount of mercury that is photochemically released from this rock" at waste dumps. Jones & Miller at 26 (JAXX).[20]

The rulemaking comments submitted by Glenn C. Miller, also cited by Petitioners, further support EPA's position that it lacks sufficient information about the fugitive emissions. *See* Comments of Glenn C. Miller, EPA-HQ-OAR-2010-0239-0272.1, at 2 (JAXX) ("The chemical process that allows volatilization of mercury from heaps and tailings facilities *is not well understood,* but may occur as result of sunlight driven photoreductive reactions that convert

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[20] Remarkably, Petitioners rely on the Miller & Jones article to first argue that EPA had sufficient data to regulate fugitive emissions, only to later point to the very same article as evidence of the lack of data in order to argue that EPA should be required to obtain additional evidence. Compare Pet. Br. at 40 & 48-49.

mercuric ion to elemental mercury which then volatilizes.") (emphasis added). In fact, Dr. Miller expressly acknowledges that "further research will be required for more complete understanding of the factors affecting mercury volatization." *Id*.

Petitioners also point to a handful of evidence in the record that indicates that some gold mine facilities are using chemical compounds to control mercury emissions, and that at least one facility claims that its use of certain chemical compounds has significantly reduced fugitive vapor emissions of mercury. Pet. Br. at 39, 41-43. However, even comments relied upon by Petitioners recognize that any investigation into the use of chemical compounds to control these fugitive emissions is at its initial stages and additional data are necessary. *See* Comments of Northern Alaska Envtl. Center, EPA-HQ-OAR-2010-0239-0277.1, at 4 (JAXX) ("Further, initial studies have found that various reagents can successfully trap mercury in heap leaches, and may be able to trap mercury in waste rock piles . . . . EPA should explore the use of reagents to trap mercury in waste rock piles and tailings ponds to control fugitive emissions.") Petitioners may disagree with EPA's assessment of the evidence; however, they have presented no supportable allegations that EPA "has chosen to ignore the evidence." Pet. Br. at 41 (quoting *Consol. Rail Corp. v. Surface Transp. Bd.*, 93 F.3d 793, 799 (D.C. Cir. 1996)).

2. C.S. Eckley et al. Articles Relied on by Petitioners Are Not Part of the Administrative Record and Do Not Support Petitioners' Position that EPA's Analysis Was Arbitrary.

The two studies by C.S. Eckley et al. that Petitioners cite are not part of the administrative record and are therefore not properly before this Court. Moreover, those studies fail to support Petitioners' claims that EPA's assessment of the data was arbitrary.[21] First, as set forth in detail in EPA's September 9, 2011, Opposition to Petitioners Motion to Supplement the Record, neither of the C.S. Eckley et al. articles was considered by the Agency during this rulemaking because: (1) they were not submitted as comments for the record, (2) they were not relied upon in the notices of proposed rulemaking or Final Rule at issue in this case, and (3) the Administrator had no opportunity to even review the documents at issue before signing the Final Rule, let alone determine that they are of central relevance to the rulemaking. 42 U.S.C. § 7607(d)(7)(A).

Second, the record does include an early version of the work in the Eckley articles, which, among other things, discussed fugitive emissions from area sources

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[21] The two extra-record articles are (1) C.S. Eckley et al., *Scaling Non-Point-Source Mercury Emissions from Two Active Industrial Gold Mines: Influential Variables and Annual Emission Estimates*, 45 Envtl. Sci. & Tech. 392, 397 (2011) (published Jan. 15, 2011, available online Dec. 10, 2010); and (2) C.S. Eckley et al., *Measurement of Surface Mercury Fluxes at Active Industrial Gold Mines in Nevada (USA)*, 409 (3) Sci. Total Env't 514, 514 (2011) (published Jan. 1, 2011).

such as heap leach piles and tailing impoundments, but it confirms the factual uncertainty identified by EPA. *See* EPA-HQ-OAR-2010-0239-0406 at 1 (JAXX). As noted by EPA in the preamble, this "preliminary research" represented studies at only two facilities and had not been published or peer-reviewed. 76 Fed. Reg. at 9458/1 (JAXX). Rather than refuting this assessment, the Eckley document in the record expands on this point:

> Because there are a variety of factors (such as mercury concentration, age of the materials, climatic conditions, weather, ore type, ore processing techniques, etc.) that can affect the emission of fugitive mercury emissions from different mining surfaces and the uncertainty associated with each of the factors, this data, developed for these two mines cannot be extrapolated to come up with emissions estimates for other mines.

See EPA-HQ-OAR-2010-0239-0406 at 1 (JAXX). Accordingly, EPA reasonably determined that these data, from only two facilities, were not sufficient to justify including these fugitive emission sources as part of this source category that EPA listed for regulation pursuant to section 112(c)(6), 42 U.S.C. § 7412(c)(6).

Even if the Court were to consider the extra-record articles relied on by Petitioners, the soundness of EPA's judgment is confirmed. Neither of the new extra-record articles includes data from any new sites. Thus, the prior assessment that such data "cannot be extrapolated to come up with emissions estimates for other mines," still holds true. EPA-HQ-OAR-2010-0239-0406 at 1 (JAXX). And, as concluded by the authors of the study, additional data is needed:

> [G]iven the uncertainty associated with flux estimates for the materials being actively heap-leached and tailings impoundments and their apparent importance relative to the total mine non-point-source releases, additional measurements from these surfaces are needed.

C.S. Eckley et al., *Scaling Non-Point-Source Mercury Emissions from Two Active Industrial Gold Mines: Influential Variables and Annual Emission Estimates*, 45 Envtl. Sci. & Tech. 392, 399 (2011).

3. EPA Was Not Required to Undertake Additional Research After it Determined the Data in the Record Were Insufficient.

Petitioners' final argument actually confirms the reasonableness of EPA's determination that it had insufficient data. After having spent the first half of their fugitive emissions argument insisting that EPA was wrong to have decided additional data were necessary, Petitioners round out their brief by arguing that EPA was arbitrary for failing to undertake additional research or information gathering. To support this argument Petitioners admit that both the RTI Evaluation and Jones & Miller study demonstrate that there was uncertainty regarding the nature of fugitive mercury emissions from gold mining and that further studies are required. Pet. Br. at 48-49.

Moreover, Petitioners' argument that EPA was required to develop additional data because "when an agency has a statutory obligation to take action, as EPA did here to control fugitive emissions, the mere claim of uncertainty or lack of information is an inadequate explanation for failing to do so," also fails because

EPA had no statutory obligation to establish emission standards for those sources. Pet. Br. at 47 (citation omitted). When EPA lists a source category, it has a statutory obligation to establish emission standards for the sources included in that source category. But EPA does not have an obligation to establish emission standards for sources, such as the sources of fugitive emissions at issue here, that are outside of the source category listed for regulation.

Further, EPA's satisfaction of the ninety percent requirement in section 112(c)(6) is not at issue in this case. The factual question of whether EPA's standards cover ninety percent of the baseline emissions of the hazardous air pollutants listed in section 112(c)(6) is currently at issue in *Sierra Club et al. v. EPA*, No. 11-1184 (D.C. Cir.). As explained above, EPA has discretion in deciding what sources to list for regulation to meet the ninety percent requirement in section 112(c)(6), and it reasonably chose, in this case, to limit those sources to the thermal processes at gold mine ore processing and production facilities that occur after ore crushing. 76 Fed. Reg. at 9458.

In sum, EPA's conclusions are supported by the record and should be upheld. Petitioners' mere disagreement with EPA's assessment of the available data does not overcome the "extreme" deference applied to EPA's scientific or technical judgments made within its area of expertise. *Huls Am. Inc.*, 83 F.3d at 452.

CONCLUSION

The petition should be denied.

Respectfully submitted,

Ignacia S. Moreno
Assistant Attorney General
Environment & Natural Resources
Division

/s/ Jered J. Lindsay
Jered J. Lindsay
Environmental Defense Section
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986
Tel: (202) 514-9277
Fax: (202) 514-8865

Attorney for Respondent

Amy Huang Branning
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

November 8, 2011

CERTIFICATE OF COMPLIANCE WITH WORD LIMITS

Pursuant to Fed. R. App. P. 37(a)(7)(C), and exclusive of the components of the brief excluded from the word limit pursuant to Fed. R. App. P. 32(a)(7)(B)(iii) and Circuit Rule 32 (a)(1), I certify that the foregoing Brief of Respondent EPA contains 12,140 words, as counted by the "word count" feature of my Microsoft Office Word software.

/s/ Jered J. Lindsay
JERED J. LINDSAY

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of the foregoing Brief for Respondents via the Court's CM/ECF system on this 8th day of November, 2011.

/s/ Jered J. Lindsay
JERED J. LINDSAY

ADDENDUM

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CODE OF FEDERAL REGULATIONS

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➡ Subpart Eeeeeee. National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category (Refs & Annos)
Applicability and Compliance Dates

§ 63.11640 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a gold mine ore processing and production facility as defined in § 63.11651, that is an area source.

(b) This subpart applies to each new or existing affected source. The affected sources are each collection of “ore pretreatment processes” at a gold mine ore processing and production facility, each collection of “carbon processes with mercury retorts” at a gold mine ore processing and production facility, each collection of “carbon processes without mercury retorts” at a gold mine ore processing and production facility, and each collection of “non-carbon concentrate processes” at a gold mine ore processing and production facility, as defined in § 63.11651.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source on or before April 28, 2010.

(2) An affected source is new if you commenced construction or reconstruction of the affected source after April 28, 2010.

(c) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) If you own or operate a source subject to this subpart, you must have or you must obtain a permit under 40 CFR part 70 or 40 CFR part 71.

§ 63.11641 What are my compliance dates?

(a) If you own or operate an existing affected source, you must comply with the applicable provisions of this subpart no later than February 17, 2014.

(b) If you own or operate a new affected source, and the initial startup of your affected source is on or before February 17, 2011, you must comply with the provisions of this subpart no later than February 17, 2011.

(c) If you own or operate a new affected source, and the initial startup of your affected source is after February 17, 2011, you must comply with the provisions of this subpart upon startup of your affected source.

Standards and Compliance Requirements

§ 63.11645 What are my mercury emission standards?

(a) For existing ore pretreatment processes, you must emit no more than 127 pounds of mercury per million tons of ore processed.

(b) For existing carbon processes with mercury retorts, you must emit no more than 2.2 pounds of mercury per ton of concentrate processed.

(c) For existing carbon processes without mercury retorts, you must emit no more than 0.17 pounds of mercury per ton of concentrate processed.

(d) For existing non-carbon concentrate processes, you must emit no more than 0.2 pounds of mercury per ton of concentrate processed.

(e) For new ore pretreatment processes, you must emit no more than 84 pounds of mercury per million tons of ore processed.

(f) For new carbon processes with mercury retorts, you must emit no more than 0.8 pounds of mercury per ton of concentrate processed.

(g) For new carbon processes without mercury retorts, you must emit no more than 0.14 pounds of mercury per ton of concentrate processed.

(h) For new non-carbon concentrate processes, you must emit no more than 0.1 pounds of mercury per ton of concentrate processed.

(i) The standards set forth in this section apply at all times.

§ 63.11646 What are my compliance requirements?

(a) Except as provided in paragraph (b) of this section, you must conduct a mercury compliance emission test within 180 days of the compliance date for all process units at new and existing affected sources according to the requirements in paragraphs (a)(1) through (a)(13) of this section. This compliance testing must be repeated annually thereafter, with no two consecutive annual compliance tests occurring less than 3 months apart or more than 15 months apart.

(1) You must determine the concentration of mercury and the volumetric flow rate of the stack gas according to the following test methods and procedures:

(i) Method 1 or 1A (40 CFR part 60, appendix A–1) to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) and prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F (40 CFR part 60, appendix A–1), or Method 2G (40 CFR part 60, appendix A–2) to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B (40 CFR part 60, appendix A–2) to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10, “Flue and Exhaust Gas Analyses” (incorporated by reference-see § 63.14) as an alternative to EPA Method 3B.

(iv) Method 4 (40 CFR part 60, appendix A–3) to determine the moisture content of the stack gas.

(v) Method 29 (40 CFR part 60, appendix A–8) to determine the concentration of mercury, except as provided in paragraphs (a)(1)(vi) and (vii) of this section.

(vi) Upon approval by the permitting authority, ASTM D6784; “Standard Test Method for Elemental, Oxidized, Particle–Bound and Total Mercury in Flue Gas Generated from Coal–Fired Stationary Sources (Ontario Hydro Method)” (incorporated by reference--see § 63.14) may be used as an alternative to Method 29 to determine the concentration of mercury.

(vii) Upon approval by the permitting authority, Method 30B (40 CFR part 60, appendix A–8) may be used as an alternative to Method 29 to determine the concentration of mercury for those process units with relatively low particulate-bound mercury as specified in Section 1.2 of Method 30B.

(2) A minimum of three test runs must be conducted for each performance test of each process unit. Each test run conducted with Method 29 must collect a minimum sample volume of 0.85 dry standard cubic meters (30 dry standard cubic feet). If conducted with Method 30B or ASTM D6784, determine sample time and volume according to the testing criteria set forth in the relevant method. If the emission testing results for any of the emission points yields a non-detect value, then the minimum detection limit (MDL) must be used to calculate the mass emissions rate (lb/hr) used to calculate the emissions factor (lb/ton) for that emission point and, in turn, for calculating the sum of the emissions (in units of pounds of mercury per ton of concentrate, or pounds of mercury per million tons of ore) for all emission points subject to the emission standard for determining compliance. If the resulting mercury emissions are greater than the MACT emission standard, the owner or operator may use procedures that produce lower MDL results and repeat the mercury emissions testing one additional time for any emission point for which the measured result was below the MDL. If this additional testing is performed, the results from that testing must be used to determine compliance (i.e., there are no additional opportunities allowed to lower the MDL).

(3) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. Performance tests must be conducted under operating conditions (including process or production throughputs) that are based on representative performance. Record and report to the permit authority the process throughput for each test run. For sources with multiple emission units (e.g., two roasters, or a furnace, electrowinning circuit and a mercury retort) ducted to a common control device and stack, compliance testing must be performed either by conducting a single compliance test with all affected emissions units in operation or by conducting a separate compliance test on each emissions unit. Alternatively, the owner or operator may request approval from the permit authority for an alternative testing approach. If the units are tested separately, any emissions unit that is not tested initially must be tested as soon as is practicable. If the performance test is conducted when all affected units are operating, then the number of hours of operation used for calculating emissions pursuant to paragraphs (a)(6) and (7) of this section must be the total number of hours for the unit that has the greatest total operating hours for that period of time, or based on an appropriate alternative method approved by the permit authority to account for the hours of operation for each separate unit in these calculations.

(4) Calculate the mercury emission rate (lb/hr), based on the average of 3 test run values, for each process unit (or combination of units that are ducted to a common stack and are tested when all affected sources are operating pursuant to paragraph (a)(3) of this section) using Equation (1) of this section:

Tabular or graphic material set at this point is not displayable.

Where:

E = mercury emissions in lb/hr;

Cs = concentration of mercury in the stack gas, in grains per dry standard cubic foot (gr/dscf);

Qs = volumetric flow rate of the stack gas, in dry standard cubic feet per hour; and

K = conversion factor for grains (gr) to pounds (lb), 1.43×10^{-4}.

(5) Monitor and record the number of one-hour periods each process unit operates during each month.

(6) For the initial compliance determination for both new and existing sources, determine the total mercury emissions for all the full calendar months between the compliance date and the date of the initial compliance test by multiplying the emission rate in lb/hr for each process unit (or combination of units ducted to a common stack that are tested together) by the number of one-hour periods each process unit (or the unit that had the greatest total operating hours among the combination of multiple units with one stack that are tested together, or an alternative method approved by the permit authority, pursuant to paragraph (a)(3) of this section) operated during those full calendar months prior to the initial compliance test. This initial period must include at least 1 full month of operations. After the initial compliance test, for subsequent compliance tests, determine the mercury mass emissions for the 12 full calendar months prior to the compliance test in accordance with the procedures in paragraph (a)(7) of this section. Existing sources may use a previous emission test for their initial compliance determination in lieu of conducting a new test if the test was conducted within one year of the compliance date using the methods specified in paragraphs (a)(1) through (a)(4) of this section, and the tests were representative of current operating processes and conditions. If a previous test is used for their initial compliance determination, 3 to 12 full months of data on hours of operation and production (i.e., million tons of ore or tons of concentrate), including the month the test was conducted, must be used to calculate the emissions rate (in units of pounds of mercury per million tons of ore for the ore pretreatment affected sources, or in units of pounds of mercury per tons of concentrate for the other affected sources).

(7) For compliance determinations following the initial compliance test for new and existing sources, determine the total mercury mass emissions for each process unit for the 12 full calendar months preceding the performance test by multiplying the emission rate in lb/hr for each process unit (or combination of units ducted to a common stack that are tested together) by the number of one-hour periods each process unit (or the unit that had the greatest total operating hours among the combination of multiple units with one stack that are tested together, or an alternative method approved by the permit authority, pursuant to paragraph (a)(3) of this section) operated during the 12 full calendar months preceding the completion of the performance tests.

(8) You must install, calibrate, maintain and operate an appropriate weight measurement device, mass flow meter, or densitometer and volumetric flow meter to measure ore throughput for each roasting operation and autoclave and calculate hourly, daily and monthly totals in tons of ore according to paragraphs (a)(8)(i) and (a)(8)(ii) of this section.

(i) Measure the weight or the density and volumetric flow rate of the oxidized ore slurry as it exits the roaster oxidation circuit(s) and before the carbon-in-leach tanks. Alternatively, the weight of the ore can be measured “as fed” if approved by the permit authority as an acceptable equivalent method to measure amount of ore processed.

(ii) Measure the weight or the density and volumetric flow rate of the ore slurry as it is fed to the autoclave(s). Alternatively, the weight or the density and volumetric flow rate of the oxidized ore slurry can be measured as it exits the autoclave and before the carbon-in-leach tanks if approved by the permit authority as an acceptable equivalent method to measure amount of ore processed.

(9) Measure the weight of concentrate (produced by electrowinning, Merrill Crowe process, gravity feed, or other methods) using weigh scales for each batch prior to processing in mercury retorts or melt furnaces. For facilities with mercury retorts, the concentrate must be weighed in the same state and condition as it is when fed to the mercury retort. For facilities without mercury retorts, the concentrate must be weighed prior to being fed to the melt furnace before drying in any ovens. For facilities that ship concentrate offsite, measure the weight of concentrate as shipped offsite. You must keep accurate records of the weights of each batch of concentrate processed and calculate, and record the total weight of concentrate processed each month.

(10) You must maintain the systems for measuring density, volumetric flow rate, and weight within ± 5 percent accuracy. You must describe the specific equipment used to make measurements at your facility and how that equipment is periodically calibrated. You must also explain, document, and maintain written procedures for determining the accuracy of the measurements and make these written procedures available to your permitting authority upon request. You must determine, record, and maintain a record of the accuracy of the measuring systems before the beginning of your initial compliance test and during each subsequent quarter of affected source operation.

(11) Record the weight in tons of ore for ore pretreatment processes and concentrate for carbon processes with mercury retorts, carbon processes without mercury retorts, and for non-carbon concentrate processes on a daily and monthly basis.

(12) Calculate the emissions from each new and existing affected source for the sum of all full months between the compliance date and the date of the initial compliance test in pounds of mercury per ton of process input using the procedures in paragraphs (a)(12)(i) through (a)(12)(iv) of this section to determine initial compliance with the emission standards in § 63.11645. This must include at least 1 full month of data. Or, if a previous test is used pursuant to paragraph (a)(6) of this section for the initial compliance test, use a period of time pursuant to paragraph (a)(6) of this section to calculate the emissions for the affected source. After this initial compliance test period, determine annual compliance using the procedures in paragraph (a)(13) of this section for existing sources.

(i) For ore pretreatment processes, divide the sum of mercury mass emissions (in pounds) from all roasting operations and autoclaves during the number of full months between the compliance date and the initial compliance test by the sum of the total amount of gold mine ore processed (in million tons) in these process units during those same full months following the compliance date. Or, if a previous test is used to determine initial compliance, pursuant to paragraph (a)(6) of this section, then the same 3 to 12 full months of production data (i.e., million tons of ore) and hours of operation referred to in paragraph (a)(6) of this section, must be used to determine the emissions in pounds of mercury per million tons of ore.

(ii) For carbon processes with mercury retorts, divide the sum of mercury mass emissions (in pounds) from all carbon kilns, preg tanks, electrowinning, mercury retorts, and melt furnaces during the initial number of full months between the compliance date and the initial compliance tests by the total amount of concentrate (in tons) processed in these process units during those same full months following the compliance date. If a previous test is used to determine initial compliance, pursuant to paragraph (a)(6) of this section, then the same 3 to 12 full months of production data (i.e., tons of concentrate) and hours of operation referred to in paragraph (a)(6) of this section, must be used to determine the emissions in pounds of mercury per tons of concentrate.

(iii) For carbon processes without mercury retorts, divide the sum of mercury mass emissions (in pounds) from all carbon kilns, preg tanks, electrowinning, and melt furnaces during the initial number of full months between the compliance date and the initial compliance tests by the total amount of concentrate (in tons) processed in these process units during those same full months following the compliance date. If a previous test is used to determine initial compliance, pursuant to paragraph (a)(6) of this section, then the same 3 to 12 full months of production data (i.e., tons of concentrate) and hours of operation referred to in paragraph (a)(6) of this section, must be used to determine the emissions in pounds of mercury per tons of concentrate.

(iv) For non-carbon concentrate processes, divide the sum of mercury mass emissions (in pounds) from mercury retorts and melt furnaces during the initial number of full months between the compliance date and the initial compliance tests by the total amount of concentrate (in tons) processed in these process units during those same full months following the compliance date. If a previous test is used to determine initial compliance, pursuant to paragraph (a)(6) of this section, then the same 3 to 12 full months of production data (i.e., tons of concentrate) and hours of operation referred to in paragraph (a)(6) of this section, must be used to determine the emissions in pounds of mercury per tons of concentrate.

(13) After the initial compliance test, calculate the emissions from each new and existing affected source for each 12–month period preceding each subsequent compliance test in pounds of mercury per ton of process input using the procedures in paragraphs (a)(13)(i) through (iv) of this section to determine compliance with the emission standards in § 63.11645.

(i) For ore pretreatment processes, divide the sum of mercury mass emissions (in pounds) from all roasting operations and autoclaves in the 12–month period preceding a compliance test by the sum of the total amount of gold mine ore processed (in million tons) in that 12–month period.

(ii) For carbon processes with mercury retorts, divide the sum of mercury mass emissions (in pounds) from all carbon kilns, preg tanks, electrowinning, mercury retorts, and melt furnaces in the 12–month period preceding a compliance test by the total amount of concentrate (in tons) processed in these process units in that 12–month period.

(iii) For carbon processes without mercury retorts, divide the sum of mercury mass emissions (in pounds) from all carbon kilns, preg tanks, electrowinning, and melt furnaces in the 12–month period preceding a compliance test by the total amount of concentrate (in tons) processed in these process units in that 12–month period.

(iv) For non-carbon concentrate processes, divide the sum of mercury mass emissions (in pounds) from mercury retorts and melt furnaces in the 12–month period preceding a compliance test by the total amount of concentrate (in tons) processed in these process units in that 12–month period.

(b) At all times, you must operate and maintain any affected 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. Determination of whether such operation and maintenance procedures are being used 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.

§ 63.11647 What are my monitoring requirements?

(a) Except as provided in paragraph (a)(5) of this section, you must monitor each roaster for mercury emissions using one of the procedures in paragraphs (a)(1), (a)(2), or (a)(3) of this section and establish operating limits for mercury concentration as described in paragraph (a)(4) of this section.

(1) Perform sampling and analysis of the roaster's exhaust for mercury concentration using EPA Performance Specification 12B (40 CFR part 60, appendix B and Procedure 5 of appendix F) or EPA Method 30B (40 CFR part 60, appendix A–8) at least twice per month. A minimum of two measurements must be taken per month that are at least 11 days apart from other consecutive tests. The mercury concentration must be maintained below the operating limit established in paragraph (a)(4) of this section. The results of the sampling must be obtained within 72 hours of the time the sample is taken.

(i) To determine the appropriate sampling duration, you must review the available data from previous stack tests to determine the upper 99th percentile of the range of mercury concentrations in the exit stack gas. Based on this upper end of expected concentrations, select an appropriate sampling duration that is likely to provide a valid sample and not result in breakthrough of the sampling tubes. If breakthrough of the sampling tubes occurs, you must resample within 7 days using a shorter sampling duration.

(ii) If any mercury concentration measurement from the twice per month sampling with PS 12B or Method 30B is higher than the operating limit, the exceedance must be reported to the permit authority as a deviation and corrective actions must be implemented within 48 hours upon receipt of the sampling results. Moreover, within 96 hours of the exceedance, the owner or operator must measure the concentration again (with PS 12B (40 CFR part 60, appendix B and Procedure 5 of appendix F), Method 30B or Method 29 (40 CFR part 60, appendix A–8), or ASTM D6784(incorporated by reference--see § 63.14)) and demonstrate to the permit authority that the mercury concentration is no higher than the operating limit, or inform the permit authority that the limit continues to be exceeded. If the measured mercury concentration exceeds the operating limit for mercury concentration after these 96 hours, the exceedance must be reported as a deviation within 24 hours to the permitting authority. The owner or operator must conduct a full compliance test pursuant to § 63.11646(a) for the roaster operations within 40 days to determine if the affected source is in compliance with the MACT emission standard. For facilities that have roasters and autoclaves, the owner or operator can use the results of the previous compliance test for the autoclaves to determine the emissions for those process units to be used in the calculations of the emissions for the affected source. If the source is determined to be in compliance, the compliance test may also be used to establish a new operating limit for mercury concentration (in accordance with paragraph (e) of this section).

(2) Install, operate, calibrate, and maintain a continuous emissions monitoring system (CEMS) to continuously measure the mercury concentration in the final exhaust stream from each roaster according to the requirements of Performance Specification 12A (40 CFR part 60, appendix B) except that calibration standards traceable to the National Institute of Standards and Technology are not required. You must perform a data accuracy assessment of the CEMS according to section 5 of Appendix F in part 60 and follow the applicable monitoring requirements in § 63.8 as provided in Table 1 to subpart EEEEEEE.

(i) You must continuously monitor the daily average mercury concentration from the roaster and maintain the daily average concentration below the operating limit established in paragraph (a)(4) of this section.

(ii) If the daily average mercury concentration from the CEMs is higher than the operating limit, the exceedance must be reported to the permit authority as a deviation and corrective actions must be implemented within 48 hours upon receipt of the sampling results. Moreover, within 96 hours of the exceedance, the owner or operator must measure the concentration again (with the CEMs (40 CFR part 60, appendix B and Procedure 5 of appendix F) and demonstrate to the permit authority that the mercury concentration is no higher than the operating limit, or inform the permit authority that the limit continues to be exceeded. If the measured mercury concentration exceeds the operating limit for mercury concentration after these 96 hours, the exceedance must be reported as a deviation within 24 hours to the permitting authority, and the owner or operator must conduct a full compliance test pursuant to § 63.11646(a) for the roaster operations within 40 days to determine if the affected source is in compliance with the MACT emission standard. For facilities that have roasters and autoclaves, the owner or operator can use the results of the previous compliance test for the autoclaves to determine the emissions for those process units to be used in the calculations of the emissions for the affected source. If the source is determined to be in compliance, the compliance test results may also be used to establish a new operating limit for mercury concentration (in accordance with paragraph (e) of this section).

(iii) You must submit a monitoring plan that includes quality assurance and quality control (QA/QC) procedures sufficient to demonstrate the accuracy of the CEMS to your permitting authority for approval 180 days prior to your initial compliance test. At a minimum, the QA/QC procedures must include daily calibrations and an annual accuracy test for the CEMS.

(3) Continuously measure the mercury concentration in the final exhaust stream from each roaster using EPA Performance Specification 12B (40 CFR part 60 appendix B and Procedure 5 of appendix F).

(i) You must continuously measure the mercury concentration in the roaster exhaust and maintain the average daily mercury concentration below the operating limit established in paragraph (a)(4) of this section. To determine the appropriate sampling duration, you must review the available data from previous stack tests to determine the upper 99th percentile of the range of mercury concentrations in the exit stack gas. Based on this upper end of expected concentrations, select an appropriate sampling duration that is likely to provide a valid sample and not result in breakthrough of the sampling tubes. If breakthrough of the sampling tubes occurs, you must re-sample within 7 days using a shorter sampling duration.

(ii) If the daily average mercury concentration is higher than the operating limit, the exceedance must be reported to the permit authority as a deviation and corrective actions must be implemented within 48 hours upon receipt of the sampling results. Moreover, within 96 hours of the exceedance, the owner or operator must measure the concentration again with PS 12B (40 CFR part 60, appendix B and Procedure 5 of appendix F), Method 30B or Method 29 (40 CFR part 60, appendix A–8), or ASTM D6784(incorporated by reference--see § 63.14) and demonstrate to the permit authority that the mercury concentration is no higher than the operating limit, or inform the permit authority that the limit continues to be exceeded. If the measured mercury concentration exceeds the operating limit for mercury concentration after these 96 hours, the exceedance must be reported as a deviation within 24 hours to the permitting authority and the owner or operator must conduct a full compliance test pursuant to § 63.11646(a) for the roaster operations within 40 days to determine if the affected source is in compliance with the MACT emission standard. For facilities that have roasters and autoclaves, the owner or operator can use the results of the previous compliance test for the autoclaves to determine the emissions for those process units to be used in the calculations of the emissions for the affected source. If the source is determined to be in compliance, the compliance test results may also be used to establish a new operating limit for mercury concentration (in accordance with paragraph (e) of this section).

(4) Use Equation (2) of this section to establish an upper operating limit for mercury concentration as determined by using the procedures in paragraphs (a)(1), (a)(2), or (a)(3) of this section concurrently while you are conducting your annual compliance performance stack tests according to the procedures in § 63.11646(a).

Tabular or graphic material set at this point is not displayable.

Where:

OLR = mercury concentration operating limit for the roaster (or roasters that share a common stack) (in micrograms per cubic meter);

C_{test} = average mercury concentration measured by the monitoring procedures (PS 12A or PS 12B or 30B) during the compliance performance stack test (in micrograms per cubic meter);

EL = emission standard for ore pretreatment processes (in lb/million tons of ore);

CT = compliance test results for ore pretreatment processes (in lb/million tons of ore).

(5) For roasters that utilize calomel-based mercury control systems for emissions controls, you are not required to perform the monitoring for mercury emissions in paragraphs (a)(1), (a)(2), or (a)(3) of this section if you demonstrate to the satisfaction of your permitting authority that mercury emissions from the roaster are less than 10 pounds of mercury per million tons of ore throughput. If you make this demonstration, you must conduct the parametric monitoring as described below in paragraphs (b) and (c) of this section.

(i) The initial demonstration must include three or more consecutive independent stack tests for mercury at least one month apart on the roaster exhaust stacks. Subsequent demonstrations may be based upon the single stack test required in paragraph (a) of section § 63.11646. The results of each of the tests must be less than 10 pounds of mercury per million tons of ore. The testing must be performed according to the procedures in § 63.11646(a)(1) through (a)(4) to determine mercury emissions in pounds per hour.

(ii) Divide the mercury emission rate in pounds per hour by the ore throughput rate during the test expressed in millions of tons per hour to determine the emissions in pounds per million tons of ore.

(b) For facilities with roasters and a calomel-based mercury control system that choose to monitor for mercury emissions using the procedures in paragraph (a)(1) of this section or that qualify for and choose to follow the requirements in paragraph (a)(5) of this section, you must establish operating parameter limits for scrubber liquor flow (or line pressure) and scrubber inlet gas temperature and monitor these parameters. You may establish your operating parameter limits from the initial compliance test, according to the manufacturer's specifications, or based on limits established by the permitting authority. If you choose to establish your operating parameter limits from the initial compliance test, monitor the scrubber liquor flow (or line pressure) and scrubber inlet gas temperature during each run of your initial compliance test. The minimum operating limit for scrubber liquor flow rate (or line pressure) is either the lowest value during any run of the initial compliance test or 10 percent less than the average value measured during the compliance test, and your maximum scrubber inlet temperature limit is the highest temperature measured during any run of the initial compliance test or 10 percent higher than the average value measured during the compliance test. You must monitor the scrubber liquor flow rate (or line pressure) and scrubber inlet gas temperature hourly and maintain the scrubber liquor flow (or line pressure) at or above the established operating parameter and maintain the inlet gas temperature below the established operating parameter limit.

(c) For facilities with roasters and a calomel-based mercury control system that choose to monitor for mercury emissions using the procedures in paragraph (a)(1) of this section or that qualify for and follow the requirements in paragraph (a)(5) of this section, you must establish operating parameter ranges for mercuric ion and chloride ion concentrations or for oxidation reduction potential and pH using the procedures in paragraph (c)(1) or (c)(2) of this section respectively.

(1) Establish the mercuric ion concentration and chloride ion concentration ranges for each calomel-based mercury control system. The mercuric ion concentration and chloride ion concentration ranges for each calomel-based mercury control system must be based on the manufacturer's specifications, or based on approval by your permitting authority. Measure the mercuric ion concentration and chloride ion concentrations at least once during each run of your initial compliance test. The measurements must be within the established concentration range for mercuric ion concentration and chloride ion concentration. Subsequently, you must sample at least once daily and maintain the mercuric ion concentration and chloride ion concentrations within their established range.

(2) Establish the oxidation reduction potential and pH range for each calomel-based mercury control system. The oxidation reduction potential and pH range for each calomel-based mercury control system must be based on the manufacturer's specifications, or based on approval by your permitting authority. Install monitoring equipment to continuously monitor the oxidation reduction potential and pH of the calomel-based mercury control system scrubber liquor. Measure the oxidation reduction potential and pH of the scrubber liquor during each run of your initial compliance test. The measurements must be within the established range for oxidation reduction potential and pH. Subsequently, you must monitor the oxidation reduction potential and pH of the scrubber liquor continuously and maintain it within the established operating range.

(d) If you have an exceedance of a control device operating parameter range provided in paragraphs (b) or (c) of this section, you must take corrective action and bring the parameters back into the established parametric ranges. If the corrective actions taken following an exceedance do not result in the operating parameter value being returned within the established range within 48 hours, a mercury concentration measurement (with PS 12B or PS 12A CEMS (40 CFR part 60, appendix B and Procedure 5 of appendix F), Method 30B or Method 29 (40 CFR part 60, appendix A–8), or ASTM D6784 (incorporated by reference--see § 63.14)) must be made to determine if the operating limit for mercury concentration is being exceeded. The measurement must be performed and the mercury concentration determined within 48 hours (after the initial 48 hours, or a total of 96 hours from the time the parameter range was exceeded). If the measured mercury concentration meets the operating limit for mercury concentration established under § 63.11647(a)(4), the corrective actions are deemed successful, and the owner or operator can request the permit authority to establish a new limit or range for the parameter. If the measured mercury concentration exceeds the operating limit for mercury concentration after these 96 hours, the exceedance must be reported as a deviation within 24 hours to the permitting authority and the owner or operator must conduct a full compliance test pursuant to § 63.11646(a) for the roaster operations within 40 days to determine if the affected source is in compliance with the MACT emission standard. For facilities that have roasters and autoclaves, the owner or operator can use the results of the previous compliance test for the autoclaves to determine the emissions for those process units to be used in the calculations of the emissions for the affected source. If the source is determined to be in compliance with the MACT emission standard, the compliance test may also be used to establish a new operating limit for mercury concentration (see paragraph (e) of this section).

(e) You may submit a request to your permitting authority for approval to change the operating limits established under paragraph (a)(4) of this section for the monitoring required in paragraph (a)(1),(a)(2), or (a)(3) of this section. In the request, you must demonstrate that the proposed change to the operating limit detects changes in levels of mercury emission control. An approved change to the operating limit under this paragraph only applies until a new operating limit is established during the next annual compliance test.

(f) You must monitor each process unit at each new and existing affected source that uses a carbon adsorber to control mercury emissions using the procedures in paragraphs (f)(1) or (f)(2) of this section. A carbon adsorber may include a fixed carbon bed, carbon filter packs or modules, carbon columns, and other variations.

(1) Continuously sample and analyze the exhaust stream from the carbon adsorber for mercury using Method 30B (40 CFR part 60, appendix A–8) for a duration of at least the minimum sampling time specified in Method 30B and up to one week that includes the period of the annual performance test.

(i) Establish an upper operating limit for the process as determined using the mercury concentration measurements from the sorbent trap (Method 30B) as calculated from Equation (3) of this section.

Tabular or graphic material set at this point is not displayable.

Where:

OLC = mercury concentration operating limit for the carbon adsorber control device on the process as measured using the sorbent trap, (micrograms per cubic meter);

C_{trap} = average mercury concentration measured using the sorbent trap during the week that includes the compliance performance test, (micrograms per cubic meter);

EL = emission standard for the affected sources (lb/ton of concentrate);

CT = compliance test results for the affected sources (lb/ton of concentrate).

(ii) Sample and analyze the exhaust stream from the carbon adsorber for mercury at least monthly using Method 30B (40 CFR part 60, appendix A–8). When the mercury concentration reaches 75 percent of the operating limit, begin weekly sampling and analysis. When the mercury concentration reaches 90 percent of the operating limit, replace the carbon in the carbon adsorber within 30 days. If mercury concentration exceeds the operating limit, change the carbon in the carbon adsorber within 30 days and report the deviation to your permitting author- ity.

(2) Conduct an initial sampling of the carbon in the carbon bed for mercury 90 days after the replacement of the carbon. A representative sample must be collected from the inlet of the bed and the exit of the bed and analyzed using SW–846 Method 7471B (incorporated by reference--see § 63.14). The depth to which the sampler is inserted must be recorded. The design capacity is established by calculating the average carbon loading from the inlet and outlet measurements. Sampling and analysis of the carbon bed for mercury must be performed quarterly thereafter. When the carbon loading reaches 50 percent of the design capacity of the carbon, monthly sampling must be performed until 90 percent of the carbon loading capacity is reached. The carbon must be removed and replaced with fresh carbon no later than 30 days after reaching 90 percent of capacity. For carbon designs where there may be multiple carbon columns or beds, a representative sample may be collected from the first and last column or bed instead of the inlet or outlet. If the carbon loading exceeds the design capacity of the carbon, change the carbon within 30 days and report the deviation to your permitting authority.

(g) You must monitor gas stream temperature at the inlet to the carbon adsorber for each process unit (i.e., carbon kiln, melt furnace, etc.) equipped with a carbon adsorber. Establish a maximum value for the inlet temperature either during the annual performance test (required in § 63.11646(a)), according to the manufacturer's specifications, or as approved by your permitting authority. If you choose to establish the temperature operating limit during the performance test, establish the temperature operating limit based on either the highest reading during the test or at 10°F higher than the average temperature measured during the performance test. Monitor the inlet temperature once per shift. If an inlet temperature exceeds the temperature operating limit, you must take corrective actions to get the temperature back within the parameter operating limit within 48 hours. If the exceedance persists, within 144 hours of the exceedance, you must sample and analyze the exhaust stream from the carbon adsorber using Method 30B (40 CFR part 60, appendix A–8) and compare to an operating limit (calculated pursuant to (f)(1)(i)) or you must conduct carbon sampling pursuant to (f)(2) of this section. If the concentration measured with Method 30B is below 90 percent of the operating limit or the carbon sampling results are below 90 percent of the carbon loading capacity, you may set a new temperature operating limit 10°F above the previous operating limit or at an alternative level approved by your permit authority. If the concentration is above 90 percent of the operating limit or above 90 percent of the carbon loading capacity you must change the carbon in the bed within 30 days and report the event to your permitting authority, and reestablish an appropriate maximum temperature limit based on approval of your permit authority.

(h) For each wet scrubber at each new and existing affected source not followed by a mercury control system, you must monitor the water flow rate (or line pressure) and pressure drop. Establish a minimum value as the operating limit for water flow rate (or line pressure) and pressure drop either during the performance test required in § 63.11646(a), according to the manufacturer's specifications, or as approved by your permitting authority. If you choose to establish the operating limit based on the results of the performance test, the new operating limit must be established based on either the lowest value during any test run or 10 percent less than the average value measured during the test. For wet scrubbers on an autoclave, establish the pressure drop range according to manufacturer's specifications. You must monitor the water flow rate and pressure drop once per shift and take corrective action within 24 hours if any daily average is less than the operating limit. If the parameters are not in range within 72 hours, the owner or operator must report the deviation to the permitting authority and perform a compliance test for the process unit(s) controlled with the wet scrubber that has the parameter exceedance within 40 days to determine if the affected source is in compliance with the MACT limit. For the other process units included in the affected source, the owner or operator can use the results of the previous compliance test to determine the emissions for those process units to be used in the calculations of the emissions for the affected source.

(i) You may conduct additional compliance tests according to the procedures in § 63.11646 and re-establish the operating limits required in paragraphs (a) through (c) and (f) through (h) of this section at any time. You must submit a request to your permitting authority for approval to re-establish the operating limits. In the request, you must demonstrate that the proposed change to the operating limit detects changes in levels of mercury emission control. An approved change to the operating limit under this paragraph only applies until a new operating limit is established during the next annual compliance test.

§ 63.11648 What are my notification, reporting, and recordkeeping requirements?

(a) You must submit the Initial Notification required by § 63.9(b)(2) no later than 120 calendar days after the date of publication of the final rule in the Federal Register or within 120 days after the source becomes subject to the standard. The Initial Notification must include the information specified in § 63.9(b)(2)(i) through (b)(2)(iv).

(b) You must submit an initial Notification of Compliance Status as required by § 63.9(h).

(c) If a deviation occurs during a semiannual reporting period, you must submit a deviation report to your permitting authority according to the requirements in paragraphs (c)(1) and (2) of this section.

(1) The first reporting period covers the period beginning on the compliance date specified in § 63.11641 and ending on June 30 or December 31, whichever date comes first after your compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. Your deviation report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(2) A deviation report must include the information in paragraphs (c)(2)(i) through (c)(2)(iv) of this section.

(i) Company name and address.

(ii) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.

(iii) Date of the report and beginning and ending dates of the reporting period.

(iv) Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

(d) If you had a malfunction during the reporting period, the compliance report required in § 63.11648(b) must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11646(b), including actions taken to correct a malfunction.

(e) You must keep the records specified in paragraphs (e)(1) through (e)(3) of this section. The form and maintenance of records must be consistent with the requirements in section 63.10(b)(1) of the General

Provisions.

(1) As required in § 63.10(b)(2)(xiv), you must keep a copy of each notification that you submitted to comply with this subpart and all documentation supporting any Initial Notification, Notification of Compliance Status, and semiannual compliance certifications that you submitted.

(2) You must keep the records of all performance tests, measurements, monitoring data, and corrective actions required by §§ 63.11646 and 63.11647, and the information identified in paragraphs (c)(2)(i) through (c)(2)(vi) of this section for each corrective action required by § 63.11647.

(i) The date, place, and time of the monitoring event requiring corrective action;

(ii) Technique or method used for monitoring;

(iv) Operating conditions during the activity;

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation; and

(vi) Maintenance or corrective action taken (if applicable).

(3) You must keep records of operating hours for each process as required by § 63.11646(a)(5) and records of the monthly quantity of ore and concentrate processed or produced as required by § 63.11646(a)(10).

(f) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1). As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. You must keep each record onsite for at least 2 years after the date of each recorded action according to § 63.10(b)(1). You may keep the records offsite for the remaining 3 years.

(g) After December 31, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by entering the data electronically into EPA's WebFIRE data base through EPA's Central Data Exchange. The owner or operator of an affected facility shall enter the test data into EPA's data base using the Electronic Reporting Tool or other compatible electronic spreadsheet. Only performance evaluation data collected using methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

Other Requirements and Information

§ 63.11650 What General Provisions apply to this subpart?

Table 1 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.16 apply to you.

§ 63.11651 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

Autoclave means a pressure oxidation vessel that is used to treat gold ores (primarily sulfide refractory ore) and involves pumping a slurry of milled ore into the vessel which is highly pressurized with oxygen and heated to temperatures of approximately 350° to 430° F.

Calomel-based mercury control system means a mercury emissions control system that uses scrubbers to remove mercury from the gas stream of a roaster or combination of roasters by complexing the mercury from the gas stream with mercuric chloride to form mercurous chloride (calomel). These scrubbers are also referred to as “mercury scrubbers.”

Carbon adsorber means a control device consisting of a single fixed carbon bed, multiple carbon beds or columns, carbon filter packs or modules, and other variations that uses activated carbon to remove pollutants from a gas stream.

Carbon kiln means a kiln or furnace where carbon is regenerated by heating, usually in the presence of steam, after the gold has been stripped from the carbon.

Carbon processes with mercury retorts means the affected source that includes carbon kilns, preg tanks, electrowinning cells, mercury retorts, and melt furnaces at gold mine ore processing and production facilities that use activated carbon, or resins that can be used as a substitute for activated carbon, to recover (adsorb) gold from the pregnant cyanide solution.

Carbon processes without mercury retorts means the affected source that includes carbon kilns, preg tanks, electrowinning cells, and melt furnaces, but has no retorts, at gold mine ore processing and production facilities that use activated carbon, or resins that can be used as a substitute for activated carbon, to recover (adsorb) gold from the pregnant cyanide solution.

Concentrate means the sludge-like material that is loaded with gold along with various other metals (such as silver, copper, and mercury) and various other substances, that is produced by electrowinning, the Merrill–Crowe process, flotation and gravity separation processes. Concentrate is measured as the input to mercury retorts, or for facilities without mercury retorts, as the input to melt furnaces before any drying takes place. For facilities without mercury retorts or melt furnaces, concentrate is measured as the quantity shipped.

Deviation means any instance where an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emissions limitation or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Exceeds any operating limit established under this subpart.

Electrowinning means a process that uses induced voltage on anode and cathode plates to remove metals from the continuous flow of solution, where the gold in solution is plated onto the cathode. Steel wool is typically used as the plating surface.

Electrowinning Cells means a tank in which the electrowinning takes place.

Gold mine ore processing and production facility means any industrial facility engaged in the processing of gold mine ore that uses any of the following processes: Roasting operations, autoclaves, carbon kilns, preg tanks, electrowinning, mercury retorts, or melt furnaces. Laboratories (see CAA section 112 (c)(7)), individual prospectors, and very small pilot scale mining operations that processes or produces less than 100 pounds of concentrate per year are not a gold mine ore processing and production facility. A facility that produces primarily metals other than gold, such as copper, lead, zinc, or nickel (where these metals other than gold comprise 95 percent or more of the total metal production) that may also recover some gold as a byproduct is not a gold mine ore processing and production facility. Those facilities whereby 95 percent or more of total mass of metals produced are metals other than gold, whether final metal production is onsite or offsite, are not part of the gold mine ore processing and production source category.

Melt furnace means a furnace (typically a crucible furnace) that is used for smelting the gold-bearing material recovered from mercury retorting, or the gold-bearing material from electrowinning, the Merrill–Crowe process, or other processes for facilities without mercury retorts.

Mercury retort means a vessel that is operated under a partial vacuum at approximately 1,100 ° to 1,300 °F to remove mercury and moisture from the gold bearing sludge material that is recovered from electrowinning, the Merrill–Crowe process, or other processes. Mercury retorts are usually equipped with condensers that recover liquid mercury during the processing.

Merrill–Crowe process means a precipitation technique using zinc oxide for removing gold from a cyanide solution. Zinc dust is added to the solution, and gold is precipitated to produce a concentrate.

Non-carbon concentrate processes means the affected source that includes mercury retorts and melt furnaces at gold mine ore processing and production facilities that use the Merrill–Crowe process or other processes and do not use carbon (or resins that substitute for carbon) to recover (adsorb) gold from the pregnant cyanide solution.

Ore dry grinding means a process in which the gold ore is ground and heated (dried) prior to additional preheating or prior to entering the roaster.

Ore preheating means a process in which ground gold ore is preheated prior to entering the roaster.

Ore pretreatment processes means the affected source that includes roasting operations and autoclaves that are used to pre-treat gold mine ore at gold mine ore processing and production facilities prior to the cyanide leaching process.

Pregnant solution tank (or preg tank) means a storage tank for pregnant solution, which is the cyanide solution that contains gold-cyanide complexes that is generated from leaching gold ore with cyanide solution.

Pregnant cyanide solution means the cyanide solution that contains gold-cyanide complexes that are generated from leaching gold ore with a dilute cyanide solution.

Quenching means a process in which the hot calcined ore is cooled and quenched with water after it leaves the roaster.

Roasting operation means a process that uses an industrial furnace in which milled ore is combusted across a fluidized bed to oxidize and remove organic carbon and sulfide mineral grains in refractory gold ore. The emissions points of the roasting operation subject to this subpart include ore dry grinding, ore preheating, the roaster stack, and quenching.

§ 63.11652 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority, such as your state, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the state, local, or tribal agency.

(c) The authorities that will not be delegated to state, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the applicability requirements in § 63.11640, the compliance date requirements in § 63.11641, and the applicable standards in § 63.11645.

(2) Approval of an alternative nonopacity emissions standard under § 63.6(g).

(3) Approval of a major change to a test method under § 63.7(e)(2)(ii) and (f). A "major change to test method" is defined in § 63.90(a).

(4) Approval of a major change to monitoring under § 63.8(f). A "major change to monitoring" is defined in § 63.90(a).

(5) Approval of a waiver of recordkeeping or reporting requirements under § 63.10(f), or another major change to recordkeeping/reporting. A "major change to recordkeeping/reporting" is defined in § 63.90(a).

§ 63.11653 [Reserved]

Tables to Subpart Eeeeeee of Part 63

Table 1 to Subpart EEEEEEE of Part 63--Applicability of General Provisions to Subpart EEEEEE

[As stated in § 63.11650, you must comply with the applicable General Provisions requirements according to the following table]

Citation	Subject	Applies to subpart EEEEEEE	Explanation
§ 63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)-(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e)	Applicability	Yes.	
§ 63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3), (c)(4), (d)	Reserved	No.	
§ 63.2	Definitions	Yes.	
§ 63.3	Units and Abbreviations	Yes.	
§ 63.4	Prohibited Activities and Circumvention	Yes.	
§ 63.5	Preconstruction Review and Notification Requirements	Yes.	
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1)(iii), (f)(2), (f)(3), (g), (i), (j)	Compliance with Standards and Maintenance Requirements	Yes.	
§ 63.6(e)(1)(i) and (ii), (e)(3), and (f)(1)	Startup, Shutdown and Malfunction Requirements (SSM)	No	Subpart EEEEEEE standards apply at all times.
§ 63.6(h)(1), (h)(2),	Compliance with Opacity	No	Subpart EEEEEEE does

(h)(4),(h)(5)(i), (ii), (iii) and (v), (h)(6)-(h)(9)	and Visible Emission Limits		not contain opacity or visible emission limits.
§ 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv)	Reserved	No.	
§ 63.7, except (e)(1)	Applicability and Performance Test Dates	Yes.	
§ 63.7(e)(1)	Performance Testing Requirements Related to SSM	No.	
§ 63.8(a)(1), (b)(1), (f)(1)-(5), (g)	Monitoring Requirements	Yes.	
§ 63.8(a)(2), (a)(4), (b)(2)-(3), (c), (d), (e), (f)(6), (g)	Continuous Monitoring Systems	Yes	Except cross references to SSM requirements in § 63.6(e)(1) and (3) do not apply.
§ 63.8(a)(3)	[Reserved]	No.	
§ 63.9(a), (b)(1), (b)(2)(i)-(v), (b)(4), (b)(5), (c), (d), (e), (g), (h)(1)-(h)(3), (h)(5), (h)(6), (i), (j)	Notification Requirements	Yes.	
§ 63.9(f)		No.	
§ 63.9(b)(3), (h)(4)	Reserved	No.	
§ 63.10(a), (b)(1), (b)(2)(vi)-(xiv), (b)(3), (c), (d)(1)-(4), (e), (f)	Recordkeeping and Reporting Requirements	Yes.	
§ 63.10(b)(2)(i)-(v), (d)(5)	Recordkeeping/Reporting Associated with SSM	No.	
§ 63.10(c)(2)-(c)(4), (c)(9)	Reserved	No.	
§ 63.11	Control Device Requirements	No.	
§ 63.12	State Authority and Delegations	Yes.	
§§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.	

END OF DOCUMENT

Calendar No. 427

101st Congress
1st Session

SENATE

Report
101–228

CLEAN AIR ACT AMENDMENTS OF 1989

REPORT

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

together with

ADDITIONAL AND MINORITY VIEWS

TO ACCOMPANY

S. 1630

December 20, 1989.—Ordered to be printed

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cumulation is specifically stated in the provisions governing the Administrator's listing of additional hazardous air pollutants.

Powerful evidence of adverse environmental effects due to toxic air pollutant has been accumulated specifically with reference to the Great Lakes region. The Great Lakes and other smaller lakes are heavily contaminated with a variety of persistent organic chemicals and heavy metals. With improvements in the control of surface water pollution, it is now the case that the primary route through which these toxic substances reach these water bodies is air pollution. According to the International Joint Commission and other authorities, more than 90 percent of three of the most serious toxic pollutants entering Lake Superior—PCBs, lead, and benzo(a)pyrene (all of which are listed by this legislation)—are coming from the air. For Lakes Michigan and Huron, the figure is 50 percent or more. In particular, International Joint Commission data estimate that 543,000 kilograms of lead enter Lake Michigan each year, 99.5 percent from the air.

Airborne toxic fallout contaminates even isolated lakes that have no nearby industrial sources and no other route by which pollutants could reach them. The pollution is capable of travelling on the wind from sources hundreds, even thousands, of miles away. The case of Lake Siskwit, sitting on a wilderness island (Isle Royale) that lies in the far reaches of Lake Superior, is perhaps the best known. Toxaphene, a (now-banned) pesticide used no closer than the cotton-growing areas of the deep South, has been found in this lake along with concentrations of PCPs, hexachlorobenzene, and other persistent toxic organics.

Mercury has been found in snow samples in Northern Minnesota at concentrations exceeding EPA water quality criteria. Last January, Michigan issued fish advisories warning of mercury contamination for all of its inland lakes and cited atmospheric deposition as a major source of the contamination. Every Great Lakes State and the Province of Ontario has issued fish advisories for a variety of toxic chemicals. Some of the advisories even cover consumption of ducks and other waterfowl species hunted in the Great Lakes region.

Many of the pollutants of greatest concern bioaccumulate in fish and organisms higher up the food chain. To illustrate the extent to which contaminant concentrations can be magnified, consumption of a single one-pound serving of fish contaminated with PCBs at five parts per million delivers as much PCBs as one would ingest by drinking Great Lakes water for 1000 years. Once ingested, PCBs and other toxic chemicals can be passed across the placenta and in breast milk to fetuses and nursing infants.

Adverse effects on humans from consumption of contaminated food are, of course, health effects as well as environmental effects. As such, the Administrator has the responsibility to assure human health protection from these effects when establishing residual risk standards, and at other health-related decision points under this legislation. The examples of human health effects, however, illustrate how nonhuman life which is also relatively high on the food chain can be adversely affected. Scientific studies have shown high incidences of cancer among fish species and reproductive and developmental disorders among waterfowl (e.g., cross-billed syndrome, egg failure, and other ill effects in cormorants and Caspian terns). Thus, when setting enviornmental protection standards, the Administrator must consider not only the effects on plants, fish, or wildlife which directly take up toxic pollutants deposited from the air onto land or into water, but also the effects on fish, wildlife, and other life higher up the food chain.

This legislation requires protection of the environment from these pollutants in three specific ways. First, it provides that for seven specific toxic contaminants which are persistent organics or heavy metals (alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, PCBs, 2,3,7,8-tetrachlorodibenzofurans, and 2,3,7,8-tetrachlorodibenzo-p-dioxin), the Administrator shall lower the 10-ton threshold in the "major source" definition to a level which results in setting MACT standards for the sources of at least 90 percent of the emissions of each of these pollutants. The result of this is to assure that the sources of at least 90 percent of the emissions of each pollutant are subject to stringent technology-based controls in the first phase of the program established by this legislation.

Second, the legislation requires the Administrator to protect against all significant environmental effects when setting residual risk standards in the second phase. The scope of this authority is to be broadly construed. It relates to all hazardous air pollutants, not just the seven singled out for attention at the MACT stage. Further, it relates to all environmental effects of listed pollutants, not just those related to air deposition into lakes or coastal waters.

Third, the legislation creates a specific program of studies and actions for the protection of the Great Lakes, Lake Champlain, and coastal waters.

It bears emphasis that the focus of this discussion on the Great Lakes region should not be misconstrued to suggest that the Administrator may limit his or her concern to Great Lakes area issues when implementing the enviornmental protection mandates of this legislation. For one thing, the legislation specifically covers coastal water resources and Lake Champlain, in addition to the Great Lakes. More important is the fact that the enviornmental effects definition is a general one that (as stated above) encompasses all effects on the environment covered by the term "welfare" under current law, and is in no way limited to effects that occur in, or are mediated through, water bodies. And, in addition to the Administrator's special responsibilities under the Great Lakes/coastal water provisions of this legislation, it is the Administrator's mandate when establishing residual risk standards to protect any significant threat to any environmental value encompassed by these definitions.

Definitions established in current law for "owner or operator", and "existing source" remain in the Act unchanged by this title.

List of Pollutants.—The amendments to section 112 made by this legislation are intended to accelerate the regulation of hazardous air pollutants by creating a program of technology-based standards similar to those which have already been implemented under the Clean Water Act for control of toxic effluent discharges to surface waters from major industrial sources. The legislation will establish emission standards for the major sources of a list of air pollutants

101st Congress
2d Session

HOUSE OF REPRESENTATIVES

Report
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CLEAN AIR ACT AMENDMENTS OF 1990

CONFERENCE REPORT

TO ACCOMPANY

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JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendments of the House to the bill (S. 1630) to amend the Clean Air Act to provide for attainment and maintenance of health protective national ambient air quality standards, and for other purposes, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The House amendment to the text of the bill struck out all of the Senate bill after the enacting clause and inserted a substitute text.

The Senate recedes from its disagreement to the amendment of the House with an amendment which is a substitute for the Senate bill and the House amendment. Certain matters agreed to in conference are noted below.

The Conference agreement on S. 1630, the Clean Air Act Amendments of 1990, includes provisions addressing attainment and maintenance of ambient air quality standards, mobile sources of air pollution, toxic air pollution, acid rain, permits, enforcement, stratospheric ozone protection, miscellaneous provisions, and clean air research. A summary of the conference agreement follows.

TITLE I—NONATTAINMENT PROVISIONS

Title I of the conference agreement, which adopts the House Title I except with respect to transportation related issues and with a change concerning the regulation of oxides of nitrogen, divides areas that fail to meet any one of the pollution standards listed above into categories, depending on the severity of the problem, and sets out requirements of different levels of stringency for each category.

Depending on the severity of the pollution problem, nonattainment areas for any of the pollutants must attain the health standard for ozone within five, ten, fifteen, or seventeen years (twenty years for Los Angeles).

In the case of ozone, areas must reduce emissions of volatile organic compounds (VOCs), a precursor of ozone, by 3 percent per year (with waivers for certain specified conditions) until the standard is attained.

Vehicle inspection and maintenance programs must be upgraded in ozone and carbon monoxide areas that already have such programs and must be instituted in most other areas that do not already have them.

The Environmental Protection Agency (EPA) is required to impose one of the following sanctions in an area that fails to pre-

Heavy-duty fleet vehicles from 8,500 lbs. gvwr to 26,000 lbs. gvwr will be required to meet a combined NO_x and hydrocarbon emission standard that will provide a 50 percent reduction below emissions from a 1994 heavy-duty diesel engine. If EPA determines this standard is not technically feasible for a clean diesel fueled engine, it can be modified to require a 30 percent reduction.

The agreement would shorten the warranty period for all light-duty vehicle and light-duty truck emission control components to two years or 24,000 miles starting in 1995 but extends the applicable coverage for major components costing more than $200 (such as the catalytic converter, onboard diagnostics and the electronic control system) to eight years or 80,000 miles.

Section 208(c) requires the Administrator to maintain the confidentialty of any information provided to the Administrator which, if made public, would divulge "methods or processes" entitled to protection as trade secrets. The Administrator should maintain the confidentiality of business information provided to the Administrator by covered fleet operators, provided such information is confidential within the meaning of section 1905 of Title 18 of the United States Code.

TITLE III—AIR TOXICS PROVISIONS

Routine Emissions From Major Sources

List of pollutants and source categories

The conference agreement lists 189 chemicals for regulation.

For purposes of section 112 of the Clean Air Act, a source cannot be a major source and an area source.

MACT standard

For each category of sources, EPA will promulgate a standard which requires the installation of maximum achievable control technology (MACT) by the sources in the category.

Section 112(e) requires that MACT standards for 40 source categories shall be promulgated not later than 2 years after the date of enactment. In selecting categories for standards in this group, the Administrator shall, at the Administrator's discretion, pick the priority elements of the hazardous organic NESHAP which is under development.

Existing sources must comply with MACT standards no later than 3 years after they are issued. Section 112(i)(3)(B) authorizes the Administrator or a State to grant a 1 year extension for compliance with the MACT standards and other requirements beyond the 3-year period that would otherwise apply. Only one such extension may be granted.

New section 112(d)(2) requires EPA to require the maximum degree of reduction of hazardous air pollutants that the Administrator determines is achievable. In a case where a source emits more than one hazardous air pollutant, EPA must consider each pollutant.

The conferees wish to emphasize that in promulgating standards, the EPA should devote its resources first to those pollutants which present the greatest risk to the public health and the environment.

Permits

It is the conferees' intent that EPA not use the permit hammer approach (case-by-case) to avoid or delay meeting MACT requirements.

Routine Emissions From "Area" Sources

Based on the list of pollutants mentioned above, EPA can also list an area source category just as the agency would list a major source category, and can require MACT. EPA must list sufficient source categories to assure that 90% of the emissions of the 30 most serious area source pollutants are regulated.

Five years after enactment, EPA is to propose a national urban air toxics strategy to reduce cancer risks associated with urban air toxics by 75%. EPA is to report on reductions achieved in 8 and 12 years intervals.

Accidental Releases

The agreement contains provisions that are designed to prevent chemical accidents.

EPA is to publish a list of at least 100 regulated substances, of which 16 are listed in the agreement.

EPA is authorized to promulgate accident prevention regulations.

The conferees do not intend the term "stationary source" to apply to transportation, including the storage incident to such transportation, of any regulated substance or other extremely hazardous substance under the provisions of this subsection.

The prohibition on listing substances for the accident prevention program which have been listed under this section 108(a) does not preclude the listing of anhydrous sulfur dioxide which is on the initial list.

The conference agreement establishes a Chemical Safety and Hazard Investigation Board, similar to the National Transportation Safety board, to investigate chemical accidents.

The Board is authorized to investigate accidental releases which cause substantial property damage. Substantial damage would include fires, explosions, and other events which cause damages that are very costly to repair or correct, and would not include incidental damage to equipment or controls.

Hazard assessments required under this section shall include:

(1) basic data on the source, units at the source facility which contain or process regulated substances (including the longitude and latitude of such units), operating procedures, population of nearby communities, and the meteorology of the area where the source is located;

(2) an identification of the potential points of accidental releases from the source of regulated substances;

(3) an identification of any previous accidental releases from the source including the amounts released, frequencies, and durations;

(4) an identification of a range (including worst case events) of potential releases from the source, including an estimate of