Coalition for Responsible Waste Incineration

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The Coalition for Responsible Waste Incineration (CRWI) appreciates the opportunity to submit comments on the *National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units: Proposed Rule*. 76 FR 24976 (May 3, 2011). CRWI is a trade association comprised of 26 members. All of our Full members are regulated under Subpart EEE.

CRWI is only submitting comments on the NESHAPS portion of the proposed rule. Our specific comments are attached.

Thank you for the opportunity to comment on this proposed rule. If you have any questions, please contact me at (703-431-7343 or mel@crwi.org).

Sincerely yours,

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Specific Comments

1. EPA's MACT floor methodologies are inconsistent with the statute, Congressional intent, case law, and in some cases, EPA's own policies.

Section 112(d) of the Clean Air Act requires EPA to set "maximum achievable control technology" (MACT) standards for controlling hazardous air pollutants. For new sources, these standards cannot be less stringent than the "emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator."[1] Standards for existing sources cannot be less stringent than "the average emission limitation achieved by the best performing 12 percent of the existing sources . . . ."[2] When read together, these provisions require EPA to set achievable standards and then check to see if they are at least as stringent as the "floor" benchmarks.

In the proposed rule, EPA chose to use a bottom up approach and assessed the floors first. In doing so, EPA used the "lowest emissions" approach to assess the MACT floor for both new and existing sources, even though the statute indicates that two different bench marks should be used ("emission control" for new sources and "emission limitation" for existing sources). The Agency arrayed the emission levels in its database for each subcategory from lowest to highest and, for existing sources, established the MACT floor at the numerical average of the test results from the lowest emitting 12% of sources in each category for each pollutant after incorporating a variability factor that was designed to estimate the level that is achievable by the best performing source. 76 FR 25041. For new sources, EPA set the MACT floor standard at the lowest emission level for each pollutant, after incorporating a variability factor. 76 FR 25047. This method of setting the floor is at odds with the statutory language and Congressional intent. In some ways, it also violates EPA's own policies.

A. EPA's MACT floors for existing sources are unlawful because § 112(d) requires EPA to set achievable standards that are no less stringent than the average "emission limitation" achieved by the best performing 12 percent of sources.

Sections 112(d)(2) and (3) require EPA to set standards that are no less stringent than the average "emission limitation" achieved by the best performing 12 percent of existing sources. The term "emission limitation" is defined in Section

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[1] 42 USC § 7412(d)(3).

[2] *Id.*

302 as "a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis . . . ." Consequently, setting the MACT floors based on emission levels – the levels emitted, rather than emission limitations, the levels imposed – is unlawful. Since boilers and process heaters are regulated units under new source performance standards, states have established emission limitations for most, if not all of them, and complying with the law should be a relatively easy task.

i. Setting floors for existing sources based on "emission limitations" is required by the plain meaning of the statute.

As EPA knows, the first step in construing a statute is to determine, using traditional tools of statutory construction, whether Congress has spoken to the precise question at issue: "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Chevron v. Natural Resource Defense Council*, 467 US 837, 842-843 (1984). Employing the traditional tool of first examining the text, it is clear that, by using a defined term from the statute, Congress has spoken clearly about the precise issue in question. *Backcountry Against Dumps v. EPA,* 100 F.3d 147, 150 (D.C Cir 1996).

ii. Case law supports using "emission limitations" to set MACT floors.

In one of the few cases to affirm EPA's floor methods, *Mossville Environmental Action, Now v. EPA,* 370 F.3d 1232 (DC Cir. 2004) ("*Mossville*") the court upheld using emission limitations to set floor standards for the polyvinyl chloride and copolymer manufacturing industry. The court noted that it had previously held, in *Sierra Club v. EPA*, 167 F.3d at 658, (DC Cir 1999) ("*Sierra Club*"), that EPA "could lawfully rely on estimates drawn from the regulatory data." *Mossville*, *supra*, at 1241.

iii. Using "emission limitations" as the floor for existing source standards is supported by the legislative history

When Congressional intent is clear from the text, it is not necessary to delve into the legislative history of a provision to discover congressional intent. Even so, examining the legislative history confirms that Congress meant for EPA to base the floors for existing sources on the defined term of "emission limitations."

First, the context suggests that the use of the term "emission limitation" in §112(d)(3), rather than "emission level" was deliberate. The same provision

provides that floors for *new* sources "shall not be less stringent than the *emission control* that is achieved in practice . . . ." (emphasis added). Congress' use of two different phrases establishing floor benchmarks for new and existing sources shows conscious intent to not only select different benchmarks for new and existing sources, but to mean what it said. *Cf. Brown v. Gardner*, 513 U.S. 115, 120 (1994) (court must accord significance to disparate wording).

Second, Congress obviously knew the difference between the terms "emission level" *i.e.*, what is actually emitted, and "emission limitation" *i.e.*, what is imposed, since they used both terms in the CAA many times without confusing their meaning. The normal rule of statutory construction assumes that "'identical words used in different parts of the same act are intended to have the same meaning.'") *Sorenson v. Secretary of Treasury*, 475 U.S. 851, 860 (1986) (For example, section 112(j) is entitled "Equivalent emission limitation by permit" in which Congress prescribed the process for States to impose an "emission limitation "if EPA does not promulgate MACT standards in a timely manner. It is clear Congress knew that the term "emission limitation" was defined to mean limits imposed by either the State or EPA, and how to properly use it.

Similarly, Congress used the term "emission level" properly in many places as well. For example, in the non-attainment provisions, Congress wrote: "that emissions of such pollutant resulting from the proposed new or modified major source will not cause of contribute to emission levels which exceed the allowance permitted for such pollutant . . .."[3]

Third, perhaps more instructive is that the Senate Bill, S. 1630 used the term "emission level" as the benchmark for new sources in § 112(d)(3) from its inception in S. 816 to passage in the Senate of S. 1630.[4] These early versions of the Senate bill stated, "The degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the most stringent emissions level that is achieved in practice by a source in the same category or subcategory, as determined by the Administrator, and may be more stringent where feasible."[5]

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[3] 42 USC § 7503(a)(1)(B).

[4] See Congressional Research Service, "A Legislative History of the Clean Air Act Amendments of 1990, at, 8079, 8859, 9243. ("Legislative History"). Early versions of the House Bills (H.R. 4) did also. *Id.* at 4048

[5] *Id.*

In these early Senate versions, existing sources were not subject to the "emission limitation" benchmark, but rather to a "top-down" approach that relegated cost concerns to lower importance.[6] The Senate changed the approach for existing sources in the committee substitute that passed the Senate[7] so that these later versions, juxtaposed the floor benchmark of "emission levels" for new source standards with "emission limitation" for existing source standards, thus clearly showing intention to establish two different benchmarks for the different floor standards.[8]

B. EPA's MACT floors for new sources are unlawful because although section 112(d) may allow new sources floors to be based on emission levels, those emission levels must be the product of control.

Since Congress expressly changed the MACT floor benchmark for new sources from "emission levels" to "emission control," it is obvious that not only did they eschew emission levels as being the preferred benchmark, they wanted to ensure that whatever benchmark EPA uses for new sources, it must be the product of control.

As the Agency knows, emission levels can be achieved by intentional control, unintentional control, or no control ("happenstance" as the Agency often calls it).[9] Thus, if the Agency chooses to use emission levels as the benchmark for new source floors, it can only use those emission levels achieved in practice by control (whether it is intentional control, or as *National Lime Association v. EPA*, 233 F.3d 625 (D.C. Cir. 2000) (*"National Lime II"*) recognized, unintentional control. See below, Section 2.D.ii.)

Consequently, establishing new source MACT floors by examining emission levels, without determining which ones were achieved by control, is unlawful. Since EPA has not examined the emissions in its database to see if the emission

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[6] *Id.* at 8079, 8518, 8859, 9243

[7] *Id.* at 4423, 7579. The House eventually passed the Senate's version (S. 1630) containing the two different benchmarks, *id.* at 2135, although the House also originally set the new source floor benchmark as "emission levels.

[8] Later, the language relating to new sources was changed from "emission levels" to "emission control" in Conference, adopting the House language for new source "floors." *Id.* at 59, 487, 1598 (CAA as passed); 2133 (S. 1630 as passed the House), 3107 (H.R. 3030).

[9] 70 FR 59402, 59444 (October 12, 2005).

levels are based on technological control, its proposed MACT floors for new sources are unlawful.

C. Setting floor standards on a pollutant-by-pollutant basis violates the statute and its own views of the statute.

EPA is proposing to set MACT floor standards on a "pollutant-by-pollutant" basis.[10] This approach may result in EPA setting a suite of standards that have not been "achieved" by the best performing sources. This violates the statute.

The provisions for new sources state that floor standards cannot be less stringent than the emission control "achieved in practice" by the "best controlled similar source." Thus, EPA has a duty to find *the* best source. *Sierra Club, supra,* at 665, (noting "use of the singular in the statutory language suggests" EPA look to the single "unit with the best observed performance").

For existing sources the floor standards cannot be less stringent than the "average emission limitation achieved by the best performing 12 percent of the existing sources." CRWI asserts that this means EPA must find at least 12% of the sources that can simultaneously meet the final standards.

That Congress expected EPA to base the MACT floor on a single source or technology is demonstrated in the legislative history by a colloquy in which Senator Dole asked Senator Durenberger about how EPA will select the best performing sources when confronted with differing technology that reduces different pollutants to different levels. This is a question that would not matter if EPA was allowed to set standards on a pollutant-by-pollutant basis.

> Mr. DOLE. This section also requires the development of standards for a variety of pollutants. It is entirely possible that different technologies may reduce one pollutant better than another. For example, technology A may reduce heavy metals better than technology B while technology B may reduce particulates better than technology A; yet, one would not be compatible with the other. I would assume that EPA would have adequate discretion to balance environmental benefits to determine which technology on the whole represents a better MACT. I would appreciate some discussion on this point as well from my distinguished colleague from Minnesota.

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[10] 76 FR 25041 (existing sources), 25047 (new sources).

> Mr. DURENBERGER. The Senator is correct. Where differing air pollution control technologies result in one technology producing better control of some pollutants and another producing better control of different pollutants but it is technically infeasible according to the MACT definition to use both, EPA should judge MACT to be the technology which best benefits human health and the environment on the whole."[11]

In addition, ensuring that the requisite number of best performers can meet their proposed standards avoids what EPA has called an "impermissible" result. As EPA noted in other rules, it is "impermissible" for its methodology to result in standards which would force the best performing source to install upgraded air pollution control equipment because that "amounts to a beyond the floor standard without consideration of the beyond the floor factors: the cost of achieving those reductions, as well as energy and non-air environmental impacts."[12] Since EPA's "pollutant-by-pollutant" methodology can result in best performing sources taking actions to meet the standards, it is an unlawful floor setting mechanism.

Finally, the case EPA usually relies upon to justify use of a pollutant-by-pollutant approach,[13] cannot save it. That case dealt with an EPA demonstration that all standards were "achievable," not that any facility "achieved" the limits as required by section 112(d)(3). Moreover, that case simply said that the court will defer to EPA's judgment to set standards in this fashion, as long as the statute and legislative history does not say otherwise. Here, the statute does say otherwise and EPA has already stated that such an approach leads to an impermissible result under the statute.

Consequently, EPA is proposing standards that are in excess of its authority.

2. Existing case law does not support EPA setting floor standards based on actual emissions.

Many cases have considered EPA's floor setting techniques, but none of them support settling floor standards based on actual emissions – not even the *Brick MACT*[14] decision that EPA erroneously relies upon. Instead, reliance upon "actual emissions" can result in violating not only the statute, as noted above, but

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[11] 1 Leg. History, 1118.

[12] 70 FR 59402, 59443 (October 12, 2005).

[13] *Chemical Manufacturers Association v. EPA,* 870 F. 2d 177, 238 – 239 (5th Cir. 1989).

[14] *Sierra Club v. EPA* 479 F.3d 875, 884 (D.C. Cir 2007) ("*Brick MACT*"),

the strictures of an entire line of cases that require EPA to examine and consider all methods that best performers use to control emissions.

A. *Sierra Club* does not support EPA using a floor-setting methodology based on lowest actual emissions.

In *Sierra Club*, *supra*, at 658, the court considered a challenge to EPA's use of permit limits to set MACT floors instead of "performance data," *i.e.*, actual emissions, to set the floors. EPA defended itself by arguing that the term "emissions limitation" under Section 129 entitled it to use permit limits.

The court rejected Sierra Club's claims and *held* that the use of actual emissions was not required.[15] However, since the term used in § 129 "emissions limitation" did not exactly match the defined term of "emission limitation," the Court decided to not "enter the thicket" of statutory construction and refused to consider EPA's "tortured" defense of why it could use permit limits to set MACT floors.[16] Instead, the court decided that EPA is free to use whatever method it desires to set the floor as long as it represents a "reasonable estimate of what the best performers" do.[17] While they rejected EPA's floor standards, they noted that under this test, the lawfulness of using permit limits as a way of estimating what the best performers actually achieve, "seems quite possible here."[18]

Thus, *Sierra Club* does not sustain EPA's use of actual emissions.

B. *National Lime II* does not support EPA setting floor standards on lowest actual emissions.

In *National Lime II*, Sierra Club once again asked the court to proclaim that EPA was required to set MACT floors based on actual emissions. The Court rejected that interpretation for § 112, and went on to apply the "reasonable estimate"

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[15] *Sierra Club*, *supra,* at 661-662.

[16] It is interesting to note that not only did EPA's initial interpretation of the floor provisions for existing sources comport with the statutory definition of "emission limitation," but one of the few times the court affirmed EPA's floor setting methods, the Agency based them on emission limitations. Mossville, *supra*, at 1232, 1242.

[17] *Sierra Club*, *supra*, at 662, 665.

[18] *Id.* at 662.

standard of *Sierra Club* to MACT standards under Section 112.[19] Thus, this case does not support EPA using actual emissions to set the floor standards.

EPA may believe that the court's discussion in *National Lime II* citing the *Sierra Club's* decision that a floor method must reasonably estimate the performance of the best performing sources, (*National Lime II*, *supra,* at 632) means that the court has already decided that EPA has the flexibility to select whatever floor-setting method it desires under section 112. However, that reference to *Sierra Club* was *dicta, i.e.*, opinions of a judge that do not embody the resolution or determination of the court, because the court's discussion was in conjunction with an issue that the court declined to address because petitioner failed to raise it properly. Thus its discussion about the Sierra Club case was not part of the court's resolution of the issue.

Likewise, the court's other discussion of *Sierra Club's* "reasonable estimate" test enunciated was also *dicta*. In *National Lime II*, the court explained that "Sierra Club argues that the Agency's technology-based approach conflicts with the Clean Air Act's plain language." The court noted that in this regard, it was not writing on a "clean slate" and described *Sierra Club*'s decision that EPA's floor setting method must reasonably estimate the performance of the best performing sources. *National Lime II*, *supra*, at 631. This discussion also does not enter into the court's decision because, as the court further explains, "Sierra Club does not challenge EPA's extension of *Sierra [Club]* to existing source standards. Instead, it argues that Sierra's Chevron one analysis does not control this case because section 7412 (at issue here) differs from section 7429 (at issue in *Sierra*). Consequently, extension of the reasonable estimate test from *Sierra Club* into Section 112 was never ruled upon by the court, and any statements the *National Lime II* court made about that test was *dicta*.

C. *CKRC* does not support EPA setting floor standards on lowest actual emissions.

In *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 (D.C. Cir 2001) ("*CKRC*"), an industrial party argued that EPA improperly set the floor standards for existing sources because it failed to use "emission limitations." However, the court refused to address the issue because the petitioner did not raise it to the Agency.[20] Whether the court would decline to enter the thicket of statutory construction in § 112 is therefore, unknown, but as a party in that case, CRWI notes that the court was extremely interested in that issue at oral argument.

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[19] *National Lime II*, *supra*, at 632.

[20] *CKRC*, supra, as 855, 860-61.

The court went on to consider Sierra Club's challenge that EPA could not set the floors based solely on the performance of add-on technology, and remanded the rule because EPA did not consider all ways facilities control emissions.[21] Thus, the court's holding in *CKRC* is antithetical to an actual emissions approach since setting the floor solely on emissions does not require the Agency to examine all methods of control. Instead, an actual emissions approach merely requires the Agency to examine its database, crunch some numbers, and set the floor without any examination of what sources actually do to reduce emissions. EPA recently admitted this in a brief they filed in MWI v. EPA, Case No 09-1297, a case being considered by the United States Court of Appeals for the District of Columbia Circuit. In support of the actual emission method it used to set standards for medical waste incinerators, EPA wrote: "EPA's task is, in the end, straightforward: analyze the emissions data of the best-performing sources and set the numeric MACT floors for each pollutant based on the emissions limitations actually being achieved by those sources." Brief of Respondent Environmental Protection Agency, No. 09-1297, filed July 9, 2010.

Consequently, EPA's lowest emissions method is at odds with *CKRC*.

D. *Brick MACT* does not require that standards be set based on lowest actual emissions.

Brick MACT is a case where EPA proposed floor standards based on technology and the court vacated the final standards because they were based on the "second-best" technology.[22] Thus, it too does not support an actual emissions methodology.

The *Brick MACT* court began its discussion by noting EPA's proposed technology-based standards with approval: "Because the 94th percentile (the median of the top 12 percent) of the best-performing large tunnel brick kilns used non-DLA technology, EPA — *as required by Cement Kiln* — proposed a floor based on this technology."[23] Thus, the court believed that setting the standards based on the levels achieved by technology was proper and consistent with precedent.

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[21] Id. at 866.

[22] *Brick MACT*, supra, at 879 - 880.

[23] Id. at 880 (emphasis supplied).

However, EPA did not set the standards based on non-DLA technology. After receiving comments that not all sources could retrofit their installations with the selected technology, EPA based the final standard on a different technology and excluded non-DLA performance data from consideration. This the court could not abide, indicating that EPA should have stayed with the first technology-based standard that resulted in lower emissions.[24]

i. The Court's reference to "lowest emissions" in *Brick MACT* does not support a floor methodology based on actual emissions.

In discussing its holding that EPA could not switch to "second best" technology when setting the floor standard, the court stated: "But EPA cannot circumvent *Cement Kiln's* holding that section 7412(d)(3) requires floors based on the emission level actually achieved by the best performers (those with the lowest emission levels), not the emission level achievable by all sources, simply by redefining "best performing" to mean those sources with emission levels achievable by all sources. *See* 255 F.3d at 861."[25]

This parenthetical reference to "lowest emissions" was not the court directing the Agency to use an actual emissions approach. The main thrust of the court's statement, as evidenced by the text and the citation to the *CKRC* case at 861, was that EPA could not set floor standards that are achievable by all sources – a key point that the Agency notes in the preamble.[26] Consequently, the *Brick MACT* decision does not require EPA to use an "actual emission" methodology. Instead, the court was simply referring back to the Agency' characterization of non-DLA technology as being the best. See *Brick MACT*, *supra*, at 879.

Brick MACT, therefore, cannot be interpreted as endorsing a straight emissions methodology, especially since it did not overrule the court's *Chevron Step I* holdings in *Sierra Club* and *National Lime II* that EPA need not set the standard based on performance data.[27]

ii. The Court did not decide that intent to control does not matter.

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[24] Id.

[25] *Brick MACT*, *supra*, at 880 – 881.

[26] 75 FR 32010. ("Floors for existing sources must reflect the average emission limitation achieved by the best-performing 12 percent of existing sources, not levels EPA considers to be achievable by all sources (479 F. 3d at 880–81)").

Coalition for Responsible Waste Incineration

Finally, there seems to be some confusion, either in EPA's or the court's mind about the role that "intention to control" plays in setting the MACT floor. As the Agency notes in the preamble they believe the *Brick MACT* decision, citing *National Lime II*, decided that, "the fact that a specific level of performance is unintended is not a legal basis for excluding the source's performance from consideration."[28] This is not a proper interpretation of what the court said in *Brick MACT*. The passage in *National Lime II, supra,* at 640, cited by the *Brick MACT* court does not say control is irrelevant to standard setting.

In *National Lime II,* the court held that EPA could not refuse to set standards because sources did not use air pollution control technology to control emissions.[29] Later in the opinion, when deciding a challenge from the National Lime Association, the court rejected their argument that PM was not a proper surrogate for setting a standard and wrote the language referred to in *Brick MACT*:

> According to the NLA, this methodology requires the agency to set a floor of "no control" for HAP metals because no cement plant intentionally controls HAP metals; metal emissions are controlled only incidentally by controls placed upon PM. The EPA's response is the correct one: "cement plants actually *are* controlling HAP metals[,] intentionally or not."[30]

Thus, the *National Lime II* court was not saying that control does not matter. Instead, the court was explaining that *as long as control is being achieved*, intent to control does not matter. Therefore, if a source is controlling one pollutant and that control also limits another pollutant, the Agency can consider the performance data for that second pollutant as well. Consequently, EPA may not use just any performance data to select best performers – it can only use emission data from sources that are controlling, intentionally or not, that pollutant.

3. <u>The method EPA is currently using to develop standards is not a "reasonable estimate" of sources' performance.</u>

In addition to using the wrong benchmarks for assessing MACT floors, CRWI does not believe that the lowest emission method EPA used in the proposed rule

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[28] 75 FR 32010.

[29] *National Lime II*, *supra*, at 631, 633. Other, non-technological control methods were not before the court. *Id.*, at 632 - 633.

[30] *Id.* at 640.

results in a "reasonable estimate" of what these facilities achieve. EPA has faced this issue since the *CKRC* and *National Lime II* decisions. In developing the Hazardous Waste Combustor MACT rule (70 FR 59419, October 12, 2005), EPA came to the conclusion that the lowest emitters are not always the best performers (70 FR 59443).

> As explained in the introduction above, the statute does not specify that lowest emitters are invariably best performers. Nor does the case law cited by the commenter support this position. The D.C. Circuit has held repeatedly that EPA may determine which sources are best performing and may "reasonably estimate" the performance of the top 12 percent of these sources by means other than use of actual data. *Mossville, supra*, at 1240–41 (collecting cases). In *Mossville,* sources had varying levels of vinyl chloride emissions due to varying concentrations of vinyl chloride in their feedstock. Individual measurements consequently did not adequately represent these sources' performance over time. Not-to-exceed permit limits thus reasonably estimated sources' performance, corroboration being that individual sources with the lowest long-term average performance occasionally came close to exceeding those permit limits. *Id.* at 1241–42. The facts are similar here, since our examination of best performing sources with multiple test conditions likewise shows instances where these sources would be unable to meet floors established based solely on lowest emissions (including their own). As here, EPA was not compelled to base the floor levels on the lowest measured emission levels.

In addition, EPA explains why they used a technology based methodology (which has been upheld in *Sierra Club v. EPA* 353 F.3d 976 (D.C. Cir. 2004) (*Copper Smelters MACT*), and, as we explained above, was implicitly blessed in *Brick MACT*) to set the MACT standard (70 FR 59448).

> b. *Why not select the lowest emitters?* Although sources with baghouses tended to have the lowest emission levels for particulate matter, this was not invariably the case. There are certain instances when sources controlled with electrostatic precipitators (or, in one instance, a venturi scrubber) had lower emissions in individual test conditions than sources we identified as best performing which were equipped with baghouses.[96] Under the commenter's approach, we must always use these lowest emitting sources as the best performers.
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> We again disagree. We do not know if these sources equipped with control devices other than baghouses with lower emissions in single test conditions would actually have lower emissions over time than sources equipped with

baghouses because we cannot assess their uncontrollable emissions variability over time. Our data suggests that they likely are not better performing sources. We further conclude that our statistical procedures that account for these sources' within test, run-to-run emissions variability underestimates these sources long-term emissions variability. This is not the case for sources equipped with baghouses, where we have completely assessed, quantified, and accounted for long-term, test-to-test emissions variability through application of the universal variability factor.[97] The sources equipped with control devices other than baghouses with lower snapshot emissions data could therefore have low emissions in part because they were operating at the low end of the "uncontrollable" emissions variability profile for that particular snapshot in time. The basis for these conclusions, all of which are supported by our data, are found in section 16 of volume III of the technical support document.

We therefore conclude sources equipped with baghouses are the best performers for particulate matter control not only based on engineering judgment, but because we are able to reliably quantify their likely performance over time. The straight emissions methodology ignores the presence of long-term emissions variability from sources not equipped with baghouses, and assumes without basis that these sources are always better performing sources in instances where they achieved lower snapshot emissions relative to the emissions from baghouses, emissions that have notably already been adjusted to account for long-term emissions variability.

A straight emissions approach also results in inappropriate floor levels for particulate matter because it improperly reflects/includes low ash feed when identifying best performing sources for particulate matter. 69 FR at 21228. For example, the MACT pool of best performing liquid fuel boilers for particulate matter under the straight emissions approach includes eight sources, only one of which is equipped with a back-end control device. These sources have low particulate matter emissions solely because they feed low levels of ash. The average ash inlet loadings for these sources are well over two orders of magnitude lower than the average ash inlet loading for the best performing sources that we identify with the Air Pollution Control Technology approach. (Of course, since ash loadings are not a proper surrogate for HAP metals, these sources' emissions are lowest for particulate matter but not necessarily for HAP metals.) The straight emissions approach would yield a particulate matter floor level of 0.0025 gr/dscf (with a corresponding design level of 0.0015 gr/dscf). There is not one liquid fuel boiler that is equipped with a back-end control that achieved this floor level, much less the design level. The best performing source under the air

> pollution control technology approach, which is equipped with both a fabric filter and HEPA filter, did not even make the pool of best performing sources for the straight emissions approach. Yet this unit has an excellent ash removal efficiency of 99.8% and the lower emitting devices' removal efficiencies are, for the most part, 0% because they do not have any back-end controls. EPA believes that it is arbitrary to say that these essentially uncontrolled devices must be regarded as "best performing" for purposes of section 112(d)(3). We therefore conclude that a straight emissions floor would not be achievable for any source feeding appreciable levels of ash, even if they all were to upgrade with baghouses, or baghouses in combination with HEPA filters, and that a rote selection of lowest emitters as best performers can lead to the nonsensical result of uncontrolled units being classified as best performers.

(Emphasis supplied, footnotes omitted.)

CRWI believes that EPA's conclusions in the HWC MACT rule for deciding what to base achievable MACT standards on is correct. For HAPs where feed control was "feasible and technically assessable," EPA used a dual ranking system that picked the best performers based on both feed control and back end control. For situations where feed control was not feasible ("where HAP is contributed by raw material and fossil fuel inputs"), EPA used only back end control methods to select the best performers.

One way to demonstrate that the straight emissions approach does not result in a "reasonable estimate" is to look at each subcategory to see if a certain percentage can meet all standards proposed without making additional changes in their equipment or operating procedures. Using EPA's metric for judging the minimum stringency of existing source standards (*i.e.*, emission levels), CRWI believes that, at least 12% of the sources within each category or subcategory should be able to meet all standards without adding additional controls. If this is not demonstrated, CRWI believes that EPA has not shown that the proposed standards are "achieved" as the statute requires. If EPA cannot demonstrate that at least 12% can simultaneously meet all standards, CRWI believes that in effect, EPA has improperly gone around the section 112(d)(2) beyond-the-floor process because the "floor standards would force industry-wide technological changes without consideration of the factors (cost and energy in particular) which Congress mandated for consideration when establishing beyond-the-floor standards." (70 FR 59448). CRWI requests that when the final rules are promulgated, EPA make a final check to ensure that at least 12% of the units in each category or subcategory can simultaneously meet all the final standards.

Finally, we believe that EPA needs to develop a method that selects facilities that do the best job under the worst conditions. Said differently, almost all units will have low emissions when burning the cleanest fuels. But using this criterion does not define them as the best performers. This would be analogous to defining the best hitters as the ones who can hit softballs instead of a 98 mph fastball. The best hitters are the ones who can consistently hit any type of pitch that is thrown, not just the easy ones. Just like in baseball, the best performers are the facilities that can consistently handle all materials burned. Control of emissions from combustion sources can be from control of the materials burned, control of the combustion process, and air pollution control systems. All three are viable methods of controlling emissions. Facilities that have a clean fuel (no metals or chlorine) only need to control the combustion process. They do not need air pollution control equipment so they do not install it. However, these units are restricted to burning only clean fuel. This does not make them top performers because they are restricted in what they can burn. CRWI believes that the best performers are not defined by how they perform on the easiest tasks but by how they perform on the hardest tasks.

4. EPA's proposed requirement that facilities meet steady-state standards during SSM events is not logical nor is it lawful.

EPA's proposal to require electric utility steam generation units to comply with the same emission standards during periods of startup, shutdown, malfunction, and steady state conditions is neither logical nor lawful. MACT floor standards must be based on evidence that sources have already achieved them. However, EPA's statement that sources can meet the standards during startup, shutdown, and malfunctions is not based on any data (at least there is no data in the record to show this). In fact, it is most likely wrong.

Before the court's decision in *Sierra Club v. EPA*, 551 F.3d 1019 (DC. Cir 2008) ("*SSM Decision*") the DC Circuit had consistently held that technology-based standards *must* contain exemptions or less stringent standards during periods of startup, shutdown, and malfunction (SSM) than would usually apply during steady state periods.

For example, in *Portland Cement Ass'n v. Ruckelshaus*, 86 F.2d 375, 396, 398 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974) ("*Portland Cement*"), the DC Circuit recognized that "'start-up' and 'upset' conditions, due to plant or emission device malfunction, is an inescapable aspect of industrial life and that allowance must be made for such factors in the standards that are promulgated. The Court, which was addressing EPA's NSPS rules, also noted that including the startup, shutdown, and malfunction provisions "imparts a construction of 'reasonableness'

to the standards as a whole and adopts a more flexible system of regulation than can be had by a system devoid of 'give.'" *Id.* at 399.

In *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 432 (D.C. Cir. 1973), petitioners argued that lesser or no standards should apply during startup, shutdown or malfunction conditions. The Court agreed, holding that such provisions "appear necessary to preserve the reasonableness of the standards as a whole." *Id.* at 433. And in *NRDC v. EPA*, 859 F.2d 156 (D.C. Cir. 1988), the court held that, although water-quality permit limits need not incorporate an "upset defense," "[a] technology-based standard discards its fundamental premise when it ignores the limits inherent in the technology." *Id.* at 208 (citing *Marathon Oil. Co. v. EPA*, 564 F.2d 1253, 1273 (9th Cir. 1977)). Consequently, because all pollution control technologies will occasionally malfunction and take time to get to their steady-state conditions (such as during startup, shutdown or malfunction), "achievable" technology-based standards must contain provisions for compliance during such unavoidable events.

Now that the court has decided that MACT compliant standards must apply during periods of SSM, the Agency must develop standards that are "achievable" with this ruling in mind. The court has stated that for standards to be "achievable," they must be achievable under the most adverse circumstances which can reasonably be expected to recur, *Sierra Club, supra*, 665 citing *National Lime Ass'n v. EPA* 627 F2.d 416 (D.C. Cir. 1980) ("*National Lime I*"). Consequently, since startup, shutdown, and malfunctions will recur, EPA must set standards that must be achievable during those times.

Electric utility steam generating units may not be capable of complying with the standards EPA is proposing during periods of SSM. For example, facilities with baghouses cannot comply during startup periods because they have to bypass the bags until the stack gas temperature gets above the condensation point. Otherwise, they will prematurely damage their bags. There are similar issues for other types of air pollution control devices. Despite this, EPA states in the preamble that they have taken into account startup and shutdown periods in establishing these standards (76 FR 25028) and is not establishing different standards for these periods. EPA's reasons are that these units do not frequently go through startup or shutdown and when they do, they typically use cleaner fuels than used during normal operations. EPA is correct that these units typically do not startup frequently. There are two major flaws in EPA's reasoning. The first is that even when using a cleaner fuel (e.g., natural gas), the combustion process is inefficient when starting up. Until ideal combustion conditions can be met in the combustion chamber (adequate temperature and turbulence), the combustion process will be incomplete. While this should not

impact fuel-derived hazardous air pollutants (chlorine and mercury), it will impact the emissions of organics and possibly PM. As stated earlier, is also not possible for certain air pollution control devices to work until a certain temperature and gas flow rates are achieved. The second is that EPA did not include emissions data during either startup or shutdown in the development of these standards; all data was collected under steady-state conditions. Since emissions under non-steady-state conditions may vary significantly, they could significantly alter the Agency's calculations. As such, the standards are not properly set. Thus, from a physical and legal standpoint, it makes no sense to group startup, shutdown, malfunctions, and normal operation events under the same set of standards.

In addition, EPA does not consider a malfunction as a distinct operating mode. CRWI disagrees. Malfunctions occur. Just because EPA states that the goal of best performing sources is to have no malfunctions (76 FR 25028) does not make malfunctions go away. Even the best operated and maintained facilities will have malfunctions.

We agree, however, that it is difficult to develop the data necessary to set numerical emissions limits for transient conditions. For example, if a facility ran a Method 5 test during startup, a single test would take 6 – 8 hours (each run takes at least an hour, three runs are required for a valid test, and the operator must have time in between runs to change out sampling equipment). During those eight hours, the conditions would have changed so significantly that it would be virtually impossible to understand what that data meant or to extrapolate that data to other transient conditions. The same is true for CEMs readings.

As such, EPA must establish, and explain why facilities can comply with the standards it promulgates. As the court noted in *National Lime I*, "by failing to explain how the standard proposed is achievable under the range of relevant conditions which may affect the emissions to be regulated, the Agency has not satisfied this initial burden." *National Lime I*, *supra*, at 433.

While it is appropriate to use data gathered under steady-state conditions to set emission standards for steady-state conditions, it is not appropriate (from either a logical or legal perspective) to apply those standards to non steady-state conditions. Thus, EPA must find an alternative method for facilities to show compliance during these phases of operation. Congress provided for this when they set up the work practice provisions of 112(h). Here Congress stated that EPA may set work practice standards if it is not feasible to prescribe or enforce an emissions standard. CRWI believes that it is infeasible to gather data during startup, shutdowns, or malfunctions simply because there are no EPA approved methods to make measurement during non-steady-state conditions and

malfunctions, by definition, are sudden and infrequent. In the final Hospital/Medical/Infectious Waste Incinerator rule, EPA agrees with this. At 74 FR 51394, EPA states "It would be very difficult to do any meaningful testing during such an event because the exhaust flow rates, temperatures, and other stack conditions would be highly variable and could foul up the isokinetic emissions test methods (thus invalidating the testing)." EPA followed this logic in the industrial boiler rule (76 FR 15613) where they determined that it is not technically feasible to complete stack testing during periods of startup and shutdown due to the physical limitations and the short duration of the startup and shutdown periods. As a result, they set work practice standards for startup and shutdown events in this final rule. We believe the same sets of circumstances are applicable to the EGU rule and suggest that EPA set work practice standards in this final rule for startups and shutdowns. CRWI also believes that EPA should make a similar choice for malfunctions since we believe that malfunctions create the same set of circumstances pertaining to gathering data as do startups and shutdowns.

In summary, standards developed under steady-state conditions cannot incorporate the variability that occurs during SSM events. Expecting a facility to comply with emission standards developed under steady state conditions during SSM events is neither logical nor lawful. Thus, EPA should modify the proposed regulatory language to require facilities to meet emission standards (derived from data gathered under steady-state conditions) during normal operations. In addition, CRWI suggests EPA set work practice standards for startup, shutdown, and malfunctions. This would satisfy both Congress' intent that 112 standards apply at all times and the recent court ruling. Alternatively (although probably not viable, particularly for malfunctions), EPA could gather data during startups, shutdowns, and malfunctions and incorporate this data into the data gathered during steady-state conditions to set numerical emission standards. Emissions standards based on data collected during all modes of operation could then reasonably apply at all times.

5. <u>CRWI supports the use of work practices for dioxins and furans and for non-dioxin organic hazardous air pollutants.</u>

EPA research has shown that the majority of dioxin and dioxin-like compounds that are emitted from combustion processes is the result of de novo synthesis in the post-combustion gas cleaning process. EPA research has also shown that the presence of sulfur inhibits the formation of dioxins and furans in the exhaust gases. In addition, EPA is correct that with complex carbon-based fuels, combustion is rarely ideal and some CO and organic compounds are expected to be formed. Complete combustion depends upon three factors, temperature, time

and mixing. All of these ideas were considered when EPA initially regulated hazardous waste incineration in the early 1980's. Based on their own research[31], EPA determined that good combustion practices were needed to control organic compounds in the exhaust gases. As a part of that research, they determined that CO was a reliable indicator of good combustion practices and that below 400 ppmv of CO, there were very little organic hazardous air pollutants in exhaust gases. To be conservative, EPA chose to set a 100 ppmv CO standard for hazardous waste incinerators. From a scientific basis, there is no reason to reduce a CO standard below 400 ppmv. Doing so will not reduce the emissions of organic HAPs. Although they did not call it that at the time (because the purpose of the research was RCRA-related as opposed CAA-related and was before the 1990 CAA amendments), this was in essence a work practice standard.

EPA is required to set standards for the HAPs emitted from a source category. It makes no sense to attempt to set standards for HAPs that are not emitted. For example, if coal does not contain cobalt, there is no reason to set a cobalt standard. Likewise, EPA has shown both from data (majority non-detects) and from scientific principles (dioxin formation inhibited where the sulfur to chlorine ration is 1 or higher) that it is unlikely that dioxin will be formed during this combustion process. Therefore, we see no reason to set a dioxin/furan standard or a non-dioxin organic HAP standard for this source category.

6. <u>EPA should not apply Performance Specification 15 to HCl CEMs but should promulgate a performance specification specifically designed for these instruments.</u>

Performance Specification (PS) 15 is designed for extractive FTIR (Fourier Transform Infrared Spectroscopy) continuous emissions monitors. Most commercial HCl CEMs use some form of infrared light attenuation to measure HCl concentrations. Requiring HCl CEMs to use PS 15 is simply not appropriate. Ideally, EPA should promulgate a performance specification specifically for HCl CEMs much like they have performance specifications for other CEMs (e.g., PS 11 for PM CEMs, and PS 12A for mercury CEMS, etc.). CRWI would encourage EPA to start this process as soon as possible.

CRWI also believes that it is not appropriate to require compliance with an HCl CEMs unless there is a promulgated performance specification for HCl CEMs.

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[31] Guidance on PIC Controls for Hazardous Waste Incinerators. Volume V of the Hazardous Waste Incineration Guidance Series. EPA/530-SW-90-040. April 1990.

Our initial suggestion is that these CEMs should not be required until a performance specification for these types of units is promulgated. However, if the Agency decides to require these CEMs, we believe there is a better interim solution than PS 15. EPA has already approved two preliminary Other Test Methods for HCl CEMs. These are posted at www.epa.gov/ttnemc01/prelim.html as OTM 22 and 23. CRWI believes that it makes more sense to temporarily use a preliminary test method already approved for HCl CEMs than to use an already promulgated performance specification that may not apply. We suggest that EPA modify the final rule to allow the use of OTM 22 and 23 instead of PS 15.

7. EPA should use work practice standards any time they do not have reliable data on which to develop standards.

EPA states that measurement imprecision at or near the method detection level is about 40 to 50% and that the imprecision decreases to about 10-15% at about 3 times the method detection level (76 FR 25044). This conclusion was based on the work done by the American Society of Mechanical Engineers ReMAP study. EPA describes a two-step process to address this issue. Their first step is to identify the highest test-specific method detection limit (MDL) reported in the data set that is at or less than the floor limit. The second step would be to determine a level three times the representative method detection level and then compare it to the floor limit. If three times the method detection limit is less than the floor, they would conclude that measurement variability is adequately accounted for. If not, EPA could use three times the method detection level as the floor.

Before responding to the Agency's request for comments on the use of three times the MDL, a common understanding of terms is necessary. In fact, EPA often gets confused over the meaning of the various terms used to describe different measures of detection limits. In this proposed rule (76 FR 25044), EPA uses the acronym MDL to mean the minimum detection level. In most other EPA publications, this acronym means the minimum detection limit. We believe this is an inadvertent error and only point it out to show how confusing the whole idea of detection limits is. The lowest level at which an analyte can be detected is generally termed the "detection limit." EPA's commonly used term for the detection limit is the Minimum Detection Limit (MDL). 40 CFR 136, Appendix B defines MDL as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte." EPA's Appendix B contains the procedure for determining the MDL.

Quantification levels are the levels above the detection level where reliable quantification measurements can be made. The Practical Quantification Level (PQL), the Reliable Detection Level (RDL), and Reliable Quantification Levels (RQL) are all calculated by multiplying the MDL by various factors. However, none include using a calibration point. The minimum level (ML), on the other hand, is a quantification level that corresponds to the lowest level at which the entire analytical system gives reliable signals and includes an acceptable calibration point. This use of an acceptable calibration point is critical in showing that this number is real and not just an extrapolation of statistics from a "detection limit." Most laboratories now use the term Reporting Limit (RL) instead of ML. The meaning of the two terms is the same.

EPA has addressed methods to handle setting standards at or near the detection level in the past. A 1995 paper written by EPA's Engineering and Analysis Division (*Development of Compliance Levels from Analytical Detection and Quantification Levels*) explores the different ways to describe the limits of analytical methods and concludes that the Minimum Level (ML) was the appropriate quantification level for both setting standards and showing compliance. Specifically, EPA states "EAD believes that the widely used concept of the MDL should not be altered, but should be refined to improve its efficacy. EAD further believes that the ML represents the quantitation level most consistent with the levels set by EPA for compliance in existing regulations." CRWI agrees with EPA's Engineering and Analysis Division's conclusion that the the lowest number that can be used for developing standards and showing compliance with those standards is the ML or RL. A copy is attached (Appendix A).

The first thing CRWI suggests is that EPA re-examine the data used to set the standards to make sure that all reported data is either reported as ML or RL. Any value below the RL is a estimated value and will be qualified (flagged) as such in the report from the laboratory. A number that has a qualifier is not a defensible number and should not be used for any purpose – either to set standards or to show compliance with that standard. To do anything different would be in violation of EPA's own guidelines (*Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency* EPA/260R-02-008 October 2002). CRWI believes that the entire basis for setting standards and showing compliance with those standards is reliable and quantifiable data. A data point that is above the MDL but below the RL is a result of extrapolation below the lowest calibration point. Extrapolation below the lowest acceptable calibration point simply does not result in a defensible number. Basing standards on a number that is below an RL is equivalent to building a house on a foundation of sand. This is why the

EAD made their recommendation to use the ML as the value that should be used for showing compliance. Unless the current standards are developed from data that is defensible, the entire standards setting process is suspect. CRWI strongly recommends that EPA examine or re-examine their data base to ensure that all data reported meets these quality requirements. The Agency has already faced this issue once in this proposed rule – the dioxin/furan standards. Here, when the Agency did not have reliable data, they chose to develop work practice standards. CRWI supports this choice and urges the Agency to make the same decision any place where reliable data is not available.

8. EPA should modify the affirmative defense provisions so that it is a "rebuttable presumption."

As EPA knows, malfunctions will occur. Even the best run facilities will have circumstances where events out of their control will occur. So, while CRWI believes that EPA must take into account the conditions that occur during SSM events and establish limits that consider these circumstances, CRWI also agrees that some form of enforcement discretion is needed for malfunctions. As such, we support EPA maintaining a regulatory provision for malfunctions such as an affirmative defense. However, we are concerned that by simply labeling this as an affirmative defense, it implies that the facility is guilty until proven innocent. The last sentence in 40 CFR 22.24(a) states that the "respondent has the burdens of presentation and persuasion for any affirmative defenses." The first sentence in this section states that EPA has the burden of presentation and persuasion. We are concerned that by calling something an affirmative defense even before it has been established to be a deviation improperly shifts the burden to the facility. Therefore, CRWI suggests that EPA establish a rebuttable presumption (rather than affirmative defense) where it is presumed that the facility did everything in their power to minimize emissions during these events, unless the Agency proves certain facts that are enumerated in the rules. If the Agency wants to challenge these activities, the burden of proof would be on them to show that the facility did not undertake reasonable actions to minimize emissions.

9. CRWI suggests that EPA clarify its affirmative defense provisions.

While we prefer EPA use a rebuttable presumption, should EPA keep the affirmative defense idea, CRWI suggests the following modifications to the language to make it more usable. CRWI understands that most of the provisions EPA has proposed for the affirmative defense came from earlier guidance memos. While these provisions were in guidance, the Agency did not need to be careful how certain things were worded since they were only guidance and did

not have the weight of regulation. However, if the Agency wants to codify this guidance into regulatory language, several changes are needed. For instance, the requirements in §§ 63.10001 are impossible to meet due to the use of ambiguous terms such as "careful," "proper," or "better." Until these are defined, it is impossible to determine whether these criteria have been met. EPA should also drop the reference to "any" activity in this paragraph. There are also several references to "All" that would make it difficult to ever satisfy the requirements of an affirmative defense.

To many engineers, the term "root cause analysis" implies a formal process. For many malfunctions, the cause is immediately obvious and a formal process for determining the cause is not needed. When a malfunction occurs, the expectation is that the facility will correct the problem as quickly as possible and return to their operating window. A formal root cause analysis is typically limited to very significant events or repeat events. For example, if a thermocouple fails, the most likely cause is a bad thermocouple. The first response is to simply replace the thermocouple. However, if a second thermocouple fails within a short period of time, then something else may be causing that event to happen and a more detailed analysis may be needed. It may take several failures before the real cause is identified. Here a formal root cause analysis may be needed, but it certainly is not needed to replace the first failed thermocouple. The proposed language assumes that all malfunctions are equally significant and need an identical degree of investigation. For example, a missing data point due to a malfunction of the data acquisition system is not as significant as a power failure or a catastrophic event such as fire or explosion. CRWI believes that a formal root cause analysis should only be used when other reasonable methods fail to show what caused the malfunction or when the serious nature of an event might make such an analysis necessary. Moreover, other tools may be more appropriate (e.g., failure mode and effect, fault tree, etc.) or more powerful tools may be introduced in the future. The facility is the only one that can and should decide what tool to use to determine the cause of the malfunction. Part of this problem may be in communications. To some companies and potentially to some local regulators, the term "root cause analysis" implies a formal process. If EPA intends for the facility to investigate and fix the problem so that is it less likely to recur, CRWI supports that concept but suggests that the Agency use an alternative term that does not carry a specific meaning. However, if the Agency envisions a formal process for determining the root cause for every malfunction, no matter how simple, CRWI believes this is unnecessary and would result in excess efforts with no environmental gains.

It should also be noted that it is impossible to eliminate the causes for certain malfunctions (e.g., lightning strikes). Finally, faxing is an obsolete technology.

EPA should allow notification by e-mail or other electronic means. CRWI suggests that EPA consider making the following modifications to the regulatory language in 63.10001 to address the concerns mentioned above and to make an affirmative defense a more useful tool.

§ 63.10001 Affirmative Defense for Exceedence of Emission Limit During Malfunction.

In response to an action to enforce the standards set forth in paragraph § 63.9991 you may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the respondent fails to meet its burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.
(a) To establish the affirmative defense in any action to enforce such a limit, the owners or operators of facilities must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:
(1) The excess emissions:
(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner; and
(ii) Could not have been reasonably prevented through careful planning, proper design or better operation and maintenance practices; and
(iii) Did not stem from any activity or event that could have been reasonably foreseen and avoided, or planned for; and
(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
(2) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and
(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and
(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
(5) All possible Reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and
(6) All eEmissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) ~~All of the~~ ~~a~~Actions in response to the excess emissions were documented by properly signed~~, contemporaneous~~ operating logs; and
(8) ~~At all times, t~~The facility was operated in a manner consistent with good practices for minimizing emissions; and
(9) A written ~~root cause analysis~~ report has been prepared, the purpose of which is to determine~~, correct,~~ and ~~eliminate~~ mitigate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. Facility personnel will determine the appropriate type of analysis required (may include but is not limited to root cause analysis, failure mode and effect, fault tree, etc.) to identify the cause of the malfunction. The ~~analysis~~ report shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.
(b) The owner or operator of the facility experiencing an exceedence of its emission limit(s) during a malfunction shall notify the EPA Administrator by telephone, ~~or~~ facsimile (FAX) transmission, or electronic means as soon as possible, but no later than two (2) business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the EPA Administrator within 45 days of the initial occurrence of the exceedence of the standard in § 63.9991 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedances.