Coalition for Responsible Waste Incineration

MEMBER COMPANIES

Dow Chemical U.S.A.
E. I. Du Pont de Nemours
Eastman Chemical Company
Eli Lilly and Company
INVISTA S.a.r.l.
3M
OXEA Corporation
Ross Incineration Services, Inc.
URS Corporation
Veolia ES Technical Services, LLC

ASSOCIATE MEMBERS

AECOM
Analytical Perspectives
B3 Systems
Compliance Strategies & Solutions
Coterie Environmental, LLC
Engineered Spiking Solutions, Inc.
FLSmidth CEntry
Focus Environmental, Inc.
Franklin Engineering Group, Inc.
Metco Environmental, Inc.
RMT, Inc.
SAFRISK, LC.
SAIC
Strata-G LLC
TestAmerica Laboratories, Inc.
URS Corporation

INDIVIDUAL MEMBERS

Ronald E. Bastian, PE
Ronald O. Kagel, PhD

ACADEMIC MEMBERS
(Includes faculty from:)

Colorado School of Mines
Cornell University
Lamar University
Louisiana State University
Mississippi State University
New Jersey Institute of Technology
Rensselaer Polytechnic Institute
University of California – Berkeley
University of Dayton
University of Illinois at Chicago
University of Kentucky
University of Maryland
University of Utah

August 23, 2010

EPA Docket Center (EPA/DC)
Mailcode: 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attn: Docket ID No. EPA-HQ-OAR-2002-0058

The Coalition for Responsible Waste Incineration (CRWI) appreciates the opportunity to submit comments on *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial Boilers and Process Heaters; Proposed Rule.* 75 FR 32006 (June 4, 2010). CRWI is a trade association comprised of 27 members, some of which own and operate industrial boilers and process heaters.

CRWI has been extensively involved in the development of rules under the MACT program. MACT rules regulating our members have been at the forefront of many of the legal and policy disputes over the past 12 years. CRWI has comments on many MACT rules and participated in several cases before the DC Circuit Court of Appeals, including *Cement Kiln Recycling Coalition v. EPA,* 255 F.3d 855, 862 (DC Cir. 2001) (hazardous waste combustors), NRDC v. EPA, 489 F.3d 1251 (D.C. Cir. 2007) (boilers and process heaters) and MWI v. EPA, 09-1297 (medical waste incinerators). Recently several MACT rules affecting our members were extensively reviewed by the Agency in light of the *Brick MACT* court decision that plays a major role in this proposal. Consequently, CRWI has considerable expertise in MACT issues.

Besides representing members who will be regulated by this rule, we are interested in the current proposal because the legal interpretations, policy positions, and standard setting methods being proposed may become precedents for the MACT rules applicable to other source categories affecting our members.

1615 L Street, NW, Suite 1350
Washington, DC 20036
Phone: 202 452-1241
Fax: 202 887-8044
E-mail: mel@crwi.org
Web Page: http://www.crwi.org

Coalition for Responsible Waste Incineration

CRWI has concerns about following issues.

1. EPA's MACT floor methodologies are inconsistent with the statute, Congressional intent, case law, and in some cases, EPA's own policies.
2. Existing case law does not support EPA setting floor standards based on actual emissions.
3. The method EPA is currently using to develop standards is not a "reasonable estimate" of sources' performance.
4. EPA's proposed requirement that facilities meet steady-state standards during SSM events is not logical nor is it lawful.
5. CRWI is concerned that EPA is using one method to develop standards and requiring a different method to show compliance.
6. EPA should not set standards at or near the detection limit.
7. EPA should not use stack test data to set the CO standard but should instead use long-term CO CEMs data.
8. CRWI supports the use of a health-based chlorine standard.
9. EPA should modify the language in 63.7525(g)(3) to make the calibration requirements for pH meters site-specific.
10. EPA should modify the language in 63.7540(a)(1) so that a facility has until the results of the initial test are submitted before having to meet the operating parameter limits established in the test.
11. CRWI supports inclusion of the emission averaging provisions but revisions are needed to expand and improve the usefulness of these provisions.
12. The requirement for an annual tune-up should be modified to match facility maintenance schedules.
13. CRWI supports the exclusion for any boiler or process heaters specifically listed as an affected source under any other 40 CFR part 63 standards.
14. EPA should resolve the conflicting instruction on operating conditions for certain parameters

Our specific comments on each of the issues above are attached.

Coalition for Responsible Waste Incineration

Thank you for the opportunity to comment on this proposed rule. If you have any questions, please contact me at (202-452-1241 or mel@crwi.org).

Sincerely yours,

Melvin E. Keener, Ph.D.
Executive Director

cc: CRWI members
B. Shrager – EPA

Coalition for Responsible Waste Incineration

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. 75 FR 32019. For new sources, EPA set the MACT floor standard at the lowest emission level for each pollutant, after incorporating a variability factor. 75 FR 32027. 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

---

[1] 42 USC § 7412(d)(3).

[2] *Id.*

percent of existing sources. The term "emission limitation" is defined in Section 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]

---

[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.E.i.)

Consequently, establishing new source MACT floors by examining emission levels, without determining which ones were achieved by control, is unlawful.

---

[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).

Since EPA has not examined the emissions in its database to see if the emission 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.

[10] 75 FR 32019 (existing sources), 32027 (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 has set standards that are in excess of its authority.

D. EPA's consideration of fuel switching demonstrates its confusion over how to set floor standards.

CRWI supports EPA's decision to not base the floor standard on fuel switching for all of the reasons cited and more. 75 FR 32019. However, we want to use EPA's consideration of fuel switching as an example of EPA's confused thinking over floor standards.

---

[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).

If EPA has a duty to establish floor standards at the levels "achieved in practice" by the best performing sources, then fuel switching is not a valid method of setting the floor unless EPA can find a source (in the case of new source standards) or at least 12% of the sources that have *already* "achieved" fuel switching. Since EPA's discussion of fuel switching did not cite to any evidence, we can only assume that EPA could not make such a demonstration. Thus, requiring fuel switching would be unlawful as a floor standard.

This, once again, points out the Agency's confused thinking about what is "achieved in practice" and what is "achievable." While Congress may have contemplated EPA examining practices such as fuel switching when setting achievable standards under § 112(d)(2), by its nature, such a technique is generally a "beyond-the-floor" practice and could be required only after EPA conducts the requisite cost, energy, and non-air health or environmental analyses required by § 112(d)(2) in order to set beyond the floor standards.

This is as it should be. In the preamble EPA mentions the difficulty and expense facilities would encounter trying to retrofit their units as well as the availability of the fuels to which the sources would switch. It is doubtful Congress would have contemplated requiring such a massive undertaking, without significant analysis. Thus, it is a practice that should only be considered as "beyond-the-floor" standard.

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 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.

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

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" 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

---

[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.

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

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.

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

---

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

[21] Id. at 866.

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.

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.

---

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

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

[24] Id.

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.

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.

---

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

[26] 75 FR32010. ("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)").

[28] 75 FR 32010.

Coalition for Responsible Waste Incineration

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 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

[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.

(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.

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.

In discussing the PM emissions for hazardous waste burning liquid fuel-fired boilers, EPA stated that if they had used the straight emissions method, seven of the top eight performers did not have any air pollution control devices (70 FR 59448). Using a straight emissions method, these units would have been picked as best performers "solely because they feed low levels of ash." Applying that logic to this rulemaking, CRWI decided to check the best performers for mercury in the liquid boiler sub-category based on the concept that the same problem may occur here.

It does. At least one of the top performers (TNMilanArmyAmmunitionPlant)[31] does not have any air pollution control devices. In fact, there are 30 units from this location with exactly the same emissions rates for mercury, leading us to believe that none of these units have air pollution control devices. While these units may have the lowest emissions during these tests, this was simply a result of these units not feeding mercury during that test. However, at other times, if these units did feed a liquid fuel that contains mercury, it would have all been emitted. Thus, over time, these units cannot be guaranteed to be the lowest emitters. On the other hand, if EPA had chosen to incorporate some method of back-end control as a top performer, those units will still remove a certain percentage of mercury, no matter how much is being fed. This is what caused EPA to decide in the HWC MACT rule that "a rote selection of lowest emitters as best performers can lead to the nonsensical result of units with no air pollution control equipment being classified as best performers." CRWI believes that this is true in this rule also and strongly encourages EPA to choose best performers

[31] MACT Floor Analysis (2010) for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source, April 2010, Appendix C-2, Table 1.

based on some other method than straight emissions because it is not a "reasonable estimator" of performance.

Another 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 five 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 demonstrated 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 industrial boilers and process heaters to comply with the same emission standards during periods of startup, shutdown, malfunction, and steady state conditions is neither logical nor lawful.

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.

The standards EPA are proposing for industrial boilers and process heaters are not capable of being complied with during periods of SSM. For example, facilities with baghouses cannot comply during startup periods because they have to bypass the bags until the 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 (75 FR 32012) and is not establishing different standards for these periods (75 FR 32013). EPA's reasons are that boilers do not normally startup or shutdown more than once a day and that daily or monthly averages are used to show compliance with the standards. EPA is correct that boilers typically do not startup more than once a day perhaps because it may take 36 to 48 hours to startup a large boiler (required time to heat up the refractory to avoid equipment damage). The major flaw in EPA's reasoning, however, is that EPA did not include emissions data during either startup or shutdown in the development of these standards; all data collected was under steady-state conditions. Since emissions under non-steady-state conditions may vary significantly, they could significantly alter the Agency's calculations. Thus, the standards are not properly set.

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 (75 FR 32013) does not make malfunctions go away. Even the best operated and maintained facilities will have malfunctions. For example, any facility that is tied into the external electric power grid (most have at least a small tie-in) will face power disruptions potentially causing malfunctions. We have all lost power in our homes at one point in time – it's an inevitable.

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.

So, 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)." The obvious choice for these conditions are work practice standards.

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, 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.

CRWI would like to make two additional points regarding SSM events. First, EPA needs to allow an alternate oxygen correction factor during these events. During the first part of startup and the last part of shutdown, the oxygen concentrations will approach ambient concentrations. When this occurs, the

Coalition for Responsible Waste Incineration

equation used to calculate the correction factor will approach infinity (dividing by zero). Under these conditions, it is not appropriate to apply the oxygen correction factor as proposed. The HWC MACT rule allows facilities to set up an alternate correction factor for these conditions. One example of how this problem can be addressed can be found at 40 CFR 63.1206(c)(2)(iii).

Second, if EPA keeps the provisions that the facility must comply with the standards are all times, CRWI sees no reason facilities have to record and report "SSM" events. The proposed language contains some inconsistencies. For example, Table 10 proposes that the requirement to develop an SSM plan does not apply. In addition, EPA also proposes an immediate report if the facility does not follow their SSM plan. Since Table 10 proposes that the requirement to develop SSM plans (§ 63.6(e)(3)) does not apply, a facility cannot fail to follow a plan it is not required to have. CRWI suggests that EPA re-examine the proposed rule for any provisions that are inappropriate, unnecessary, or redundant should EPA remove the SSM provisions in the final rule.

5. CRWI is concerned that EPA is using one method to develop standards and requiring a different method to show compliance.

CRWI is also concerned that EPA is developing a standard for PM based on stack test data while requiring compliance based on a PM CEMs. It appears that EPA is using one method to set the standard and a totally different method to show compliance. The U.S. Court of Appeals for the D.C. Circuit has ruled that "a significant difference between techniques used by the Agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard." *Portland Cement supra* at 396. CRWI believes that using stack test data to set the standards and then PM CEMs to show compliance qualifies as "a significant difference between techniques."

The primary difference between these two methods will be that the variability experienced during normal operations will not be captured during the stack test but will become apparent as the facility operates a CEMs over time. CRWI believes that if EPA wishes to use PM CEMs to show compliance with the standard, then the standard must be developed using PM CEMs data. The same logic can be applied to the mercury requirements.

6. EPA should not set standards at or near the detection limit.

At 75 FR 32020, EPA discusses the variability of data that is reported at the detection level. EPA states their concern is that a floor emissions limit based on

truncated data or data at or near the method detection limit may not adequately account for variability. We agree with the Agency's concerns. However, we do not agree with the way EPA is addressing the problem. Before we discuss that concern, a common understanding of what detection limits means is needed.

EPA has addressed detection level issues 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. A copy is attached (Appendix A).

The lowest level 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 limits are the levels above the detection level where reliable quantification measurements can be made. The Practical Quantification Limit (PQL), the Reliable Detection Limit (RDL) and Reliable Quantification Levels (RQL) are all calculated by multiplying the MDL by various factors. However, none include using a calibration point. The 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. CRWI believes that the lowest number that can be used for developing standards and showing compliance with those standards is the ML or RL.

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. If it is, then, the discussion of adding variability because the data is at or near the detection limit goes away because all numbers would be real numbers and not some undefined number between the detection limit and zero. Any number below the RL is not reliable and statistical methods should not be used on that data.

Coalition for Responsible Waste Incineration

If the data reported is not based on an RL, CRWI suggests that the quality of the data is not adequate to set standards and other data must be used. 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. Unless the current standards are developed on that foundation, the entire 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.

7. EPA should not use stack test data to set the CO standard but should instead use long-term CO CEMs data.

EPA used stack test data to set CO standards. CRWI does not believe that stack test data sufficiently captures the long-term variability experienced by these units. We believe that EPA needs CO CEMs data to do this.

In its database, EPA has CO CEMs data for 6 sources. One was reclassified as a CISWI unit (ARDomtar) and two are gas-fired boilers. Since the gas-fired boilers do not have CO standards, this leaves three units that have CO CEMs data and CO standards for this proposed rule. They are TXDibollTemple-Inland, VAPhilipMorrisPark500-unit B3, and WVDuPontWashingtonWorks-unit PO5. EPA includes daily data for one source (TXDiboll) in their floor memo.[32] CRWI tried to duplicate the numbers in the floor memo using the CO CEMs data in the database supplied. However, we were unable to do so. Perhaps we did not completely understand how EPA made the calculations. Consequently, our following analysis was restricted to the data EPA provided for TXDiboll in the floor memo.

TXDiboll is categorized as a biomass fired, dutch oven/suspension burner and is ranked as #2 for CO (test average of 69.3 ppmv @3% O2).[33] The proposed CO standard for existing sources in this category is 1010 ppmv. On page 9 of the floor memo, EPA states

[32] MACT Floor Analysis (2010) for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source, April 2010, Appendix B-2.
[33] *Id.* Appendix C-3, Table 9.

Coalition for Responsible Waste Incineration

> "A daily average was calculated for CO emissions from TXDibollTemple-Inland unit PB-44, based on the hourly averages reported for the 30-day CO and THC monitoring data. The result was 1,113 ppmv @ 3% O2. This average is similar to the numerical limited calculated using 99% UPL for the dutch oven and suspension burner subcategory. Therefore, we concluded that the statistical variability correctly accounts for variability in CO emissions over various boiler loads."

While this discussion pertains primarily to whether CO emission will vary under load, EPA states that since the CO average from CEMs data (1113 ppmv) is similar to the CO standard for this source category (1010 ppmv), their method of incorporating variability adequately captures longer term trends. CRWI believes this point is incorrect.

CO compliance is based on a 30 day rolling average updated once a day. CRWI used the "start anew" method for calculating the rolling averages. Using the "start anew" method requires the facility to meet their standard for day 1 using only day 1 data. On day 2, the average of days 1 and 2 are used. For day 3, the average of days 1, 2, and 3 are used. This continues until 30 days are reached and then each new day uses the last 29 days to calculate the average.

The results for TXDiboll are shown in Table 1. As you can see, by the end of day 6, this facility has exceeded the CO standard. This continues through the end of the data. If you assume that on day 31, the unit operates at the minimum it has during the entire 30 day period (151 ppmv), it takes another 6 days for the rolling average to fall below 1010.

CRWI would like to make four major points about this data and analysis.

- It is obvious from this analysis that the one hour test average for TXDiboll (69 ppmv) is much different from the average daily CEMs values of 1113 ppmv). Thus, the one hour test average does not come anywhere close to capturing the long-term variability of the CO readings from this source. This illustrates our point that EPA should not base standards measured over time on data from short term tests.
- The 29 day average for this unit is 1113 ppmv, which is greater than the standard for this subcategory. Consequently this unit, cannot meet the proposed standard on a long-term basis even though it is a top performer for CO.
- The use of longer averaging periods will not adequately account for the variability experienced over time, for all top performers.

- Longer averaging periods may help smooth out peaks but once a facility exceeds a standard, it takes longer to clear that exceedance.

CRWI believes that this analysis shows that using a one-hour average to set CO standards is not adequate to capture the variability experienced over time by these facilities. To properly capture the variability, EPA must gather long-term CO data on these units. We do not know what the proper time period to gather this data is but it must be longer than the averaging period used to show compliance. The only way to know this is to gather data, do the analysis, and see where the addition of new data does not change the variability factors.

Table 1. TXDiboll daily CO readings, a thirty day rolling average and whether the facility meets the standard.

Day	Daily average CO	30-day average	Greater than Proposed standard
1	448	448	No
2	269	359	No
3	179	299	No
4	938	459	No
5	215	410	No
6	9844	1982	Yes
7	7352	2749	Yes
8	601	2481	Yes
9	331	2242	Yes
10	305	2048	Yes
11	294	1889	Yes
12	1290	1839	Yes
13	1321	1799	Yes
14	538	1709	Yes
15	581	1634	Yes
16	1301	1613	Yes
17	2877	1687	Yes
18	1038	1651	Yes
19	511	1591	Yes
20	415	1532	Yes
21	161	1467	Yes
22	275	1413	Yes
23	159	1358	Yes
24	543	1324	Yes
25	273	1282	Yes

26	458	1251	Yes
27	298	1215	Yes
28	180	1178	Yes
29	255	1147	Yes
30	151	1113	Yes
	151	1103	Yes
	151	1100	Yes
	151	1099	Yes
	151	1072	Yes
	151	1070	Yes
	151	747	No

8. CRWI supports the use of a health-based chlorine standard.

CRWI agrees with the Agency that they have the authority to set health based standards under section 112(d)(4) of the Clean Air Act and that HCl is a threshold pollutant. 75 FR 32030. We also agree with the Agency that section 112(d)(4) is to be used at the discretion of the Administrator. In this case, we encourage the Administrator to exercise her discretion and include a health-based alternative standard for HCl in the final rule. We do this because we believe that the Agency can craft a rule that is protective of human health and the environment while at the same time reducing costs to the facility to come into compliance with those requirements. The Agency has raised a number of concerns about this provision. We attempt to address some of those concerns below.

A. The Agency has the authority to establish a health-based standard for HCl.

As EPA knows, the Clean Air Act Amendments of 1990 substantially revised the Nation's program to control hazardous air pollutants. In these amendments, Congress split the program into two phases. In the first phase, the Agency requires control commensurate with "the maximum degree of reduction in emissions" being achieved by the best controlled sources. 42 USC §§ 7412(d)(2) and (3). This phase is commonly referred to as the technology-standard phase. *See e.g.*, 1990 Leg. Hist. at 862, 875, 876, 950, 1029, 1062, 1079. In the second phase, EPA is to examine the amount of risk that remains to human health and the environment, and impose further controls if necessary to protect human health with an ample margin of safety, and prevent adverse environmental consequences. 42 USC § 7412(f).

This shift to an initial technology-based program was not absolute, however. Congress authorized EPA to use a risk-based approach during the technology-based phase where further regulation was not necessary from a risk standpoint. Consequently, EPA is allowed to delist an entire source category or subcategory, if none of the sources in it emit hazardous air pollutants that create a risk greater than 1 in one million excess cancer cases. 42 USC § 7412(c)(9).

Another risk-based component was enacted in § 112(d)(4). 42 USC § 7412(d)(4). Since at least 1997, EPA has recognized that section 112(d)(4) authorized the Agency to set risk-based emission standards in lieu of technology-based standards. As EPA wrote in a *Federal Register* notice, "Congress provided in section 112(d)(4) that EPA could, at its discretion, develop risk-based standards for HAP 'for which a health threshold has been established,' provided that the standard achieves an 'ample margin of safety.'" 62 FR 33625, 33631 (June 20, 1997).[34]

Based on the legislative history that clarifies Congressional intent, this interpretation is clearly correct. The Senate Report wrote,

> To avoid expenditures by regulated entities which secure no public health or environmental benefit, the Administrator is given discretionary authority to consider the evidence for a health threshold higher than MACT at the time the standard is under review. The Administrator is not required to take such factors into account; that would jeopardize the standard-setting schedule imposed under this section with the kind of lengthy study and debate that has crippled the current program. But where health thresholds are well established, for instance in the case of ammonia, and the pollutant presents no risk of other adverse health effects, including cancer, for which no threshold can be established, the Administrator may use the threshold with an ample margin of safety (and not considering cost) to set emissions limitations for sources in the category or subcategory. Employing a health threshold or safety level rather than the MACT criteria to set standards shall not result in adverse environmental effects which would otherwise be reduced or eliminated.

---

[34] EPA then proceeded to use this authority in the first Plywood MACT. See 63 Fed. Reg. 18754, 18765 (April 15, 1998) (Proposed National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Hazardous Air Pollutants From Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills), finalized at 66 FR 3180 (January 12, 2001).

1990 Leg. Hist. 8511, S. Rep. No. 228, 101st Cong. Sess. 171 (1990). *See also* 1990 Leg. Hist. 8516 (Administrator authorized to use threshold level "in lieu of more stringent 'best technology' requirements."). Thus, EPA clearly has the authority to set a risk-based standard.

EPA cannot set a risk-based standard for just any HAP, however. It must be a "threshold pollutant." As the Agency noted in the preamble, HCl is a health threshold pollutant for the purpose of section 112(d)(4). 75 FR 32030.

Even though EPA states that there is no evidence that HCl is a carcinogen (75 FR 32030), some may argue that HCl does not meet Congressional intent for defining threshold pollutant because it has not been conclusively shown to be non-carcinogenic. That is not necessary according to Congress. As quoted above, Congress explained that ammonia was a HAP with a "well-established" threshold for which EPA could set a risk-based standard. A comparison of the IRIS information relating to carcinogenicity for ammonia and HCl shows striking similarities: the information for both ammonia and HCl contains the same notation relating to carcinogenicity, *i.e.*, it has "not undergone a complete evaluation and determination under US EPA's IRIS program for evidence of human carcinogenic potential." Compare http://www.epa.gov/ncea/iris/subst/0422.htm (Ammonia) with http://www.epa.gov/ncea/iris/subst/0396.htm (HCl) (viewed August 12, 2010). There are other similarities as well: *i.e.*, EPA only looked at respiratory effects of both HCl and ammonia, and the RfC for ammonia appears to be based on a LOAEL, not a NOAEL – just like HCl.

In short, EPA has the authority to set a health-based standard for HCl under §112(d)(4). To believe that EPA must make a positive finding of absolutely no cancer risk, *i.e.*, prove a negative, renders this provision a near nullity and belies both the scientific process and Congressional intent.

B. An ample margin of safety has been demonstrated.

When setting a health-based limit, the Agency is required to ensure that the level will be protective of human health, with an ample margin of safety. Traditionally, that level has been the RfC which, as the Agency knows, contains multiple levels of added safety. For example, the RfC for HCl is 20 ug/m^3, 30 times lower than the NOAEL. By setting a site-specific standard at a hazardous index (ratio of the exposure at the fence line to the reference concentration) to 1.0, EPA will have demonstrated an ample margin of safety.

C. Site specific risk-based standards are lawful.

One issue that often arises when considering risk-based standards is whether EPA has authority under Section 112 to establish an exposure based emission limit. The concern seems to be that some stakeholders construe the Act's statutory provisions as requiring uniform emission limitations at all facilities, rather than emissions that are measured at places away from the source and that vary from facility to facility. CRWI does not see any legal impediment to establishing exposure based limits.

First, under Section 112, EPA has authority to establish "emission standards." Emission standards are defined to be

> 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 . . . to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.

EPA's alternate risk-based emission standard will limit the quantity, rate or concentration of the emissions using operating parameter limitations, or OPLs. These will limit the quantity, rate or concentration of emission. They will be measured at the facility, not at the point of exposure.

Finally, the limitations that EPA is establishing are uniform. They uniformly protect the individual most exposed to emission levels no higher than a hazard index of 1.0.

Thus, CRWI suggests that EPA follow the process used for Subpart EEE and allow facilities to make a site-specific showing that their emissions will be protective with an ample margin of safety. It will be the responsibility of the facility to make that showing and the permitting authority would have the responsibility to review and approve that site-specific demonstration.

D. EPA should only consider the affected source and not include all sources at the facility or surrounding facilities.

CRWI believes that Congress expected EPA to consider the effect of co-located facilities during the § 112(f) residual risk program so that, by the time EPA has promulgated residual risk standards for all source categories, risks from co-located sources will be adequately addressed. As indicated by Senator Durenberger's comments during the debate of the Clean Air Act Amendments of 1990, EPA should consider residual risk in the context of *different* HAP source

categories that might be co-located at the same site. *See* Brick MACT proposal, 67 FR 47894, 47905, fn. 5 (July 22, 2002) citing Senate Debate on Conference Report (October 27, 1990) reprinted in "A Legislative History of the Clean Air Act Amendments of 1990," Comm. Print S. Rrt. 103-38 (1993) ("Legis. Hist.") at 868.

Under § 112(d), however, the targets of regulation are new or existing sources of hazardous air pollutants within the specified source category (or subcategories) under consideration – not all sources at the site. EPA sets these standards by considering the emission levels achieved by the best performers in their respective category or subcategory. CAA § 112(d)(3).

Congress carried this concept into § 112(d)(4) as well. The legislative history explains that the focus of the Agency's authority under section 112(d)(4) is preventing risks from the sources themselves. As the Committee on Environment and Public Works explained,

> where some sources do emit more than the threshold amount, the Administrator is authorized by section 112(d)(4) to use the no observable effects level of NOEL (again with an ample margin of safety) as the emission limitation in lieu of more stringent "best technology" requirements. Following this scenario, *only those sources in the category which present* a risk to public health (those emitting in amounts greater than the threshold) would be required to install controls, even though the general policy is "maximum achievable technology" everywhere.

S. Rep. No. 228, 101st Cong. Sess. 175-176 (1989) (emphasis supplied).

In addition, there is no prior EPA precedent for considering co-located facilities from a different source category during the same § 112 rulemaking. In the Benzene NESHAP, where EPA noted that it should consider "effects due to co-location of facilities" *id.* at 54 FR 38045, EPA was only considering sources from the same category. However, in that rule "co-location" was not all sources at the site. Instead it was all sources within the source category. As explained in a section of the preamble labeled "Application of Policy to Benzene Source Categories" EPA explained that it derived the regulatory level on "model plants" to represent the sources being regulated. For Benzene Storage Vessels, EPA said, "Where two or more of the model plants used for the analysis might occur at one site (e.g., both a producer and a consumer of benzene), the risks were calculated from their total emissions." *Id.* at 38050-01. Consequently, EPA examined the effects of co-location only from the "model plants" EPA was

evaluating — and not from emissions sources outside the source category it was evaluating.

In summary, consideration of sources outside the source category is antithetical to the concept of MACT standards for individual source categories. CRWI suggests that EPA's limit the §112(d)(4) standard to only those sources within the source category. Thus, a decision to limit the provision's focus to each unit impacted is supported by Congressional intent and prior precedent.

E. SO_2 control is overestimated.

EPA should not rely on the additional SO_2 reductions that will be achieved by HCl control as a public health or environmental benefit to prevent them from establishing a health-based standard. While the Senate mentioned in its report that EPA may consider the benefits that MACT standards might have on non-HAP pollutants, CRWI notes that Congress placed the §112(d)(4) authority *in the statute*, not just its deliberations, thereby expressing a stronger intent for the Agency to consider and implement. Besides, CRWI believes that EPA is overestimating the degree of reductions SO_2 that will be achieved by HCl control.

As EPA knows, HCl absorbs readily in water at most pH's. As a result, most wet scrubbers designed to control HCl operate at acidic pH's. On the other hand, SO_2 scrubbing requires pH's above 8.5 (alkaline). Operating controls for an alkaline scrubber are much more difficult due to the formation of carbonates in the process. This can lead to plugging and more frequent cleaning. For this reason, facilities that wish to control HCl will operate their scrubber at acidic pH's because it will achieve the same results with fewer maintenance problems. Consequently, technology to control HCl will not necessarily control SO_2.

In conclusion, we have shown that EPA has the authority to set health-based alternative standards, HCl is a threshold pollutant, there is an ample margin of safety at HI of 1.0, and the additional justification of controlling SO_2 may not be technically correct. As such, CRWI believes that EPA should allow industrial boilers and process heaters to use a health-based alternative standard based on the RfC.

9. <u>EPA should modify the language in 63.7525(g)(3) to make the calibration requirements for pH meters site-specific.</u>

As proposed, EPA would require all pH meters to have a two point calibration every 8 hours. CRWI members have extensive experience with pH meters and consider this level of detail to be unnecessary. The length of time between

Coalition for Responsible Waste Incineration

checking the calibration of a pH meter is site-specific and the facility should have flexibility to determine a frequency of calibration based on the historical experience with similar installations and instruments without EPA prescribing a one-size-fits-all frequency. A set frequency for all instruments regardless of the sophistication of the instrument and regardless of the service environment of the instrument is not appropriate. In other words, one size does not fit all.

Companies that have gone to the expense of using sophisticated instruments such as smart transmitters and other instruments with self-diagnostics as opposed to continuing to use older, less sophisticated systems would not benefit from upgrading their systems. It is the facility's responsibility to develop and implement an adequate monitoring program. This is already required as a part of their site-specific monitoring plan. Putting this level of detail in a regulation does not help; it only creates unnecessary work under most circumstances.

10. EPA should modify the language in 63.7540(a)(1) so that the facilities have until the results of the initial test are submitted before having to meet the operating parameter limits established in the test.

As proposed, 63.7540(a)(1) requires facilities to operate below any applicable operating parameter limits as soon as the initial performance test is completed. Facilities cannot know what the maximum (or minimum) operating parameter limits will be until the results of their initial (or subsequent) performance tests are received and analyzed. CRWI suggests that this language be modified to state that the facility must follow the operating parameter limits once the test results are submitted.

Later in this section, EPA states that operating parameter limits must be confirmed or re-established during performance tests. To avoid obvious ratcheting down of operating parameter limits, CRWI suggests that EPA add a provision to waive meeting current operating parameter limits during subsequent testing.

Finally, as proposed, EPA requires reporting of test results within 60 days of completing each performance test. It will be difficult to get certain results back and reviewed within that time frame, and close to impossible for dioxin samples without paying a premium. EPA's current methods have the following hold times for Method 23: 21 days to extraction and 40 days from extraction to analysis. Recently, many laboratories have struggled to meet these holding times simply because of the large number of samples to be analyzed. Adding the test results from all the units in this rule will further strain the system and may cause even longer delays. CRWI suggests that this requirement be changed to 90 days.

11. CRWI supports inclusion of the emission averaging provisions but revisions are needed to expand and improve the usefulness of these provisions.

A. Dioxins/furans should be included.

A source should be allowed to comply with the dioxin/furan (D/F) standard via emission averaging. While CRWI does not believe it is appropriate to set numerical emission standards for D/F, if the final rule does include such numerical standards, a source with multiple units could choose to comply by installing post-combustion control (such as activated carbon injection) to reduce D/Fs on some units. (Note: this example does not imply CRWI believes such technology has been demonstrated on industrial boilers). Since that pollution reduction strategy would justify allowing use of emission averaging for other HAPs, sources should be allowed the same flexibility for dioxins/furans in order to reduce the overall compliance costs for the facility.

B. Carbon monoxide should be included.

Some units may be able to easily meet the proposed CO limits, while, for others, it may impossible. Therefore, CO should be included in the emissions averaging provisions. To facilitate its inclusion, the emission limitation for CO should be expressed in an alternative form – lb/mmBtu. For the case of units using CEMS to measure CO, we reference an existing emission averaging provision for NOx found at 40 CFR 76.11. Heat input should be allowed to be determined using either flow monitors (some units subject to the NOx budget trading program have these already) or using fuel factors and diluent monitors per 40 CFR 60 Method 19.

C. Averaging across subcategories should be allowed.

The proposed emission averaging provision appears to only allow averaging within a subcategory (see 63.7522(a). CRWI believes there is no justification for restricting averaging to a given subcategory. Other MACT standards do not place such restrictions. For example, the Hazardous Organic NESHAP (40 CFR 63 Subpart G) allows process vents, storage vessels, transfer racks, and wastewater streams to all be included in an emission average across an affected source. This provides a facility the opportunity to avoid otherwise cost-prohibitive compliance options by over-controlling some other emission unit in a more cost-effective combination. In addition, by not allowing averaging across the different fuel types, EPA removes an incentive to burn more natural gas or renewable

fuels such as biomass as a strategy to average out emissions from a coal-fired unit.

It is not clear from the proposed rule language if EPA intended to restrict averaging across subcategories. While the wording under the separate stack requirements seems to have this restriction, the wording under the common stack requirements does not (see Equation 6). In any event, as stated above, there should be no such restriction.

As in the HON, the compliance methodology can easily accommodate subcategories with different emission limits for a given pollutant. This is done basically by calculating a weighted average allowable mass emission and a weighted average actual mass emission each month using heat inputs or steam production for each unit.

D. Compliance should be based solely on actual emissions:

The proposed provisions require (1) a demonstration that the average weighted emissions is less than 90 percent of the applicable emissions limit assuming each unit is operating at its maximum rated heat input capacity (see Equation 1) and (2) a demonstration each calendar month that the average weighted emissions is less than the applicable emissions limit using the actual heat inputs for that month.

There is no rationale for the first test and it should be eliminated. Other rules that allow emission averaging (again, see the HON), include no such requirement. Such a requirement could be unduly restrictive. For example, a facility may have one older unit and a newer unit which they would like to average. The older unit may have a much lower capacity factor (ratio of actual usage divided by rated capacity) than the newer one. Older units typically have much more space constraints and a facility may be facing steep compliance costs to bring the older unit into compliance and may have an opportunity to over-control the newer unit. Given that the newer unit has a longer remaining life expectancy, such a facility should be incented to over control the newer unit. Yet, Equation 1 may block the facility from taking advantage of the emission averaging flexibility, especially if the older unit has a comparable or even higher rated capacity than the newer unit.

Coalition for Responsible Waste Incineration

E. Compliance on a monthly basis during the first twelve months of compliance period is unworkable.

Proposed 63.7522(f)(3) requires a facility to generate enough credits to offset the debits each and every calendar month up until 12 months are accumulated and, thereafter, determine compliance on a twelve month rolling average basis. This requirement unnecessarily restricts the utility of the emission averaging provision. For example, in the case where a facility over-controls one boiler while under-controlling the other, there will be months when the facility could not comply with individual unit limits – even though the facility meets the emission limits on a "facility" basis. This would certainly be true during a month when the credit-generating unit is down for its periodic maintenance outage or during high heating demand months when both units are required at full capacity. Due to the necessary length of these outages (4-6 weeks), there could conceivably be two or three months in a row where the facility could not comply with proposed averaging provisions. There will be other cases where the credit-generating unit experiences an unanticipated outage and the debit-generating unit is required to operate more to compensate. For these reasons, this provision should be eliminated.[35] Due to the circumstances described above (extended outages while other units take on additional load or during high heating demand months when both units are required at full capacity), a facility using emissions averaging for boilers and process heaters should be subject to only annual compliance determinations.

F. The 10 percent penalty for using emissions averaging is arbitrary, unnecessary, and should be removed.

EPA solicits comment on this discount factor and states that its inclusion further ensures the allowable emissions are at least as stringent as the MACT floor limits without using averaging. Given the accuracy of heat input weighted emission calculations, CRWI does not see that there is any uncertainty that the average emission rates will be any less stringent than when not using averaging. This

[35] CRWI notes that the HON, which EPA references, includes an annual emission test along with a quarterly emission test where the average emissions must be less than 130 percent of the allowable emissions. Here, EPA acknowledges that a short term average (quarterly) must provide some tolerance as compared to an annual average. We bring this point up, not to suggest that EPA adopt the HON quarterly test, but to illustrate that EPA emissions averaging provisions have accounted for this issue. Also, we would note that the HON is written for an entirely different industry than the case of boilers and process heaters.

discount factor is arbitrary and should be eliminated. Its inclusion reduces the flexibility that the averaging concept provides.

In addition, it appears the 10 percent discount factor discussed on page 32035 of the proposed rule should be in the denominator in Equations 1 – 4.

12. The requirement for an annual tune-up should be modified to match facility maintenance schedules.

CRWI supports the use of a periodic tune-up as a work practice for gas-fired boilers. However, we would suggest that the schedule be made more flexible.

The tune up must be done when the unit is shut down. While some facilities shut down their unit for maintenance on an annual basis, others have maintenance cycles of 36 months or more, depend upon the facility's production schedule, the boiler design, the fuel used, the load for that boiler and the annual hours of operations. Some facilities will have multiple boilers and only use part of them at any time. Requiring a facility that has not been used in that calendar year to undergo an annual tune-up does not make sense.

Therefore, CRWI suggests that the Agency modify the timing for this requirement to match a facility's routine maintenance schedule. There is no reason to develop a rigid schedule for something when a flexible schedule based on routine maintenance will be equally effective. CRWI suggests the following modifications to § 63.7540(a)(10) and Table 3.

> 63.7540(a)(10): If your boiler or process heater is in either the Gas 1 (NG/RG) or Metal Process Furnace subcategories and have a heat input capacity of 10 million Btu per hour or greater, you must conduct a tune-up of the boiler or process heater in each calendar year in which the unit operates ~~annually~~, or at the next scheduled unit turnaround, to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (a)(10)(vi) of this section.
>
> Table 3, Item 2:
>
> Conduct a tune-up of the boiler in each calendar year in which the unit operates ~~annually~~, or at the next scheduled unit turnaround, as specified in § 63.7540

Coalition for Responsible Waste Incineration

13. CRWI supports the exclusion for any boiler or process heater specifically listed as an affected source under any other 40 CFR part 63 standards.

At 63.7491(h), EPA proposes to exclude any boiler or process heater that is subject to regulation from any other MACT standard. CRWI supports this and encourages EPA to include this in the final rule.

14. EPA should resolve the conflicting instruction on operating conditions for certain parameters

In the preamble (75 FR 32033), EPA states that facilities must set certain parameters (pH, pressure drop and liquid flow rates for wet scrubbers, etc.) based on a 4-hour block average. However, Table 7 requires that the operating limits should be based on the average of each individual test run. Typically, each individual test run lasts one hour. Thus, the average of three tests would only come up to 3 hours, not the 4 hours listed in the preamble. CRWI believes that the regulations have the proper way to set operating parameters and suggests that the preamble should be modified to match the regulatory language.