BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

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September 19, 2003

Steven Vozzo, Public Hearing Officer
Division of Air Quality-FRO
225 Green St., Suite 714
Fayetteville, NC 28301-5043
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Re: Stericycle, Inc, Haw River, Alamance County
Air Quality Permit No. 05896T15, Facility ID: 04/01/00010

Dear Mr. Vozzo:

On behalf of the Board of Directors of the Blue Ridge Environmental Defense League and our members in Alamance County, I write to comment on the proposed Title V permit for Stericycle, Inc. I have learned that DAQ prepares no transcript of the oral comments at public hearings. Therefore I submit the following comments which reflect my oral presentation delivered at the public hearing held in Graham on September 8th. Also, we hereby request that the entire hearing record from the previous Title V permit (No. 05896T14) be inserted into the record for this new permit.

General Comments

The state of North Carolina cannot at present ensure that medical waste incinerators are operated without threatening public health and the environment. Blue Ridge Environmental Defense League is working with our members to end pollution from commercial medical waste incineration in two North Carolina communities: Matthews in Mecklenburg County and Haw River in Alamance.

Waste Incinerator Emission Limits are Arbitrary and Capricious

Medical waste incinerators are the second largest known source of dioxin in the United States. Health effects of prolonged dioxin exposure include impairment of immune, nervous and endocrine systems. Dioxin is a known human carcinogen. In addition to dioxin, hazardous air pollutants from medical waste incinerators include arsenic, chromium IV, cadmium, lead, hydrochloric acid, and mercury. The Clean Air Act spells out the hazardous air pollutant emission requirements for existing medical waste incinerators:

> Emissions standards for existing units in a category may be less stringent than standards for new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category. The Administrator may distinguish among classes, types, ... and sizes of units within a category in establishing such standards. (42 U.S.C. s 7429[a][2])

As directed by Congress, the Environmental Protection Agency was supposed to base emission floors on the best 12% performing sources; however, EPA based the MACT standards on the performance of the worst units.

On March 2, 1999, the United States Court of Appeals for the District of Columbia Circuit expressed doubts about the reasonableness of EPA's approach, and ruled, "EPA's method looks hopelessly irrational." The DC Circuit found in favor of the Sierra Club and NRDC that "EPA has not pointed to evidence supporting the reasonableness of the approximation, and we agree that at a minimum further explanation is needed." The court ordered the case remanded to EPA for "further explanation of its reasoning in determining the 'floors' for new and existing MWIs." (see attachment: Sierra Club and Natural Resources Defense Council v.USEPA, No. 97-1686).

For example, the DC Circuit found that the EPA's so-called MACT emission standard allowed more than double the hydrogen chloride emissions found in uncontrolled sources. NC DAQ's permit is based on an incorrect MACT emission standard: that is, one which allows excess toxic pollution emissions which present a risk to public health and which may not comply with NAAQS.

Stericycle Financial Track Record Invites Litigation from Clients

In November 2000 the state recommended civil penalties for five episodes of excess waste burning in Stericycle's Haw River incinerator. But the North Carolina Division of Air Quality, which can levy fines of $10,000 per violation, imposed no penalty. Stericycle said the computer system which recorded the weight violations in 2000 was only a "billing tool for accounting purposes" and that its handwritten logs recorded no excesses. According to financial reviews of the company's investment status, Stericycle's pricing practices are "aggressive," resulting in steep increases in disposal rates for captive customers. Such deceptive practices could conceivably result in lawsuits by medical services caught in an economic downturn.

Specific Comments

Permit Allows Increased Burning of Medical Waste, Section 2.1.A.1.b(4)

Under the existing permit (No. 05896T14), Stericycle is permitted to burn 1,911 pounds per hour in each of the two incinerator units, a total of 33,480,720 pounds of medical waste a year. DAQ's Air Permit Review, AQ-16, for the new draft permit states incorrectly that "No…increase in plant-wide emissions is being permitted as a result of this revision." However, the T15 permit raises the charge rate maximum to 2,101 pounds per hour and 2.096 pounds per hour for Units 1 and 2, respectively. To explain the increase, the AQ-16 cites the 40 CFR 60.51c definition for maximum charge rate:

> B) Specific Condition 2.1A1.b.(4) Table - Values for the site specific operating parameters determined by most recent approved stack test are placed in two tables, one table for each unit. **Not**e: Consistent with 40 CFR 60.51c - Definitions, the maximum charge rates placed in the tables are 110% of the lowest 3 hour average charge rates measured during the most recent performance test. Thus, the maximum charge rates are determined as follows:
> Unit 1 (1.1)*(1,910 lb/hr) = 2,101 lb/hr
> Unit 2 (1.1)*(1,906 lb/hr) = 2,096 lb/hr

Thus, the total annual waste burning limit under the new draft federal permit is 36,765,720 pounds, a 9.8 % increase. The incineration of an additional 3.285 million pounds of medical waste would doubtless increase plant-wide emissions. All pollution limits are based on emission rates which vary with the amount of waste burned. We note that under the NC Toxic Air Pollutant program the previous hourly limits are state enforceable. But DAQ computer air modeling is the basis for this determination and the TAP program lacks federal enforceability. Blue Ridge Environmental Defense League opposes this increase.

New Permit Would Legalize Previous Violations

State records reveal that the company exceeded its allowable burn rate by as much as 11% over the maximum eight times during a five month period. The effect of the new permit would be to raise Stericycle's maximum waste burning rate tantamount to previous overloads. In other words, the violations which occurred in the past would no longer be subject to federal enforcement action.

Stack Test Reliability Problems Cast Doubt On Compliance, Section 2.1.A.1.b(3)

The complete definition of "maximum charge rate" in Subpart Ec, 40 CFR 60.51c (7-1-02 Edition) states: "(1) For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits" (emphasis added).

Stericycle is required to test its incinerators periodically to demonstrate compliance with pollution limits. In October 2000 Stericycle submitted test results which indicated that state and federal standards were met. But the Division of Air Quality discovered "computational errors" in the report filed by Stericycle which falsely indicated compliance with the particulate matter (PM) standard. The incinerator had actually emitted PM 5.4% above the maximum. DAQ issued a notice of violation and recommended enforcement. Subsequently, Stericycle repeated the PM emission test and analysis, and the results indicated compliance with state regulation. The DAQ, upon reviewing the data, levied a fine of $4,000.

Given the history of reliability problems with stack tests performed by Stericycle consultants, we request that the results of the most recent stack test demonstrating compliance be subjected to independent verification in order to assure that the public is not exposed to excess, dangerous levels of air pollution.

Permit Lacks Waste Management Plan, Specific Condition 2.1.A.1.e (4)

The draft permit's waste management plan fails to meet the requirements under Subpart Ec, 40 CFR 60.55c. Subpart Ec details the requirements for owner/operators of incinerators which burn waste generated by hospitals and medical institutions. This subpart does not address the requirements for managers of health care facilities. We note that Subpart Ec is cited throughout the draft Title V permit and the permit review (AQ-16). Subpart Ec states:

> Subpart EcStandards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996.
> Source: 62 FR 48382, Sept. 15, 1997, unless otherwise noted.

60.50c Applicability and delegation of authority.
(a) Except as provided in paragraphs (b) through (h) of this section, the affected facility to which this subpart applies is each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction is commenced after June 20, 1996 or for which modification is commenced after March 16, 1998.

Subpart Ec sets standards of performance for new and modified HMIWI, implementing sections 111 and 129 of the Clean Air Act. The standards apply to facilities the primary purpose of which is the combustion of hospital waste and/or medical/infectious waste. Subpart Ec also establishes requirements for HMIWI waste management plans. Paragraphs (b) through (h) of 60.50c outline exemption claims for specific wastes, co-fired units, solid waste combustors, pyrolysis units, cement kilns, and certain modifications and do not apply to the Stericycle incinerator in Haw River. Federal regulations for waste management plans require incinerator operators to do far more than "encourage waste minimization …from the generator," as stated in Permit No. 05896T15, Section 2.1.A.1.e(4). Stericycle, not the hospitals and medical institutions which are its clients, is the "affected facility" under Subpart Ec and must "identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste." (40 CFR 60.55c) Federal regulations here incorporate by reference an American Hospital Association publication which "shall be considered in the development of the waste management plan." Waste management plans reduce the amount of materials incinerated. For example, medical products which are made of PVC plastic should not be incinerated because they can produce dioxin-like substances, which are endocrine disruptors and carcinogens. The permit as drafted does not comply with federal regulations.

Enforcement is Lacking, Sections 2.1.A.1.b(8) and 2.2.C.1

The DAQ must rely on complaints from citizens to enforce regulations which limit visible emissions and odor [15A NCAC 2D .0521 and .1806]. However, DAQ's record on Stericycle reveals a lack of ability to respond to plant neighbor's complaints. We submit the following examples drawn from DAQ files:

1. January 15, 2001: Sam Kiser, who lives in Haw River, complains to the NC Division of Air Quality's regional office about black smoke coming from the incinerator. He says he observed the smoke at about nine o'clock in the evening. He adds that the stacks emit smoke frequently. Rather than going to the facility to check, the inspector at DAQ calls Stericycle's plant manager on the phone. The manager faxes records which reveal elevated carbon monoxide emissions and a spike in scrubber pH at 9:15 PM on the 15th. DAQ concludes that medical waste with a high moisture content could have caused the increase in visible emissions seen by Mr. Kiser. In his report, the state inspector wrote, "Since the emission occurred at night, it is difficult…to categorize a visible emission, and there is no real reason to believe the incinerators were operating…in violation." Also, he cites stack tests completed in October which showed that the incinerator was operating within permitted limits.
2. February 21, 2001: Sam Kiser again sees black smoke coming from the incinerator. This incident begins at 6:00 AM and lasts for two hours. DAQ's second investigation-by-telephone determines it may have been the "lighting conditions" on that morning. No further action was taken.

These are but two examples of poor enforcement which can and must be corrected. Visible emissions regulations are federally enforceable, odor rules state enforceable. Since DAQ must continue to rely on calls from residents to ensure compliance with VE and odor, the permit must stipulate where and how citizens complaints shall be recorded, what actions shall be initiated by DAQ, and a time frame for resolution of the complaint.

Respectfully,

Louis Zeller

Cc: EPA Administrator, Region IV
Martha Hamblin
John Powell. Esq.

Attachment: Sierra Club and Natural Resources Defense Council v.USEPA, No. 97-1686).

ATTACHMENT

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued November 9, 1998 Decided March 2, 1999
No. 97-1686
Sierra Club and
Natural Resources Defense Council,
Petitioners
v.
United States Environmental Protection Agency
and Carol M. Browner, Administrator,
United States Environmental Protection Agency,
Respondents
Integrated Waste Services Association and
Pharmaceutical Research and Manufacturers of America,
Intervenors
On Petition for Review of an Order of the Environmental Protection Agency
James S. Pew argued the cause for petitioners. With him on the briefs was Howard I. Fox.
Steven Edward Rusak, Attorney, U.S. Department of Justice, argued the cause for respondents. With him on the brief were Lois J. Schiffer, Assistant Attorney General, and Michael W. Thrift, Counsel, United States Environmental Protection Agency.
Michael B. Wigmore argued the cause for intervenors. With him on the brief were Charles H. Knauss, Tracy N. Zlock and David M. Friedland.
David P. Novello was on the brief for amicus curiae Cement Kiln Recycling Coalition.
David S. Biderman was on the brief for amicus curiae Medical Waste Institute.
Before: Wald, Williams and Henderson, Circuit Judges.
Opinion for the Court filed by Circuit Judge Williams.
Williams, Circuit Judge: Section 129 of the Clean Air Act, added by the 1990 amendments, directs EPA to establish performance standards for new and existing medical waste incinerators ("MWIs"), including "emissions limitations and other requirements" for new units and "guidelines ... and other requirements" for existing units. 42 U.S.C. s 7429(a)(1). In general, the standards[1] are to

> reflect the maximum degree of reduction in emissions of air pollutants ... that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category.

42 U.S.C. s 7429(a)(2). The EPA explains that this level of control is commonly referred to as "maximum achievable control technology," or "MACT." See 62 Fed. Reg. 48,348, 48,351/3 (1997).
The statute supplements this general directive with specific requirements, detailed below, that dictate minimum levels of stringency below which EPA may not go (using the phrase "shall not be less stringent than"). See 42 U.S.C. s 7429(a)(2). The parties refer to these requirements as "floor" provisions. (The nomenclature can be confusing because these sentences in fact establish maximums on the emissions that EPA's standards may permit.) The statute of course authorizes EPA to establish still stricter standards if it finds them "achievable." In its rulemaking, the EPA

first established each floor (i.e., addressed the "not less stringent than" provisions) and then considered whether to set the standard at a stricter level. See 62 Fed. Reg. 48,348, 48,353/2 (1997). In some cases EPA found greater stringency achievable, in others not.

The petitioners, the Sierra Club and the Natural Resources Defense Council (both referred to here simply as the Sierra Club), challenge EPA's rule establishing MWI standards, complaining principally that EPA failed to comply with the specifications of s 7429(a)(2) for the floors. Although we reject the Sierra Club's statutory construction challenge, we conclude that there are serious doubts about the reasonableness of EPA's treatment of the floor requirements, and remand the rule for further explanation. The Sierra Club also claims that EPA should have required MWIs to use pollution prevention measures, such as programs to reduce waste streams, and that it unlawfully failed to consider certain "non-air quality" effects of MWI pollution on health and the environment. We reject both these claims.

I. Floors for Existing Units

The Clean Air Act contains the following floor requirement for existing MWIs:

> Emissions standards for existing units in a category may be less stringent than standards for new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category. The Administrator may distinguish among classes, types, ... and sizes of units within a category in establishing such standards.

42 U.S.C. s 7429(a)(2).

The EPA's first step was to divide the MWI population into three subcategories, based on waste-burning capacity: small, medium, and large. 61 Fed. Reg. 31,736, 31,740/2 (1996). Setting standards for nine pollutants in each of these three subcategories, EPA went on to make 27 separate floor determinations.

To do so, it surveyed the emissions limits imposed by state regulations and permit requirements, reasoning that each such limit was an "emissions limitation" within the meaning of the Clean Air Act. Then, for each of the nine pollutants covered by the standards, EPA ranked the incinerators by the stringency of the control provisions to which they were subject, from strictest to laxest. Finally, it selected the 12 percent of the incinerator population subject to the strictest controls and set the floor level for the subcategory by averaging the emissions limitations governing those incinerators. See 61 Fed. Reg. 31,736, 31,744-45 (1996).

For 17 out of the 27 floors to be established, however, EPA found that the share of the MWI population covered by any regulatory requirement was less than 12 percent. See Patrick Chang, Letter to Jim Pew, June 4, 1998, at 1. (Questions about the validity of this finding are discussed below.) So for these 17 EPA supplemented the regulatory data with "uncontrolled" data--data from its test program recording the performance of incinerators with no pollution controls. See 61 Fed. Reg. 31,736, 31,745/2 (1996); Suzanne Shoraka Blair, "Determination of the Maximum Achievable Control Technology (MACT) Floor for Existing Medical Waste Incinerators," Jan. 31, 1996, at 2 ("Blair Mem."). For instance, EPA estimated the total population of small MWIs at 1,118, so that 12 percent amounted to 135 units. Id. But it found that state limitations covered 135 or more MWIs only with regard to two of the nine pollutants. Its solution for the other seven pollutants is illustrated by its treatment of hydrogen chloride (HCl). Estimating that only 91 small MWIs were actually subject to state HCl limits, EPA assumed that the last 44 units in the top 12 percent were not subject to emissions control at all. To calculate the HCl standard it averaged the state ceilings (evidently weighted for the number of units covered), together with the highest (i.e., worst) of the results from its own testing of uncontrolled small MWIs, weighted 44 times. Id. at 2-4.

A. Challenge to Statutory Construction

The Sierra Club argues that EPA's use of regulatory permit data rather than performance data violated the statute's requirement to base the floors on "emissions limitation[s] achieved." s 7429(a)(2). The EPA defends itself principally with a tortured argument that 42 U.S.C. s 7602(k), which defines an "emission limitation" solely as a type of regulatory requirement, applies here in the sense of allowing the use of regulatory data, but not in the sense of requiring the use of such data exclusively. The Sierra Club's arguments to the contrary lead off with the claim that s 7602(k) cannot apply here because it defines an "emission limitation," while s 7429(a)(2), the provision calling for these standards, refers to an "emissions limitation."

The parties beckon us into a labyrinth, but in this case, unlike the hapless Athenian youths and maidens given in tribute to King Minos, we are not compelled to enter. The permissibility of EPA's approach does not turn on the applicability of s 7602(k), but on whether using the state regulatory data is a reasonable means of estimating the performance of the top 12 percent of MWIs in each subcategory. If using the state data is reasonable for this purpose, EPA does not need s 7602(k); if using the state data is unreasonable, then EPA has conceded that s 7602(k) will not save its position.[2]

We first reject the Sierra Club's claim that EPA's decision to base the floors on regulatory data fails the first step of the Chevron test. None of the Sierra Club's arguments establish that Congress has "directly addressed" and rejected the use of regulatory data. See Chevron v. NRDC, 467 U.S. 837, 843, 845 (1984).

The Sierra Club argues that the plain meaning of s 7429(a)'s words, "average emissions limitation achieved by the best performing 12 percent of units," precludes the use of regulatory data. But this phrase on its own says nothing about how the performance of the best units is to be calculated. And the Sierra Club has disavowed any interpretation that would require measuring the performance of every last unit--it stated in its brief and confirmed at oral argument that the statutory language "does not preclude EPA from relying on a representative sample of the units in each category." The phrase does not by its plain meaning exclude estimation, either by sampling or by some other reliable means.

The Sierra Club also claims that the legislative history of s 7429(a)(2) reflects Congressional intent to prohibit EPA from relying on regulatory data. The Sierra Club cites an earlier version of the 1990 Clean Air Act Amendments that would have required emissions standards to "reflect the greatest degree of emission reduction achievable ... which ... (A) has been achieved in practice ..., or (B) is contained in a State or local regulation or any permit ..., whichever is more stringent." S. 1630, 101st Cong., 2d Sess. s 306 (1990) ("Senate Bill"). The Sierra Club argues that the disparity between the language of the Senate Bill and that of the enacted amendments establishes Congress's intent to prohibit the use of regulatory data. Obviously Congress was deliberate in dropping the Senate Bill's mandate that EPA use state or local regulatory limits whenever they were more stringent than the results achieved in practice. But it seems to us quite a stretch to infer that in thus reducing the mandated degree of stringency Congress expressed an intent to ban use of regulatory data as a proxy for what firms have achieved.

The Sierra Club offers two additional arguments that the use of regulatory data fails the first step of Chevron. Neither, it turns out, has any bite so long as EPA used the regulatory data merely to generate a reasonable estimate of the actual performance of the top 12 percent of units. First, the Sierra Club says that using regulatory data is impossible because such data exists for fewer than 12 percent of units. But if the regulatory data provide a good proxy for the performance of the units they do cover, then it is irrelevant that the coverage is incomplete. (The issue of how well the units work as proxies is addressed below.) Second, the Sierra Club argues that using regulatory data would impermissibly "import an achievability requirement" into the unit floor computation. A premise of the argument is the counterintuitive proposition that an "achieved"

level may not be "achievable," or, as Sierra Club puts it, may be better than "EPA's notions about what is 'achievable.' " Again we need not enter the thicket. The distinction is irrelevant if (as here) the permit data are used only to approximate what actually is "achieved" in practice.

Addressing the second step of Chevron, we find nothing inherently impermissible about construing the statute to permit the use of regulatory data--if they allow EPA to make a reasonable estimate of the performance of the top 12 percent of units. Indeed, the Sierra Club conceded at oral argument that "a reasonable sample" may be used "to find out what the best 12 percent are doing." Oral Arg. Tr. at 11. To be sure, the Sierra Club did not concede that permit data may be used. But neither has it provided any basis for believing that state and local limitations are inherently such weak indicators of performance that using them is necessarily an impermissible stretch of the statutory terms.

EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to "invest the resources to conduct the perfect study." See American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1004 (D.C. Cir. 1997) (per curiam). Although the agency's choice of model will be rejected if it "bears no rational relationship to the reality it purports to represent," Columbia Falls Aluminum Co. v. EPA, 139 F.3d 914, 923 (D.C. Cir. 1998), the necessary relationship seems quite possible here. Indeed, it seems likely that any jurisdiction bothering to impose limits would not knowingly set them below what it found firms to be achieving in practice. And there seems no reason to think that underachieving firms would be overrepresented in jurisdictions making this effort. Of course those jurisdictions may have proceeded in error, may have outdated limits, and may have contained unrepresentatively high shares of bad actors, but we address the evidence of possible infirmities below in our discussion of the Sierra Club's challenge to EPA's methodology as arbitrary and capricious. We note that since EPA had data on only one percent of about 3000 MWIs, RTC at 3-28, the data-gathering costs of any non-sampling method may well have been daunting.

The Sierra Club complains that EPA never used the reasonable-estimation rationale in explaining its decision to use regulatory data, but instead rested on its interpretation of s 7602(k). Although much of EPA's explanation during the rulemaking was indeed devoted to s 7602(k), the agency did state that use of the regulatory data was permissible because the agency "could conclude from these data what the best performing 12 percent of existing [MWIs] were able to achieve." RTC at 3-28. Similarly, it characterized the MACT floor as "a measure of the level of air pollution control currently used by a relatively small fraction of the MWI." RTC at 3-30. In its 1995 rulemaking proposal, EPA explained that it examined the state regulatory data "to determine the emission limitations achieved by the best-performing 12 percent of units in each subcategory," and further defended its decision by observing that "[i]t was assumed that all MWI's are ... achieving their [regulatory] limits." 60 Fed. Reg. 10,654, 10,674/2-3 (1995). This link between the regulatory requirements and actual performance undergirded EPA's decision to use regulatory data when it first proposed MWI standards in 1995, and the agency certainly did not disavow that rationale when it adopted the standards in the present rulemaking.

We therefore reject the Sierra Club's argument that the Clean Air Act forbids the use of permit and regulatory data, and hold that the use of such information is permissible as long as it allows a reasonable inference as to the performance of the top 12 percent of units. Similarly, as long as there is a reasonable basis for believing that some of the best performing 12 percent of units are uncontrolled, EPA may include data points giving a reasonable representation of the performance of those units in its averaging.

B. Challenge as Arbitrary and Capricious

We now examine whether EPA was justified in using its combination of regulatory data and uncontrolled values to approximate the performance of the top 12 percent of MWIs. The Sierra Club argues that EPA has not pointed to evidence supporting the reasonableness of the approximation, and we agree that at a minimum further explanation is needed. We outline the problems that need to be resolved on remand.

Although EPA said that it believed the combination of regulatory and uncontrolled data gave an accurate picture of the relevant MWIs' performance, it never adequately said why it believed this. We refer to two specific areas to illustrate the deficiencies in EPA's explanation.

First, EPA has said nothing about the possibility that MWIs might be substantially overachieving the permit limits.[3] If this were the case, the permit limits would be of little value in estimating the top 12 percent of MWIs' performance.

Data in the record suggest that the regulatory limits are in fact much higher than the emissions that units achieve in practice. For 13 of the 27 cases EPA considered, the floor, which is the weighted average of the regulatory limits and the uncontrolled data, is higher than the value used for the uncontrolled data.[4] For instance, in the case of the HCl floor for small MWIs, the value for uncontrolled emissions was 2,770 parts per million volume, and the floor (the weighted average of the regulatory and uncontrolled data) was 4,426 ppmv. Blair Mem. at 2. Thus, unless EPA made a mathematical error (or we have), the average of the regulatory data must have been 5,227 ppmv[5], or 89% higher than the uncontrolled emissions.

Even under the most deferential standard, it is difficult to accept a method under which the emissions of the best-performing 12% of units are hypothesized to pollute nearly twice as badly as the worst of test units that lacked any emissions controls. Our observations are based on our own analysis of EPA's data, and we may have omitted some crucial step in the process, but the exercise highlights the need for additional explanation even if our calculation is wrong.

Second, EPA never gave any reason for its apparent belief that MWIs that were not subject to permit requirements did not deploy emission controls of any sort. Unless there is some finding to this effect, it is difficult to see the rationality in using the "uncontrolled" data for the units that were not subject to regulatory requirements.

Furthermore, data on which EPA relied strongly suggest that it was irrational to suppose that any of the incinerators in the top 12 percent were uncontrolled--at least for the six pollutants that wet scrubbers control.[6] Data submitted by the American Hospital Association in 1995 indicate that over 55% of MWIs in each category were controlled by wet scrubbers.[7] See Comments and Recommendations of the American Hospital Association, April 28, 1995, Exhibit 3. Particularly since the AHA data were the starting point for EPA's estimate of the number of MWIs,[8] see 61 Fed. Reg. 31,736, 31,739/3, it is difficult to see how it was rational to include any uncontrolled units in the top 12 percent, at least with respect to pollutants that wet scrubbing controls.

With these numbers, EPA's method looks hopelessly irrational. Moreover, assuming the regulatory data was a good proxy for the better controlled units and that there were shortfalls in reaching the necessary 12 percent, EPA has never explained why it made sense to use the highest of its test run data to make up the gap. Nonetheless, we do not vacate the standard. It is possible that EPA may be able to explain it, and the Sierra Club has expressly requested that we leave the current regulations in place during any remand, rather than eliminate any federal control at all. We therefore remand the floor determinations for existing units for further explanation by EPA.

II. Floors for New Units

The Clean Air Act prescribes that standards for newly constructed MWIs "shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator." 42 U.S.C. s 7429(a)(2).

To implement this provision, EPA examined each subcategory and identified the most effective technology in use by an incinerator in that subcategory. That technology became the basis for the new unit standard for incinerators in the subcategory. For instance, the most effective technology that it identified as in use by a small MWI was a so-called moderate-efficiency wet scrubber, so the floor for new small MWIs is based on the performance capability of such a scrubber. If EPA had identified any small MWIs employing high-efficiency wet scrubbing, the new small MWI floor would presumably reflect the performance of that technology. See 61 Fed. Reg. 31,745-46 (1996).

To determine the performance of a given technology, EPA consulted the data from its own testing program and data provided by private parties and identified the highest level of emissions recorded in any test of an incinerator using the technology in question. It then increased that value by 10 percent and rounded up to "an appropriate round number" to arrive at the emissions performance figure it ultimately used for that technology. See Mark B. Turner & Katie Hanks, Memorandum to Richard A. Copland, May 20, 1996, at 10 ("Turner/Hanks Memo").

The Sierra Club, pointing to the statutory reference to the "best controlled similar unit," 42 U.S.C. s 7429(a)(2), purports to find two deficiencies in EPA's approach. First, it argues that EPA should have identified the single best-performing unit in each subcategory and based the new unit floor for that subcategory on that particular unit's performance, rather than considering the performance of other units employing the same technology. Next, it argues that EPA compounded its error by basing the floor on the emissions of the worst-performing unit employing the technology in question. We address the Sierra Club's claims in the reverse of the order of presentation.

First, EPA would be justified in setting the floors at a level that is a reasonable estimate of the performance of the "best controlled similar unit" under the worst reasonably foreseeable circumstances (we use the subjunctive because it is not clear from the record whether the agency was doing this). It is reasonable to suppose that if an emissions standard is as stringent as "the emissions control that is achieved in practice" by a particular unit, then that particular unit will not violate the standard. This only results if "achieved in practice" is interpreted to mean "achieved under the worst foreseeable circumstances." In National Lime Ass'n v. EPA, 627 F.2d 416, 431 n.46 (D.C. Cir. 1980), we said that where a statute requires that a standard be "achievable," it must be achievable "under most adverse circumstances which can reasonably be expected to recur." The same principle should apply when a standard is to be derived from the operating characteristics of a particular unit. Although this potential rationale for EPA's method was made clear in the briefs for the agency and the parties intervening on its behalf, it does not appear in the rulemaking record with enough clarity for us to say that the agency's "path may reasonably be discerned." Bowman Transportation, Inc. v. Arkansas-Best Freight System, Inc., 419 U.S. 281, 286 (1974).

The Sierra Club also claims EPA erred in considering the emissions of units other than the best controlled unit. The EPA simply has not explained why the phrase "best controlled similar unit" encompasses all units using the same technology as the unit with the best observed performance, rather than just that unit itself, as the use of the singular in the statutory language suggests. We do not mean to say that EPA's interpretation is impossible. Perhaps considering all units with the same technology is justifiable because the best way to predict the worst reasonably foreseeable performance of the best unit with the available data is to look at other units' performance. Or perhaps EPA reasonably considered all units with the same technology equally "well-controlled," so that each unit with the best technology is a "best-controlled unit" even if such units vary widely in performance. But we do not know what interpretation the agency chose, and thus cannot evaluate its choice.

A similar analysis applies to the agency's choices to add 10 percent to the observed emission levels and to further round up the result, often in ways that seem contrary to ordinary principles of rounding. See, e.g., Turner/Hanks Memo at 11 (rounding from 0.0198 to 0.03). Each of these may be justifiable as a means of reasonably estimating the upper bound of the best-controlled unit's performance, but in the absence of agency explanation of both the decision to increase the levels and the choice of method for determining the increases, we are in no position to decide.

III. Other Sierra Club Claims

The Sierra Club's remaining claims are directed not to the floors EPA established for the various types of facilities, but to the emissions standards themselves. The floor provision require only a minimum level of stringency, and the emissions standards themselves are to "reflect the maximum degree of reduction in emissions of air pollutants ... that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable." 42 U.S.C. s 7429(a)(2). The Sierra Club argues that EPA failed to consider two separate factors in moving from the floors to the standards themselves: the effectiveness of pollution prevention measures and non-air quality health and environmental effects arising from water, soil, and food contamination by MWI pollutants. We reject both of these claims.

A. Pollution Prevention Measures

The Sierra Club starts its argument with the observation that emissions standards are to be based on "methods and technologies for removal or destruction of pollutants before, during, or after combustion," 42 U.S.C. s 7429(a)(3), and focuses on the "before" in that requirement. It claims that EPA wrongly failed to require MWIs to undertake programs to reduce the mercury and chlorinated plastics in their waste streams.

The EPA does not deny that the waste stream reductions the Sierra Club calls for would reduce pollution. The less mercury in, the less mercury out, and the less chlorinated plastic in, the less HCl out. But the EPA has consistently argued in its response to comments and here that it does not have evidence that allows quantification of the relevant output reduction. For mercury, the only quantitative evidence before EPA was that a pollution prevention program aimed at mercury could reduce mercury emissions from very high levels to typical levels. See RTC at 7-14 to 7-15. For chlorinated plastics, there was no quantitative evidence before the agency. See RTC at 7-16, 7-18. The Sierra Club does not contest the adequacy of EPA's data-gathering with respect to these measures.

There also doesn't appear to be any evidence in the record about the costs of the pollution prevention measures the Sierra Club advocates. In the absence of any type of quantification of benefits or costs, the Administrator had no basis for finding that, "taking into account the cost," emissions reductions from pollution prevention programs were "achievable" as the statute uses the word.

B. Non-Air Quality Health and Environmental Effects

Finally, the Sierra Club observes that EPA failed to consider the fact that dioxin and mercury from MWIs can contaminate water, sediment, and soil, and can bioaccumulate in food. The Sierra Club argues in a paragraph that this omission was improper because the Clean Air Act directs EPA to consider "any non-air quality health and environmental impacts" in setting the MWI emissions standards. But the Sierra Club has made no serious effort, either in its briefs or in its comments to the agency, to show that the problems about which it complains are actually "non-air quality" effects within the meaning of s 7429(a)(2). Because this threshold step is unbriefed, and because the Sierra Club's argument is presented in such a conclusory manner, we decline to consider the challenge. See Texas Rural Legal Aid, Inc. v. Legal Servs. Corp., 940 F.2d 685, 697 (D.C. Cir. 1991).

* * *

The case is remanded to EPA for further explanation of its reasoning in determining the "floors" for new and existing MWIs. Petitioners' claims are otherwise rejected.
So ordered.

1 The EPA explains that the rules for existing units are "guidelines," while those for newly constructed units are "standards." The difference between the two appears to be that standards are federal requirements that apply directly to newly built MWIs, while guidelines do not directly govern MWIs, but are given effect through a requirement that states adopt rules that are at least as strict as the guidelines. See 62 Fed. Reg. 48,348, 48,351/1 (1997) [J.A. 976/1]. Since the distinction is not important for purposes of this case, for convenience we refer to both sets as "standards."
2 The EPA found in its response to comments that reasonableness requires the use of data that allow the agency to conclude "what the best performing 12 percent of existing HMIWI were able to achieve," EPA Response to Comments ("RTC"), July 1997, at 3-28. [J.A. 736].
3 Although the agency conceded in its response to comments that "actual emission data routinely fall below the State and permit emission limits," RTC at 3-27, the context makes reasonably clear that the EPA was referring to data on "actual emissions" during tests; EPA implied that "these levels are not routinely achieved in practice." Id.
4 Such at least is our reading of the Blair Memorandum. It lists what appear to be the test results used (evidently with no breakdown for size category), and the floor emission levels selected. See id. at 3.
5 We know the data for the uncontrolled 44 and the average of all 135, with only the figure for the permit data unknown (X): ((2,770 * 44) + 91X)/135 = 4,426. Solving for X we get 5,227.
6 These pollutants include particulate matter, dioxin precursors, HCl, lead, cadmium, and mercury. See Brian Strong, Memorandum to Rick Copland, March 20, 1996, at 2.
7 The exact figures are 690 of 1,214 small units (56.8%), 365 of 589 medium units (62.0%), and 281 of 430 large units (65.3%). AHA Comments, Exhibit 3.
8 The EPA added about 400 MWIs to the AHA data and deleted about 200 from that total. See 61 Fed. Reg. at 31,739/3. Even in the unlikely event that all the added MWIs lacked scrubbers and all the deleted ones had them, more than 12 percent of MWIs in these subcategories would as a matter of mathematical necessity have to be controlled. Yet in each subcategory the EPA used uncontrolled data points for at least some of the pollutants that scrubbers control. See Chang Letter at 1.