

Residual Risk Coalition

April 17, 2019

U.S. Environmental Protection Agency
EPA Docket Center
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Re: Comments of the Residual Risk Coalition on the National Emission Standards for Hazardous Air Pollutant Emissions: Coal- and Oil-Fired Electric Utility Steam Generating Units – Reconsideration of Supplemental Finding and Residual Risk and Technology Review (Docket ID No. EPA–HQ–OAR–2018–0794)

Dear Sir or Madam:

The Residual Risk Coalition (R2C) appreciates this opportunity to submit comments on the above-referenced proposed rule, published at 84 Fed. Reg. 2,670 (Feb. 7, 2019) (the “proposed rule”). The R2C is a coalition of national trade associations comprised of the American Chemistry Council, American Coke and Coal Chemicals Institute, American Forest & Paper Association, American Fuel & Petrochemical Manufacturers, American Iron and Steel Institute, American Petroleum Institute, National Lime Association, National Oilseed Processors Association, National Rural Electric Cooperative Association, and U.S. Tire Manufacturers Association.

Each R2C member organization has member companies that are directly regulated by National Emission Standards for Hazardous Air Pollutants (NESHAP) rules that have been or will be subject to residual risk and technology review (RTR) rulemakings pursuant to §§ 112(d)(6) and 112(f) of the Clean Air Act (CAA). The R2C is committed to working constructively with EPA in developing technologically sound and environmentally responsible approaches to regulations promulgated under these authorities. The R2C seeks to ensure that reasonable residual risk methodologies are used and that any residual risk associated with HAP emissions remaining after the application of maximum achievable control technology (MACT) is addressed appropriately, while avoiding burdensome changes to existing emission limitations when changes are not necessary to protect public health.

These comments address the following aspects of the proposed rule:

1. EPA should not give disproportionate weight to potential benefits of non-HAP emission reductions when evaluating the costs and benefits of HAP emission reductions under § 112(d)(6) due to a change in technology.

2. EPA employed a fish consumption rate in the RTR risk assessment that is unrealistically high and well above EPA's previous assumptions regarding fish consumption.

These comments address the cross-cutting issues that likely will arise in many of the residual risk assessments for rules applicable to R2C's members. The R2C is not providing comments on the particular details of the coal- and oil-fired electric utility steam generating unit (EGU) source category addressed in the subject proposal.

1. Cost-Benefit Analyses Should Not Give Disproportionate Weight to Potential Benefits of Reducing Non-HAP Pollutants.

As a general matter, when EPA is deciding whether to regulate and the level of regulation based on a cost-benefit analysis, the Agency should base its decisions on the benefits achieved from reductions of the primary pollutant being regulated. While co-benefits from the reduction of other (non-HAP) emissions are a relevant component of cost-benefit analysis, they should not provide a disproportionate justification for setting the mercury and air toxics (MATS) standards in its § 112(n)(1)(A) "appropriate and necessary" determination. *See* 84 Fed. Reg. at 2,675. EPA's proposed approach is consistent with the Supreme Court's decision in *Michigan v. EPA*, 135 S. Ct. 2,699 (2015) with regard to cost-benefit analysis for EGUs under CAA § 112(n)(1)(A). The same approach should be applied to cost-benefit analysis in technology reviews under § 112(d)(6).

Under CAA § 112(d)(6), EPA must review standards promulgated under § 112 and revise the standards "as necessary (taking into account developments in practices, processes, and control technologies)" at least once every eight years. Just as EPA must consider the cost of compliance relative to the HAP benefits of regulation when determining whether regulation of EGUs is "appropriate and necessary" under § 112(n)(1)(A), EPA must assess HAP-specific costs and benefits in deciding whether to revise the existing emission standards as "necessary" under § 112(d)(6). *See* 84 Fed. Reg. at 2,681.

For much of the past decade, EPA's consideration of co-benefits has shifted from providing information and context to becoming the primary justification for new regulations. As a result, claimed health co-benefits have too frequently impeded EPA's meaningful evaluation of the rationality and necessity of the regulation by distorting the "gross disparity between monetized costs and HAP benefits." 84 Fed. Reg. at 2,677. In the MATS rule, benefits from HAP reduction were estimated to be \$4 million to \$6 million per year, but the "costs to power plants were ... between 1,600 and 2,400 times as great as the quantifiable benefits from reduced emissions of hazardous air pollutants." *Michigan v. EPA*, 135 S. Ct. at 2,706. EPA appropriately acknowledges that 99.9 percent of the monetized benefits of MATS were purported coincidental reductions of criteria pollutants (primarily NO_x, SO₂, and PM_{2.5}) that are regulated separately under the national ambient air quality standards (NAAQS) program. *See* 84 Fed. Reg. at 2,676.

Within the context of periodic technology reviews under § 112(d)(6), EPA should ensure that the costs and benefits from HAP emission reductions drive the cost-benefit analysis and not give undue weight to potential air quality co-benefits from non-HAP emission reductions. To

the extent there are potential co-benefits of non-HAP emission reductions, an evaluation can provide information and context to EPA and the public. But non-HAP-related co-benefits should not be used disproportionately over HAP emission reductions to make a technology-based change to existing NESHAP.

2. EPA Should Change the Fish Consumption Rate in the Risk Assessment to be Consistent with the Consumption Rate Used in More Recent EPA Documents.

Fish consumption rate assumptions are a key factor when assessing both cancer and non-cancer hazards in RTR multi-pathway risk assessments. In the residual risk assessment report for the proposed MATS RTR (“proposed MATS RTR risk report”) and at least one other RTR (*i.e.* the Surface Coatings NESHAP RTR, 84 Fed. Reg. 9,590 (Mar. 15, 2019)), EPA used flawed and outdated fish consumption rate values to conduct multi-pathway risk assessments. These unrealistic fish consumption rates led to overly-conservative, inaccurate risk findings.

Other studies that are more accurate and based on more recent data are available and support the use of lower fish ingestion rates in multi-pathway risk assessment for the MATS RTR and other RTRs. These comments provide a general summary of the flaws in the studies upon which the proposed MATS RTR risk report relied as well as suggested alternative studies that should be used instead. A more detailed review and discussion of these studies is also provided in a literature review submitted as an attachment to the American Iron and Steel Institute (AISI) comments (“Fish Ingestion Rate Summary for Use in Multi-pathway Risk Assessments”) on this proposal. Based on the best alternative study, a more appropriate fish ingestion rate for use in the MATS RTR multi-pathway risk assessment would be **28.3 g/day** for adults and between **6.7 and 13.2 g/day** for children.

The proposed MATS RTR risk report uses fish ingestion rates from Burger 2002¹ for adults and EPA 2002² for children. A summary of the fish ingestion rates used in the proposed MATS RTR risk report are shown in Table 1 below. These ingestion rates are “as-prepared,” and so account for preparation and cooking losses.

Table 1 – Proposed MATS RTR Risk Report Fish Ingestion Rates

	Child 1-2 yrs	Child 3-5 yrs	Child 6-11 yrs	Child 12-19 yrs	Adult 20-70 yrs
Fish Ingestion (g/day)	107.7	159.0	268.2	331.0	373.0

Burger 2002, on which EPA based its adult fish ingestion rate assumptions in the proposed MATS RTR risk report, surveyed “high end recreationalists” in South Carolina. The

¹ Burger J. 2002. *Daily Consumption of Wild Fish and Game: Exposures of High End Recreationalists*. International Journal of Environmental Health Research 12:4, 343-354.

² EPA. 2002. *Estimated Per Capita Fish Consumption in the United States*. Office of Water, Office of Science and Technology, Washington, DC EPA-821-C-02-003. August 2002. Note: the URL listed by EPA in the proposed MATS RTR risk report for this document does not work. An alternative URL was used to obtain this report. <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901R0600.TXT>

survey was conducted on 458 people during their attendance at a single hunting and fishing show in 1998 to determine the amount of raccoons, squirrels, quail, deer, and fish consumed over the previous month. The average wild-caught fish consumption rate in the study was **50.2 g/day**. EPA used the 99th percentile ingestion rate for women of **373 g/day** as representative for the proposed MATS RTR risk report. The sample size for this study was small and the survey did not differentiate between freshwater, estuarine, and marine fish. The study was based on data that are over 20 years old and are not representative of fish consumption elsewhere in the U.S.

The data cited in the EPA 2002 report, upon which EPA relied for child fish ingestion rate assumptions in the proposed MATS RTR risk report, did not differentiate between commercially obtained and locally caught fish and, therefore, overestimates exposure from consumption of locally caught fish. In addition, the data included adjusted fish ingestion rates to reflect consumers only (individuals who consumed fish at least once during the 2-day study period) and excluded non-consumer study respondents, despite relatively small sample sizes for the consumer-only data. For child ingestion rates, using the “consumers-only” fish ingestion rate in the EPA 2002 study based on 24-hour dietary recall results in an artificially high fish ingestion rate for chronic exposure. This is because if an individual consumed fish in the past 24 hours (and, therefore, is categorized as a “consumer”), it is then assumed that the individual consumes that amount of fish every day for the entire exposure period (350 days per year, the number of years varying by age group).

An additional concern regarding the EPA RTR fish consumption rates is the use of the 99th percentile fish ingestion rates for both screening analyses and refined site-specific analyses. EPA has established numerous precedents for applying the 95th percentile upper confidence limit of environmental data in assessing health risks. The use of the 95th percentile rather than a mean or median is a recognition of the many sources and degree of variability of environmental risk related parameters, and the desire to estimate “upper limit” risks that are less likely to be affected by extreme values or “outliers” that may be present in a data set. For further discussion of EPA’s adoption of the 95th percentile to estimate “upper limit” risk in a wide array of programs, please see AISI comments on this rule.

A number of more recent, more rigorous, and more representative studies on fish consumption rates are available and should be used by EPA when developing fish consumption rate inputs to RTR multi-pathway risk assessments. Importantly, see April 4, 2019 Letter to Director John Tippetts, Idaho Department of Environmental Quality, EPA Approval of Idaho’s New and Revised Human Health Water Quality Criteria for Toxics and Other Water Quality Standards Provisions. Additional studies that derived more realistic and representative fish consumption rates include:

- EPA 2015 Response to Scientific Views from the Public on Draft Updated National Recommended Water Quality Criteria for the Protection of Human Health
- EPA 2014 Report on Estimated Fish Consumption Rates for the U.S.
- EPA 2013 Report on Fish Consumption in CT, FL, MN and ND
- Harvard 2017 National Survey on High-Frequency Fish Consumers Paper

Of the noted studies, the EPA 2014 report provides the most significant dataset and statistical analysis. Out of the 29,463 individuals surveyed across the U.S., 6,891 reported consuming fish. Fish consumption was categorized between freshwater/estuarine and marine fish, as well as categorized by trophic level. The methodology used in this report was designed to determine long-term average fish consumption rates and was split into two broad categories: a youth population under 21 years old and an adult population 21 years old and older. Within each table, more granular age group data were reported (1 to <3, 3 to <6, 6 to <11, 11 to <16, 16 to <18, 18 to <21, 21 to <35, 35 to <50, 50 to <65, and 65 years and older). This study followed a very similar methodology as the EPA 2002 report, only using more recent survey data from approximately 10 years after the EPA 2002 study survey date and from a population of surveyed individuals that is approximately twice as large as the information in the EPA 2002 study. A side-by-side comparison of the 99th percentile fish ingestion rates broken out by age group shows that fish ingestion rates have appeared to decrease by a substantial amount (45%-65%) in more recent years. The newer study surveyed twice as many individuals as the older study, and both followed the same survey procedure.

For the purpose of conducting multi-pathway RTR analyses, fish consumption rates of **28.3 g/day** for adults and **6.7 to 13.2 g/day** for children, depending on the age group as shown in Table 2, would be appropriate. This is a thorough report with a relatively high number of respondents used for statistical analysis. This study also has the benefit of providing data for several child age groups that could be used to develop both adult and child fish ingestion rates. This survey also presents regional-specific data and separate data for freshwater and estuarine fish.

Table 2 - EPA 2014: 95th Percentile FW+Est. Fish Ingestion Rates, U.S., Raw, Edible Portion and “As-Prepared” Weights

	Child 1-2 yrs	Child 3-5 yrs	Child 6-11 yrs	Child 11-19 yrs	Adult 20-70 yrs
Raw, Edible Portion (g/day)	7.50	9.50	12.45	14.88	31.80
“As-Prepared” (g/day)	6.68	8.46	11.08	13.24	28.30

Correcting the inappropriate, unrepresentative, and unrealistic fish consumption rates used in the MATS RTR multi-pathway risk assessment is important not just for accurately evaluating risks associated with facilities covered under the MATS NESHAP, but for ensuring that the proper precedent is established for myriad subsequent NESHAP RTRs, many of which are currently underway. The two studies cited by EPA, Burger 2002 and EPA 2002, are out-of-date and unrepresentative. More recent, more representative, and more rigorous fish consumption studies are available and must be used in RTR multi-pathway risk assessments, as discussed above. In addition, the 95th percentile fish ingestion rate of the general population is more appropriate for risk analyses than the use of the 99th percentile rate. Based on this study, a fish consumption rate of **28.3 g/day** for adults and **6.7-13.2 g/day** for children.

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Thank you for your consideration of these comments. Please do not hesitate to contact me at (202) 682-8319 if you have questions or need additional information.

Sincerely,

/s/

Matthew Todd
Chair, Residual Risk Coalition