

[DRAFT Model Comment Letter]

*[Note – we recommend that you begin with introductory remarks regarding the signatory's position with the Tribe, and include somewhere in the letter a description of the Tribe's physical environment, and any particular concerns the Tribe has with respect to the health or environmental effects caused by the Rule's electric generating units and their related mercury emissions. The more individualized each Tribe's letter is, the greater its potential impact. Feel free to add your own arguments, objections, or support for various aspects of the proposal.]*

August 26, 2011

EPA Docket Center (EPA/DC)  
Docket ID No. EPA-HQ-OAR-2009-0234 (NESHAP action)  
U.S. Environmental Protection Agency  
Mailcode: 2822T  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

**Subject: National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units.**

The [Name of Tribe] is pleased to submit these comments regarding the U.S. Environmental Protection Agency's (EPA's) proposed National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units (Rule).<sup>1</sup>

Coal- and oil-power plants (EGUs) emit a number of highly toxic substances that threaten human health via the air we breathe, the water we drink, and the food we eat. These substances, which are especially dangerous to humans, include carbon-based toxins (dioxins, furans), carcinogens (benzene, toluene), corrosives (acid gases such as chlorine, hydrogen chloride, and hydrogen fluoride), metals (arsenic, nickel), and neurotoxins (lead and mercury). The [Name of Tribe] is pleased that the Rule addresses these pollutants based on their deleterious impacts to our Tribal members.

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<sup>1</sup> National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 76 Fed. Reg. 24976 (proposed May 3, 2011) (to be codified at 40 CFR Parts 60 and 63).

The [Name of Tribe] would like to take this opportunity to provide EPA with our comments and recommendations regarding Tribal-related concerns, technical concerns, and the need for EPA to integrate the United Nations Declaration of the Rights of Indigenous People (Declaration) in the Rule and other EPA actions. To assist EPA in gaining a better understanding about our views regarding these topics, the [Name of Tribe] has bolded and italicized our recommendations below to distinguish them from our general comments.

### **Tribal-Related Concerns about the Rule**

EGUs are the largest source of mercury emissions in the Nation. When deposited into water, mercury can change into methylmercury, a highly toxic form that builds up in fish tissue, poisoning the fish and the human beings that eat them. Methylmercury can have adverse effects on humans' neurological development and cardiovascular systems, particularly those of young children and women of childbearing age. According to EPA's National Listing of Fish Advisories, fish advisories to protect against these dangers from mercury and other hazardous air pollutants exist for all fifty states, two territories, and at least four Indian Tribes.<sup>2</sup>

Tribes face the disproportionate health and environmental impacts from EGU mercury emissions through cultural and subsistence activities. Cultural activities are often dependent on the purity of waters, plants, and other resources, many of which have become tainted by mercury exposure. Subsistence activities on which Tribes depend for their food, such as the gathering of plants and fishing, have also been adversely affected by the deposition of mercury onto Tribal lands and into their water bodies. As a result, the health of Tribal members has been negatively impacted. It is therefore important that EPA act swiftly and seek the greatest stringency in available controls to limit and reduce Tribal communities' exposure to EGU mercury emissions and their impacts. This, of course, necessitates that EPA take the true circumstances of Tribes into account, something that it has failed to do in the Rule.

### **Lack of Mercury Studies for Tribes**

More than 15 years ago, as part of its Mercury Study Report to Congress, EPA highlighted the increased risk of mercury exposure to those who fish for subsistence purposes (e.g., Tribes), finding that their average exposure to methylmercury may be more than two times greater than that experienced by the general population.<sup>3</sup> EPA confirmed this finding in its March 2011 Regulatory Impact Analysis in support of the Rule, noting that subsistence fishers have a high risk of mercury exposure based on their relatively high rates of freshwater fish consumption.<sup>4</sup> EPA failed to act on these findings and identify the specific and more varied

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<sup>2</sup> See <http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/>.

<sup>3</sup> U.S. Environmental Protection Agency, Mercury Study Report to Congress (December 1997) (See <http://www.epa.gov/hg/report.htm>).

<sup>4</sup> U.S. Environmental Protection Agency, Regulatory Impact Analysis of the Proposed Toxics Rule: Final Report, 5-18 (March 2011) (See <http://www.epa.gov/ttn/ecas/regdata/RIAs/ToxicsRuleRIA.pdf>).

impacts to Tribes. The sole study completed during this 15-year period that focused on Tribes was done in 2004 by a professor from a Wisconsin university (e.g., not an EPA study) looking at the subsistence activities of the Chippewa and Ojibwe Tribes in the Great Lakes area.<sup>5</sup> Having only one study on the effects of mercury emissions on Tribes is problematic because EPA has a trust responsibility to Tribes that obligates it to protect the rights, interests, and resources of such Tribes when carrying out its responsibilities as a federal entity. ***The [Name of Tribe] recommends that EPA devote more of its resources to conduct in-depth studies regarding on the effects of mercury emissions on Tribes, and in fact, EPA should do such studies for other pollutants.***

### **Failure of Rule's Technical Analysis to include Tribes**

The Rule's Technical Analysis fails to account for Tribes with respect to monitoring and modeling. EPA used the Community Multi-scale Air Quality (CMAQ) model to estimate the Rule's reduction in the incidence of adverse health effects, as well as the estimated economic value of the reduction in the incidence of adverse health effects. EPA used 36-kilometer (km) and 12-km grids to calculate daily and annual particulate matter less than 2.5 microns in diameter (PM 2.5) concentrations, 8-hr maximum ozone, annual total mercury deposition levels, and visibility impairment.<sup>6</sup> However, these grid sizes fail to account for the considerable variation in the land size of individual Tribes, which can be anywhere between one to thousands of acres. The smallest lands, because of their size, may be wholly or partially located in areas that heavily influence airflow unlike surrounding jurisdictions (e.g., valleys, mountains), meaning that CMAQ grid sizes of 12 km and greater may have a hard time modeling the true effects on local air quality for Tribes. ***To predict the Rule's impact on us more accurately, the [Name of Tribe] recommends that EPA redo its CMAQ analysis and use modeling grids no greater than 4 km. Further, EPA should use similar size grids for any of its forthcoming rules that may have potential impacts on our Tribe.***

In using the CMAQ model, EPA cites as one uncertainty the “[l]ack of ozone and PM 2.5 monitors in rural areas” that required EPA to extrapolate “observed ozone data from data to rural areas.”<sup>7</sup> Most of Indian Country is located in rural areas, meaning that their lands were unrepresented by the modeling results. Tribal lands located in urban areas are also largely unrepresented since they possess few monitors to discern the presence and amount of pollutants covered by the Rule. Hence, EPA lacks the data to make any accurate conclusions about the Rule's impact on Tribes. Further, EPA must get away from the practice of extrapolating data for Tribal lands for any of its rules and actions. ***To better assess the impact of the Rule and any forthcoming actions by EPA on our Tribe, the [Name of Tribe] recommends that EPA provide us with an appropriate number of monitors of various types to establish baseline monitoring data for criteria pollutants and hazardous air pollutants.***

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<sup>5</sup> *Id.* at 5-65.

<sup>6</sup> *Id.* at 3-1.

<sup>7</sup> *Id.* at 6-15.

## Hot Spots

Mercury deposition hotspots occur within 60 miles of EGUs making fish from water bodies within this range more dangerous to consume. EPA evaluated the potential for hotspot deposition near EGU emission sources covered by the Rule and found that “[b]y 2016, although the absolute excess deposition falls, the local excess still remains around 3 times the regional average for the highest 10 percent of Hg [mercury] emitting U.S. EGUs.”<sup>8</sup> EPA also found that the EGUs “will impact local waterbodies around the EGU sources.”<sup>9</sup>

The EPA findings concern the [Name of Tribe], knowing that we may live within some of these hotspot areas and may also fish from water bodies tainted by mercury emissions. Based on the faulty technical analysis cited above, EPA has failed to provide Tribes with any assurances that their communities and land will not be part of mercury emission hotspots as a result of the Rule’s implementation. EPA has a trust responsibility to Tribes that requires it to look out for the general welfare of such Tribes when taking actions with potential Tribal implications. *The [Name of Tribe] recommends that EPA develop a plan for dealing with hotspots that might affect us. In addition, EPA must provide us with a map overlay of our lands and EGUs so we can have a better understanding of how the Rule might impact our Tribe.*

## Benefits Analysis

EPA states that “[b]ased on all the available information, EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effect on minority, low-income, or tribal populations.” (*emphasis added*).<sup>10</sup> As noted above, EPA has failed to conduct a technical analysis for the Rule that properly incorporates Tribes. Tribal cultural and subsistence are unaccounted for and unquantified by the EPA, though this could be partially or wholly addressed through a Tribal risk assessment. Before EPA can claim any benefits that might be accruable to Tribes as a result of the Rule, *the [Name of Tribe] recommends that EPA conduct a benefits analysis that fully assesses the Rule’s impacts on Tribal air quality and health, as well as cultural and subsistence practices.*

## Technical Concerns about the Rule

### Output-Based Mercury Emission Limitation Standard

EPA is giving consideration to using an input- rather than output-based mercury emission limit standard for existing EGUs,<sup>11</sup> which would be a disincentive to owners and operators to use

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<sup>8</sup> 76 *Fed. Reg.* at 25013.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.* at 25091.

<sup>11</sup> *Id.* at 25064.

energy efficiency measures to control such emissions. In its 2009 Mercury Report, the General Accountability Office found that an output-based emission limitation standard (e.g., one based on the amount of electricity produced) would result in less mercury emitted nationwide than an input-based emission limitation standard (e.g., one based on the plant's heat input).<sup>12</sup> *The [Name of Tribe] recommends that EPA strongly consider using an output-based mercury emission limit standard, and to do so for all EGUs.*

### Lower MACT Floor

EPA's proposed floors for maximum achievable control technology (MACT) standards in the Rule do not represent the best performing sources in the industry. The MACT standard cannot be less stringent than "the average emission limitation achieved by the best performing 12% of the existing sources."<sup>13</sup> EPA's limits are well in excess of the average test emissions data of the best-performing sources, the sum effect of which is to establish standards that substantially diverge from the statutory standard.

First, EPA uses inconsistent measures of plants' "actual" emissions to assess the floor. When *selecting* its best-performing sources, EPA defines their emissions according to their lowest test,<sup>14</sup> but when *establishing the floor*, EPA defines plants' emissions as the variability-adjusted average of all of EPA's data for that plant based on a ranking of all the available emissions data from lowest emissions to highest emissions.<sup>15</sup> EPA fails to provide any substantive analysis or rationale for using this variability-adjusted average for establishing the MACT floor, and why mercury controls operating under normal condition would experience extreme variations.

Second, EPA has failed to consistently apply the statutory—or any—standard by refusing to consider whether reductions beyond the statutory floor are achievable. For example, EPA assumes that the top 12% of performers for non-lignite EGUs can do nothing further to reduce their mercury emissions<sup>16</sup> while failing to conduct an analysis of the control technologies that these EGUs use and what further emission reductions are possible.

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<sup>12</sup> U.S. GAO, Mercury Control Technologies at Coal-Fired Power Plants Have Achieved Substantial Emissions Reductions, 23 (2009).

<sup>13</sup> CAA 112(d)(3)(A).

<sup>14</sup> 76 *Fed. Reg.* at 25023-25024.

<sup>15</sup> *Id.* at 25041.

<sup>16</sup> EPA states that it "could not identify better HAP emissions reduction approaches that could achieve greater emissions reductions of HAP other than the control technology combination(s) (e.g., FF [fabric filters], carbon injection, scrubber, and GCP [good combustion practice] that we expect will be used to meet the MACT floor levels of control are control and are already in use on EGUs comprising the top 12 percent of sources." *Id.* at 25046. However, there are other control technologies available that

EPA has violated the Clean Air Act by not setting a MACT standard that reflects the most stringent emission reductions achievable. *The [Name of Tribe] recommends that EPA set floors consistent with the statutory directive to reflect the actual performance of the best performers in this industry, and that EPA conduct a beyond-the-floor analysis sufficient to ensure that the standards demand the maximum achievable reduction in hazardous pollutants.*

### Subcategory

EPA is permitted to distinguish among classes, types and sizes of sources within a category or subcategory in establishing MACT standards, but its actions must be reasonable and well-supported,<sup>17</sup> and not used as a means for existing EGUs to circumvent statutory requirements.

The Rule distinguishes between units designed to burn coal with an energy content of 8,300 BTU/lb or greater (bituminous and sub-bituminous coal) and units designed to burn coal less than 8,300 BTU/lb (lignite coal). EPA provides the following justification for this subcategorization:

For Hg [mercury] emissions from coal-fired units, we have determined that different emission limits for the two subcategories are warranted. There were no EGUs designed to burn a nonagglomerating virgin coal having a calorific value (moist, mineral matterfree basis) of 19,305 kJ/kg (8,300 Btu/lb) or less in an EGU with a height-to-depth ratio of 3.82 or greater among the top performing 12 percent of sources for Hg [mercury] emissions, indicating a difference in the emissions for this HAP from these types of units. The boiler of a coal-fired EGU designed to burn coal with that heat value is bigger than a boiler designed to burn coals with higher heat values to account for the larger volume of coal that must be combusted to generate the desired level of electricity. Because the emissions of Hg [mercury] are different between these two subcategories, we are proposing to establish different Hg [mercury] emission limits for the two coal-fired subcategories.<sup>18</sup>

However, EPA's justification is wholly inadequate in that it fails to show that the subcategorization is needed based on the different emission characteristics of the coal that affect the technical feasibility and the effectiveness of emissions control. Instead, the subcategorization encourages EGUs to switch to a dirtier, less fuel efficient coal (e.g., lignite) and avoid more

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EPA could and should have considered, *i.e.*, coal blending, coal cleaning, oxidation catalysts.

<sup>17</sup> 42 U.S.C. 7607(d)(3)-(9).

<sup>18</sup> 76 Fed. Reg. at 25037.

stringent MACT standards. *The [Name of Tribe] recommends that EPA eliminate the subcategorization of bituminous and sub-bituminous coal, and lignite coal.*

#### **EPA Needs to Integrate the Declaration into the Rule and Other EPA Actions**

The Obama Administration signed the United Nations Declaration on the Rights of Indigenous Peoples in December 2010.<sup>19</sup> The Declaration sets out the individual and collective rights of Indigenous Peoples, many rights that the President has consistently supported such as the right of Tribal self-determination. In his statement supporting the Declaration, President Obama made several references to implementation to these rights in accordance with existing federal laws and priorities. A number of federal entities including the Department of the Interior and Department of Justice are taking actions to implement the Declaration in their programs and policies. However, EPA has been silent on how it plans to implement the Declaration. The Rule is a good place for EPA to start, making sure that the individual and collective rights of Tribes are protected and advanced in EPA's efforts to reduce mercury and other toxic emissions from EGUs. *The [Name of Tribe] asks that EPA inform us about how it plans to implement the Declaration through the Rule and other EPA actions with potential Tribal implications.*

#### **Conclusion**

In summary, the [Name of Tribe] is pleased to provide the aforementioned comments and recommendations concerning the Rule.

*[If appropriate, provide a staff contact who may be contacted if EPA has clarifying questions]*

Sincerely,

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<sup>19</sup> The United Nations Declaration on the Rights of Indigenous Peoples (see <http://www.un.org/esa/socdev/unpfii/en/drip.html>).