Forest County Potawatomi Community

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April 27, 2004

VIA FEDERAL EXPRESS

EPA Docket Center
Room B-102
U.S. EPA West
1301 Constitution Avenue, N.W.
Washington, DC 20460

EPA AIR DOCKET

RE: Docket ID No. OAR-2002-0056

Dear Sir or Madam:

On behalf of the Forest County Potawatomi Community ("FCPC"), I am respectfully submitting the enclosed comments regarding EPA's proposed rule - Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units. 69 Fed. Reg. 4652 (January 30, 2004).

The enclosed comments and accompanying exhibits explain the FCPC's significant concerns with the proposed rule and demonstrate that a more stringent mercury control requirement can and must be imposed on coal-fired electrical steam generating units under section 112 of the Clean Air Act in order to protect the FCPC's way of life as well as the health and safety of millions of people.

In addition to the enclosed comments, the FCPC will be making a supplemental filing before the close of the comment period to include the documents referenced in Exhibit I attached to these comments as well as a complete copy of Exhibit C.

Very truly yours,

FOREST COUNTY POTAWATOMI COMMUNITY

Harold "Gus"Frank
Chairman

JLC/alm
Enclosure
cc: Jeff Crawford
MW814866_1.DOC

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FOREST COUNTY POTAWATOMI COMMUNITY

COMMENTS

ON

PROPOSED NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS; AND, IN THE ALTERNATIVE, PROPOSED STANDARDS OF PERFORMANCE FOR NEW AND EXISTING STATIONARY SOURCES: ELECTRIC UTILITY STEAM GENERATING UNITS; PROPOSED RULE

DOCKET ID NO. OAR-2002-0056

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I Executive Summary.

The Forest County Potawatomi Community ("FCPC" or the "Tribe"), a federally recognized Indian tribe located in northern Wisconsin, respectfully submits these comments, on a government-to-government basis, with respect to the Environmental Protection Agency's ("EPA") Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units. FCPC's comments focus on EPA's proposed standards for mercury emissions from coal-fired power plants.

While FCPC recognizes the difficult role that EPA serves in balancing the numerous interests affected by this proposed rule, the Tribe is troubled by the low level of control that EPA proposes, as well as the unduly long time frame that EPA proposes to implement that control. As outlined below, FCPC and its members have faced and will continue to face disproportionate health, environmental, and cultural impacts from the deposition of mercury from coal-fired power plants. FCPC and its members face these disproportionate impacts because of their traditional subsistence way of life, which includes a heavy reliance on fish and other natural resources. Moreover, Devils Lake, which is an important traditional cultural resource of the Tribe and which is located on the FCPC Reservation, has been severely impacted by mercury deposition, which has lead to high levels of methylmercury in the lake and its fish.

Because of the heightened impacts that FCPC and its members face from mercury deposition from coal-fired power plants, EPA's trust responsibility and its obligations under the Environmental Justice Doctrine require it to ensure that mercury emissions be fully regulated in accordance with law and be reduced to the extent feasible. Unfortunately, EPA's proposed mercury rule does neither.

Contrary to the requirements of the Clean Air Act, EPA's proposal fails to fulfill its legal obligation to regulate mercury emissions from power plants under section 112. Moreover, even with respect to its alternative proposal to regulate under section 112, EPA makes clear errors, which result in a proposed standard that allows several times more emissions than appropriate. As demonstrated in these comments, proper calculation of the MACT floor standards for the five subcategories that EPA proposes would result in standards for existing sources that allow *less than one-half to less than one-fifth* of the emissions that EPA's proposed MACT standards would permit. Likewise, proper calculation of MACT floor standards for new sources results in standards that for bituminous-, subbituminous-, and lignite-fired facilities allow *approximately one-half to less than one-fourth* of the emissions that EPA's proposed MACT standards would permit.

EPA's MACT floor analysis, which appears to adopt the methodology proposed by a utility trade group, improperly uses a short-term worst-case analysis to develop its long-term average standard. Under this approach, EPA discards the 97.5 percent best emission reductions and develops standards based on the 2.5 percent worst emissions from relevant sources. Contrary to the requirements of the Clean Air Act, EPA's analysis also further increases the allowed emissions under the MACT floors by improperly considering units for which it has no

data. Moreover, even if EPA could properly consider such units, its approach results in a standard that has a 99 percent certainty to overstate the average emissions of such units.

In addition to proposing an improper MACT floor, EPA fails to consider numerous available additional pollution control techniques, which would result in emissions that are substantially more stringent than the proposed MACT floor. Indeed, these comments include a report by a mercury control technology expert that identifies numerous control techniques that are available at this time to achieve greater than 90 percent control. This level of control should be imposed regardless of whether EPA correctly issues a MACT standard under section 112 or continues to attempt to regulate under section 111.

Finally, EPA's proposed trading program is not authorized under section 111 or 112 and creates grave concerns regarding high levels of localized mercury impacts. This concern is especially great in areas such as Wisconsin, which use western subbituminous coal. To address these concerns, EPA must either abandon its trading program or take substantial steps to rectify the significant localized problems that it creates.

Because of the significant impacts that mercury contamination have caused to FCPC and its way of life and because of the significant concerns that FCPC raises in these comments, FCPC formally requests a meeting with EPA to discuss mercury impacts to the Tribe and FCPC's comments on EPA's proposed rule. FCPC makes this formal request in accordance with EPA's trust responsibility and its obligations under the Environmental Justice Doctrine.

II Significant Health and Economic Impacts of Mercury.

FCPC and its members are very concerned about the health and economic impacts of mercury deposition. As the EPA recognizes in the preamble to its proposed rulemaking and elsewhere, mercury is widely recognized as causing very serious health impacts to a very large portion of the American people. In addition to significantly affecting and ruining the lives of literally hundreds of thousands of people, these adverse health effects are recognized by EPA and others to cause billions of dollars of economic impacts.

In addition to the health impacts that EPA notes, mercury contamination has been found to cause learning and educational impacts that have resulted in significant costs to our country and its people. Also, it is important to note mercury's tremendous tourism-related costs to states, like Wisconsin, and especially rural areas, like those near the FCPC reservation, that rely heavily on tourism associated with recreational fishing. Finally, mercury contamination to lakes and streams and the fish that inhabit them causes tremendous natural resource damages that need to be considered when evaluating the costs of mercury contamination.

A. Severe health-related impacts, especially to newborns. A very large portion of the American population is significantly impacted by mercury contamination. Indeed, mercury impacts have reached epidemic proportions. As EPA notes in this proposed rule-making, a recent analysis of U.S. Centers for Disease Control data shows that approximately 8 percent of women of child-bearing age have levels of mercury in their blood that are at or above U.S. EPA's RfD. 69 Fed. Reg. 4658. Moreover, because mercury in the blood readily passes

from the mother to her unborn child, EPA has noted that "the developing fetus is considered most sensitive to the effects of methylmercury." 69 Fed. Reg. 79829. Because of this, EPA's own scientists have concluded that *630,000 infants* born *each year* may be adversely effected by mercury. See Inside EPA's Clean Air Report, Vol. XV, No. 4, Pg. 13 (February 12, 2004).

B. Economic cost of mercury's health-related impacts. The significant and pervasive impacts of mercury have a great economic cost to the United States. As EPA recognizes, its proposed mercury reductions would save approximately *$15 billion* (in 1999 dollars) in health-related costs. See 69 Fed. Reg. 4710 (emphasis added). However, this number likely underestimates the true health related costs associated with mercury emissions. For example, EPA likely did not consider the costs related to the overall lowering of IQ levels as a result of mercury emissions. As recently reported in the Milwaukee Journal Sentinel, Mr. Michael McCalley, a professor of community and preventive medicine at New York's Mount Sinai School of Medicine, and president of Physicians for Social Responsibility has estimated the diminished lifetime earnings that result from the lowering of IQ in the general population as a result of exposure to mercury at approximately $2.3 billion per year. See Milwaukee Journal Sentinel, *Mercury's dangers persist*, Section G1 (April 12, 2004).[1]

Moreover, it is important to note that the $15 billion in health-related benefits acknowledged by EPA do not reflect the full benefits that would be realized if a correct level of mercury reductions (e.g., 90 percent) were required from power plants. Rather, these benefits simply relate to the health impacts that would be avoided with the very limited mercury reductions that EPA now proposes. They do not reflect the additional billions of dollars in health cost savings and the thousands of deaths that could be avoided and lives that could be dramatically improved with a proper level of mercury control.

C. Other economic costs associated with mercury-related contamination. It is also important to note that the $15 billion in health-related costs do not include any of the significant tourism-related impacts caused by the significant mercury contamination in the nation's waters. As EPA is aware, mercury pollution has contaminated *12 million acres* of lakes, estuaries, and wetlands (30 percent of the national total) and *473,000 miles* of streams, rivers, and coast lines. For Great Lakes states, such as Wisconsin, that are blessed with rich water resources, and therefore rely heavily on recreational tourism associated with fishing, the situation is even worse.

As Wisconsin's Attorney General Lautenschlager testified in this rule-making proceeding, the Wisconsin Department of Natural Resources "has found that atmospheric mercury deposition has contaminated ***nearly all*** of the state's 15,000 lakes and 57,000 miles of rivers and streams to some level. This contamination has resulted in a ***state-wide*** fish consumption advisory." (Emphasis in original). This level of mercury contamination is not unique to Wisconsin. For instance, Wisconsin's Great Lakes sister states of Illinois, Indiana, Minnesota, Michigan, and Ohio have all also issued mercury fish advisories for 100 percent of their lakes or rivers, or both.

[1] This article is available at http://www.jsonline.com/alive/news/apr04/221511.asp.

Wisconsin's Department of Natural Resources is also in the process of conducting individual testing of specific water bodies, and has thus far identified at least 84 with unacceptably high concentrations of mercury. This has resulted in even more stringent advisories than the general state-wide advisory. Exhibit A, WDNR Mercury Advisory Update. These individual advisories mean that fewer fish or no fish should be consumed from these water bodies. These specially impacted lakes include Deep Hole Lake, Julia Lake, Little Sand Lake, Roberts Lake, and Van Zile Lake, all of which are close to the FCPC reservation in Forest County. Indeed, the Tribe owns fee land that is adjacent to Deep Hole Lake and within a couple hundred yards of Little Sand Lake.

As Attorney General Lautenschlager testified, the economic concerns associated with mercury contamination in Wisconsin are tremendous. Each year, the Wisconsin Department of Natural Resources sells approximately 1.5 million fishing licenses. Attorney General Lautenschlager testified that the sales of these licenses, as well as of food, lodging, gasoline, and sporting equipment related to fishing as an activity, resulted in a total yearly economic impact of approximately *$2.1 billion*, with the sports fishing industry accounting for approximately 30,500 jobs in the state each year. Again, Wisconsin is not alone in its reliance on and benefits from recreational fishing. Wisconsin and its Great Lakes neighbors of Illinois, Indiana, Michigan, Minnesota, and Ohio together serve over 7.8 million anglers and, not including direct payments to the state in the form of fishing licenses and taxation, these states' economies receive over *$5 billion* in fishing-related income.[2]

By failing to appropriately and fully address the significant mercury contamination from power plants, EPA is continuing to hold back and threaten the important fishing-related economies in the Great Lakes states and the nation as a whole. In Wisconsin alone, EPA is putting at risk billions of dollars in economic activity and tens of thousands of fishing-related jobs.

D. Tremendous natural resource damages caused by mercury deposition. The deposition of mercury from coal-fired power plants and other industrial sources into the lakes, streams, and other water bodies also has caused and continues to cause tremendous natural resource damages. As a consequence of mercury deposition, millions of acres of lakes and hundreds of thousands of miles of rivers, streams, and coast lines are contaminated. Moreover, the natural conversion of the deposited mercury to poisonous methylmercury and the bioaccumulation of methylmercury in fish and other living organisms has created and continues to create significant natural resource damages. Indeed, given the likely billions of contaminated fish, on top of the millions of acres and thousands of miles of contaminated water bodies, the financial costs of these damages is likely in the hundreds of billions of dollars.

[2] U.S. Department of Interior, Fish and Wildlife Service, U.S. Department of Commerce, U.S. Census Bureau, 2001, National Survey of Fishing, Hunting, and Wildlife associated recreation. FHW/01-Nat. October 2002. Tables 55 and 64.

III Background regarding FCPC and heightened mercury impacts on the tribe.

A. FCPC History and Treaties. According to the Potawatomi tradition, FCPC originated on the eastern seaboard and, in company with their fellow Algonquian speaking ancestors of the modern Ojibwe and Odawa, migrated west until they settled in southern Michigan. During the mid-seventeenth century attacks by Iroquoian people drove them west of Lake Michigan. From this refuge they eventually reoccupied their former territory in Michigan and by the early eighteenth century were expanding into adjacent areas of northern Indiana and Illinois, as well as eastern Wisconsin.

By the late 1820s the Potawatomi were the predominant tribe in this large territory that included all of the west shoreline of Lake Michigan between Green Bay and Chicago, east across the lower peninsula of Michigan and northern Indiana, and west across southern Wisconsin to the Mississippi and south to the Illinois River. At the same time, however, pressure from non-Indians for land resulted in numerous treaties made by the United States with the Potawatomi, under which the United States acquired much of our ancestor's aboriginal territory, and in exchange, promised to provide them with other lands, funds and resources from which the Potawatomi might continue to live.

By the treaties made in the 1830s, the United States sought to remove the Potawatomi from their homelands near the Great Lakes to alternative land west of the Mississippi. Many refused to move, and many others returned to Wisconsin following efforts to remove them. The FCPC is comprised of those Potawatomi who refused to be relocated. After being forced from their traditional villages and settlements, the Potawatomi in Wisconsin began to migrate north, generally ahead of the line of settlement and into the remaining unoccupied areas of Wisconsin. By 1910, 457 Potawatomi resided in the area of Forest, Marinette, and Oconto Counties. In 1913, the federal government purchased lands for FCPC using the funds due to the Band under their treaties with the United States. FCPC, as a matter of federal law has the right to hunt, fish, and gather in its Reservation lands. Menominee Nation v. United States, 391 U.S. 404, 405-13 (1968) (Indians have the right to hunt, fish, and gather on their reservation lands regardless of whether the enactment setting aside their lands makes specific reference to such rights).

In the years that followed – from 1914 through 1920 and 1928 and 1929 – Congress continued to appropriate funds, which were to be reimbursed from the Wisconsin Potawatomis' share of the annuities due under their treaties, for use in building homes and other improvements on the lands acquired for the Wisconsin Potawatomis. In 1934, FCPC organized under the Indian Reorganization Act.

B. FCPC's Reservation. The FCPC Reservation is located in northeastern Wisconsin in Forest County. The Reservation consists of 12,000 acres with approximately seventy-five percent of the land surrounded by the Nicolet National Forest. The Reservation is sparsely populated, remote and largely wilderness. It is dominated by upland hardwood forests, which are managed for timber harvest, as well as by wetlands and rivers and lakes. The Reservation includes parcels of land scattered amongst three townships, those being Stone Lake (Crandon), Wabeno, and Carter. There are two wilderness areas within 10 miles of the Reservation: the Catwillow Creek and Headwaters National Wilderness areas.

The FCPC Reservation contains three watersheds: the Upper Wolf, North Branch Oconto, and the Peshtigo. All of these rivers are afforded special levels of protection under state and federal law. The tributaries for these rivers originate or flow through the Reservation, with the majority being high quality trout waters. Four lakes are located within the Reservation. Wetland areas are abundant and are habitat for wildlife and home to threatened and endangered species.

About half of its estimated 1,200 enrolled members live on the FCPC Reservation lands. The local economy is dominated by tourism and by the timber industry. The FCPC is providing jobs for its people through a series of economic development projects. The Tribe uses financial resources from these projects to protect its reservation and the pristine lands that surround it. For example, it has worked to raise its concerns regarding the proposed highly sulfidic Crandon Mine proposal and last year, with the Sokaogon Chippewa Community, purchased the 5,000 acre mine site, which is rich in forests, wetlands and surface waters, for $16.5 million. The then-pending mining permit applications were withdrawn.

C. Critical importance of pure water and food resources to tribal way of life. In order to fully appreciate the impact associated with mercury emissions from power plants, it is important to understand the culture and beliefs of the FCPC tribe. This understanding is also critical to a legal analysis of the trust responsibility owed by EPA to the Tribe.

The FCPC ancestors have lived in the Great Lakes area since time immemorial; they have occupied eastern Wisconsin since the mid-seventeenth century and Forest County since the latter part of the nineteenth century. As they moved into the forested and cut-over area of eastern Wisconsin, its people lived from the land. By necessity, they acquired most of their food, building materials, and medicine from nature. Although they hunted, fished, and gathered over most of the counties of the northeast part of the state, they eventually concentrated their subsistence activities in areas in the vicinity of its current Reservation lands in Forest County.

The close historical link between FCPC members and the natural environment and the continuity of this tradition into modern times is well documented. Today, plants and animals obtained from the Tribe's environment are a vital part of the religious rituals, ceremonials, and medicines which define unique aspects of tribal life and which form the vital link between the Tribe's cultural past and future.

Historically, Potawatomi's conceived of the natural as being controlled by spirits with whom the Tribe must maintain harmony and balance in order to assure health and well being in the natural world. Today, FCPC members perpetuate these beliefs. As one of the four major spirits, water has a role of singular significance in the Tribe's culture. Water in its pure form is needed for FCPC ceremonies and rituals and is essential to preparation of certain medicines and foods. For example, water to prepare ritual foods or to mix medicines must be drawn from a specific spring, medicinal herbs must come from "clean" or undisturbed ground. Unless these conditions are met, the spiritual and therapeutic force of the ceremony or the medicine is lost.

The purity of water in a cultural sense is distinct from purity from a chemical or scientific perspective. Any alteration of the flow and quality of water, including contamination by

airborne emissions, renders water no longer pure for the Tribe's people. Furthermore, as water is sacred and represents life itself, changes to water will also affect the natural resources which rely on it to sustain themselves. In the FCPC culture, these changes will upset the balance that plants and animals depend on to survive in the natural world.

The cultural practices associated with FCPC's Reservation and surrounding lakes and forests are hunting, fishing and gathering, as well as ceremonies, rituals, appropriate harvesting practices and other actions necessary to maintain harmony and balance between FCPC members and the spirit world. It is through these activities that its members fulfill their responsibilities in the natural world. This is reflected in the fishing and collecting activities at Devils Lake and elsewhere, and the rituals, taboos and appropriate conduct associated with avoiding harm from underworld spirits at Devils Lake.

Cultural beliefs, which include dances, rituals, ceremonies, as well as traditional Potawatomi religion and ideology remain the core of life on the FCPC Reservation. These activities depend in large part on the natural resources which must be drawn from spiritually pure natural environments. Concern about access to these resources and the ability of the environment to provide the pure resources needed to sustain FCPC's culture occupies the thoughts and prayers of the community. The long oral and written histories of FCPC members confirm that the use of wild game, fish, and plant products gathered from nature, sustained them until after the mid-point of the twentieth century. Today these same resources are no less important as the source of "pure" foods for ritual and for medicinal purposes and for subsistence and craft production. The continued health of the natural world as well as FCPC's continued existence as a people requires the use of these resources to conduct rituals of harmony and atonement.

The Tribe obtains most of the resources that are required to maintain its traditional culture, including religious practices, from two "resource catchments" adjacent to and including Reservation land. These areas are ecologically diverse and relatively undisturbed by the intrusion of exotic species or environmental contamination. Obviously, the maintenance of these resource catchments is critical to the Tribe's ability to maintain cultural continuity with its past. The Tribe's two resource catchments in Forest County have been found eligible for listing on the National Register of Historic Places.

Wetlands and their associated lakes and streams constitute the most important source of natural foods and medicines of the FCPC members. Although upland hardwood forests, lowland conifer forests, and meadows all produce unique resources necessary for curing, rituals, and feasting, it is the open water and wetland environments that yield an estimated two-thirds of the resources that are critical for these cultural purposes. For this reason, healthy wetlands are critical to the survival of Potawatomi traditional culture.

The Tribe's hunters, fishers, and gatherers realize the importance of these natural areas to their traditional culture and particularly their spiritual purity, and are anxious to preserve them for future generations.

D. Devils Lake. Devils Lake has special significance both culturally and spiritually to FCPC and its membership. Understanding of the specific significance of this important resource is critical to understanding the need and legal requirements to protect the resource from adverse impacts from mercury deposition.

1. Background regarding Devils Lake. Devils Lake, together with its associated wetlands, is approximately thirty-five acres in size and lies entirely within the FCPC Reservation in the northwest quarter of section 2 of Lincoln Township. This lake is used as a fishing, collecting, and recreation site by the FCPC people. Devils Lake has been determined to be eligible for inclusion on the National Register of Historic Places as a traditional cultural property on the basis of its religious and spiritual significance to the community. In fact, because of the central importance of Devils Lake and the cultural activity that traditionally has occurred and continues to occur in the area around the lake, an entire ten-mile diameter resource catchment area around the lake has been found eligible for listing on the National Register of Historic Places. A map of the Devils Lake catchment area is attached as Exhibit B.

In the territory formerly occupied by the northern Algonquian tribes, maps will often show lakes named Spirit Lake, Manitou Lake or Devil Lake. Invariably, Indian traditions say these lakes are bottomless and are connected by underwater tunnels to other water bodies. It is by this means that underworld creatures appear unexpectedly in these lakes and why they are given their names. FCPC beliefs indicate that Devils Lake on the FCPC Reservation has these features.

2. FCPC's study of Devils Lake and mercury impacts. Because of the central importance of Devils Lake to FCPC's culture and way of life, the Tribe has devoted substantial resources to the study and care of the lake. In particular, because the Tribe has long been concerned about potential mercury impacts to the lake, it has devoted substantial tribal resources to evaluate mercury contamination in the lake. Beginning in 1995, the FCPC Tribal Environmental Protection Agency ("Tribal EPA") began collecting data regarding the levels of mercury and methylmercury in the lake. A comprehensive report that quantifies the Devils Lake watershed hydrology and water quality (including waterborne mercury and methylmercury) from 1995 to 2003 has been prepared for the Tribe by Horsley & Witten, Inc., The "*Devils Lake Summary Report: Water Years 1996 to 2002*" is attached as Exhibit C.

(a) Dr. Watras' study of mercury contamination in Devils Lake. Because of the Tribe's significant concerns regarding elevated levels of mercury in the lake, it has devoted almost $400,000 to fund further testing and analysis of mercury contamination in Devils Lake by a team of experts led by Dr. Carl Watras. Dr. Watras is an internationally recognized expert in mercury impacts to fresh water bodies who works with the Wisconsin DNR. A copy of Dr. Watras' curriculum vitae is attached as Exhibit D. Dr. Watras has executed a certification testifying that he participated in the drafting of the sections of these comments that relate to his work regarding Devils Lake and Little Rock Lake and that those sections are a true and accurate representation of his work and findings. A copy of his certification is attached as Exhibit E.

Building on the studies conducted by Horsley & Witten, Inc., this research project indicates that the major source of mercury to the lake and its watershed is atmospheric

deposition. The research also indicates that the lake has high levels of methylmercury, which is the form of mercury that bioaccumulates in fish and is most toxic to humans and piscivorous wildlife. The lake's waterborne methylmercury concentration ranges from 0.2 to 6.3 ng/1, with the highest concentrations occurring in the lake's anoxic bottom water. Dr. Watras' research on Devils Lake involves both mass balance studies and process oriented studies designed to elucidate the methylmercury cycle in the lake and watershed.

The purpose of Dr. Watras' mass balance studies is to quantify the sources and fates of inorganic mercury and methylmercury in the lake. Essentially, these studies involve the development of an annual balance sheet that accounts for the inputs and outputs of mercury to and from the lake while tracking changes in the mercury content of the lake over time. To facilitate this effort, Tribal EPA researchers are quantifying inputs of mercury to the lake, which include direct precipitation (wet atmospheric mercury deposition falling on the lake surface) and stream flows (indirect precipitation falling on the terrestrial watershed). The hydrology of Devils Lake is particularly well suited for a mass balance analysis because it is perched above the local groundwater system. Accordingly, the groundwater provides negligible amounts of water and mercury to the lake. Dr. Watras' process-oriented studies include measurement of the rate of methylmercury production within the lake. They also involve identification of the mechanisms by which this process is occurring.

The ongoing mass balance studies indicate that Devils Lake receives the vast majority of its mercury from atmospheric deposition in the lake, in part because of the pristine setting of the lake. It receives essentially no mercury from any point source other than the forest stream, and there is no significant geologic source of mercury in the watershed. The glacial till surrounding the lake is relatively thick, and there are no known deposits of cinnabar, the mineral form of mercury, within the till. This is generally the situation for lakes in the Wisconsin Northwoods.

Dr. Watras' work also shows that atmospherically-deposited mercury is converted to methylmercury in the hypolimnion of Devils Lake. During the summer of 2002, roughly 0.5 grams of methylmercury were produced in the lake's deep anoxic water. This amount of methylmercury would be sufficient to contaminate 900 pounds of fish to levels above the Federal health advisory limit (1 ppm Hg) if it was all bioaccumulated.

There are several reasons why inorganic mercury may be converted to methylmercury at high rates in Devils Lake. First, the lake is closely connected to a wetland that serves as an additional conduit for atmospherically-deposited mercury as well as dissolved sulfate and organic carbon. Since dissolved sulfate and organic carbon are essential nutrients for the bacteria that produces methylmercury in the lake, contributions from the wetland may fuel additional mercury methylation. The dissolved carbon also imparts a dark tea-stained color to the lake water which blocks sunlight and retards the photodestruction of methylmercury. In clear-water systems, methylmercury is often destroyed relatively quickly in reactions with sunlight.

Research on Devils Lake and elsewhere indicates that acid rain is an important secondary factor that may increase the production of methylmercury. This is because acid rain also adds sulfate directly to the lake. Because of the elevated levels of sulfate in Devils Lake due to acid

rain, sulfate-reducing bacteria may have also increased the production of methylmercury in the lake.

Work by Dr. Watras' colleagues will include looking at the microbial community in Devils Lake in more detail and using DNA fingerprinting to determine which particular bacteria are causing the production of methylmercury. They will also be looking at other factors that affect the rate at which methylmercury is produced and destroyed.

(b) FCPC's testing of fish in Devils Lake for mercury. In addition to the Tribe's testing and evaluation of the mercury cycle in Devils Lake and its surrounding watershed, FCPC has tested the lake's fish for their mercury content. This testing has focused on yellow perch (*Perca flavescens*) because of their abundance in the lake and their importance as a food source for larger gamefish, like largemouth bass, and for wildlife, like wading birds and small mammals. The testing shows that perch in Devils Lake have relatively high concentrations of mercury when compared to other lakes in northern Wisconsin. This result is consistent with the high concentrations of methylmercury observed in the lake water. Testing results are attached as Exhibit F.

Because Devils Lake is now and traditionally has been an important fishing site for tribal members, in the past, the Tribe had a fish stocking program for the lake. However, because of the high levels of mercury found in the lake and its fish, the Tribe unfortunately determined that it was appropriate to discontinue this stocking program.

E. Tribal members face substantially increased health risks because of their higher consumption of fish and because of the significant mercury impacts to Devils Lake and other water bodies near the FCPC Reservation. Because of the Tribe's heavy reliance on fish for both subsistence and cultural activities, its members are especially vulnerable to the impacts of mercury. As EPA notes in this proposed rule-making, "[s]ome populations in the U.S., such as: Native Americans. . . may rely on fish as a primary source of nutrition and/or for cultural practices. Therefore, they consume larger amounts of fish than the general population and may be at a greater risk to the adverse health effects from Hg due to increased exposure." 69 Fed. Reg. 4709.

EPA's studies and documents show the heightened exposure of Native Americans to mercury-contaminated health impacts because of their high consumption of fish compared to the general population. For example, EPA recently revised its standard assumptions and now uses default values for fish consumption of 142.4 grams/day for subsistence population, such as Native American communities, more than *eight times* the 17.5 grams/day that EPA uses for the general population. *Methodology for Deriving Water Quality Criteria for the Protection of Human Health*, (US EPA, 2000), p. 4-27[3]

However, these revised values may still underestimate Native American fish consumption and the health impacts from that consumption. See e.g., *Fish Consumption and Environmental Justice: A Report Developed from the National Environmental Justice Advisory*

[3] This document is available at http://www.epa.gov/waterscience/humanhealth/method/method.html.

Committee Meeting of December 3-6, 2001 (2002 revised), 14-15 (noting that while these revised numbers are a marked improvement over EPA's previous assumptions, "they are still a source of concern for those groups whose members consume at the highest levels. The result is that when fish is contaminated, those consuming at the higher rate will be exposed to greater quantities of contamination that are present in the fish tissue"). This concern is especially true with respect to methylmercury, since the human intake of methylmercury from fish consumption is directly related to the level of consumption, as well as the level of methylmercury contamination in the fish. See Gilkinson, Miriam, *Sample Calculation of Mercury in Support of HWC Background Document*, 12 (providing equation showing that methylmercury intake from fish is directly related to the consumption rate of fish and the concentration of methylmercury in the fish consumed) (July 20, 1999), attached as Exhibit G.

FCPC members may be even more exposed to mercury than Native Americans in general. FCPC's Reservation is located in Wisconsin's Northwoods, an area well known for its numerous lakes and streams, which are rich in fish resources. FCPC Tribal members regularly fish from Devils Lake and other water bodies in the Forest County area, many of which have been found to contain highly elevated levels of mercury. As discussed above, Devils Lake and its fish have been found to contain elevated levels of mercury. In addition, surrounding lakes used by FCPC tribal members such as Deep Hole Lake, which is adjacent to FCPC Tribal property, and Little Sand Lake, which is within a couple hundred yards of Tribal lands, have been identified as having special mercury concerns. See Exhibit A, WDNR Mercury Advisories Update.

In addition to the increased risks FCPC Tribal members face from their high consumption of fish from impacted lakes, as heavy consumers of natural resources in general, the Potawatomi risk factor from exposure to environmental pollutants is further heightened. Because FCPC's members consume substantially higher levels of fish than the general public and because Devils Lake and other lakes and water bodies on and around FCPC's lands are significantly contaminated from mercury deposition, FCPC faces substantially increased risks of health and learning disability effects from mercury. Likewise, FCPC faces heightened natural resource damages from impacts to waters and fish on and near its Reservation.

F. Unique cultural impacts because of limitations on ability to engage fully in subsistence and cultural activities. As was discussed in Section III.C above, FCPC's members have a strong connection to the natural world. This is manifested in cultural activities that range from hunting and fishing, to gathering of resources for medicines, crafts, and other cultural purposes. Performing these activities is necessary in order for the Tribe's people to attempt to maintain harmony in the natural world. Many of these activities depend upon having pure resources, such as water or plants that have not been altered (and are collected in the proper manner and from the correct location).

The mercury contamination discussed above threatens more than the physical health of FCPC's members: It also threatens the Tribe's spiritual well being. The contamination of Tribal waters, such as Devils Lake, and the entry of mercury into the food chain and into plant tissues renders the use of these resources for cultural purposes problematic. The Tribe is left with a

Hobson's choice of ingesting materials that may ultimately injure Tribal members' health, or foregoing cultural practices that are essential to their spiritual well being.

This is a dilemma that the general public – even those who hunt and fish and use natural resources for food and craft purposes – does not face because these resources do not have the enormous cultural value they do for Tribal members. In this sense, the impacts of mercury contamination pose a unique threat to Native American populations such as FCPC.

After decades of losing the lands and resources FCPC ancestors used in their subsistence way of life, mercury contamination threatens perhaps FCPC's most important remaining resource: its clean water. The cultural damage that accompanies poisoning the Tribe's water and the fish and other animals and plants that depend on and use that water is incalculable. It is critical that EPA fully understand FCPC's and other tribes' cultures and their use of fish and other wildlife resources to properly assess and address the environmental and human health hazards that they face from mercury contamination. Otherwise, as discussed in greater detail below, EPA will not be able to meet its obligations to act as a fiduciary to protect the Tribe's interests from permitted mercury emissions, and to assess and address the disproportionately high and adverse impacts that tribes face from mercury deposition and to ensure that tribes enjoy the same degree of protection from environmental and health hazards as other Americans.

IV Special Status of FCPC in making comments.

A. EPA's trust responsibility and obligations under Environmental Justice Doctrine with respect to tribe's impacted trust assets. Under the federal trust responsibility, established by the Supreme Court in the 1830s in the historic Cherokee cases, the federal government is obligated to protect Indian tribes' lands, waters, natural resources and rights of self-government as a trustee would protect the interests of a beneficiary. This obligation is heightened by the Environmental Justice Doctrine. Pursuant to Executive Order 12,898, the federal government has bound itself to ensuring the fair treatment of all minority communities, including Indian tribes.

In this rulemaking, these obligations require EPA to consult with FCPC and other affected tribes to determine how the proposed rule could have heightened or unique impacts on Indian tribes. As discussed above, mercury contamination creates significant heightened and unique impacts to the Tribe and its members because of FCPC's heavy reliance on pure water, fish, and other natural resources for its culture and way of life and the significant mercury contamination to water bodies on and near the Tribe's reservation and other lands. In addition, after EPA has determined the unique impacts to Indian tribes, EPA must make sure that its rule-making properly protects the Tribes' rights and resources, including their way of life and resources. Likewise, EPA must identify and address disproportionately high human health and environmental effects to all tribes, so that EPA ensures that all people enjoy the same degree of protection from environmental and health hazards.

1. EPA's trust responsibility to FCPC and other tribes.

(a) EPA's recognition of its trust responsibility to tribes. In 2001 the EPA reaffirmed its Indian Policy.[4] First adopted in 1984, the Policy mandates that EPA "recognize[] that a trust responsibility derives from the historical relationship between the Federal Government and Indian Tribes as expressed in certain treaties and Federal Indian law." The Policy continues: "In keeping with that trust responsibility, the Agency will endeavor to protect the environmental interests of Indian Tribes when carrying out its responsibilities that may affect the reservations."

The Policy also confirms that the EPA will stand ready to "work directly with Indian tribal governments on a one-to-one basis (the 'government-to-government' relationship), rather than as subdivisions of other governments." Finally, in circumstances where EPA has not transferred regulatory and program management responsibilities to tribes (though the Policy expresses a preference for such transfers), the Policy requires that EPA "encourage [tribes] to participate in policy-making" and other appropriate roles in the management of reservation programs.

In reaffirming this Policy, the EPA Administrator concluded:

> The United States has a unique legal relationship with Tribal Governments based on the Constitution, treaties, statutes, Executive Orders, and court decisions. This relationship includes a recognition of the right of tribes as sovereign governments to self-determination, and an acknowledgment of the Federal government's trust responsibility to the Tribes.

Accordingly, it is critical that EPA work closely with FCPC and other impacted tribes to ensure that EPA's trust responsibility is met in addressing the significant impacts associated with mercury contamination.

(b) EPA's general obligation under trust responsibility to act in accordance with highest fiduciary standards for benefit of tribes. The commitment embodied by EPA's Indian Policy and its reaffirmation of that policy is consistent with the Agency's obligations under settled law regarding the trust responsibility of the United States to Indian tribes. The trust responsibility is based on the unique history of the federal-tribal relationship, and the course of dealings between Indian tribes and the United States. The origin of the trust responsibility in federal law is found in the Supreme Court's historic decisions in the Cherokee cases. Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1 (1831); Worcester v. Georgia, 31 U.S. (6 Pet.) 515 (1832). The Cherokee cases establish that the trust responsibility is an independent legal doctrine, a conclusion which is confirmed by nearly two centuries of Supreme Court jurisprudence.[5] In carrying out their

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[4] The memorandum reaffirming the EPA Indian Policy (with the policy attached) can be found at http://www.epa.gov/indian/pdfs/reaffirmindpol01.pdf.

[5] E.g., Fellows v. Blacksmith, 60 U.S. (19 How.) 366 (1856); United States v. Kagama, 118 U.S. 375 (1886); Choctaw Nation v. United States, 119 U.S. 1 (1886); Cherokee Nation v. Southern Kansas R. Co., 135 U.S. 641, 654-55 (1890); Cherokee Nation v. Hitchcock, 187 U.S. 294, 300-05 (1902); Lone Wolf v. Hitchcock, 187 U.S. 553 (1903); Tiger v. Western Investment Co., 221 U.S. 286 (1911); Heckman v.

obligations imposed by treaties, statutes, regulations and executive orders, executive officials of the United States are bound by the trust responsibility. In discharging the trust responsibility, executive officials of the United States must observe "obligations of the highest responsibility and trust" and "the most exacting fiduciary standards," Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942). Moreover, EPA is bound "by every moral and equitable consideration to discharge its trust with good faith and fairness." United States v. Payne, 264 U.S. 446, 448 (1924). As the District Court held in Northwest Sea Farms v. United States Army Corps of Engineers, 931 F. Supp. 1515, 1520 (W.D. Wash. 1996), applying these principles, the Corps has a fiduciary duty to "ensure that Indian treaty rights are given full effect."

The trust responsibility also includes a duty to consult with Indian tribes concerning federal actions that may affect their interests. As the Court explained in Klamath Tribes v. United States Forest Service, 1996 WL 924509 (D. Or. 1996), "[i]n practical terms, a procedural duty has arisen from the trust relationship such that the federal government must consult with an Indian Tribe in the decision-making process to avoid adverse effects on treaty resources." Id. at 8. These principles are well settled. E.g., Morton v. Ruiz, 415 U.S. 199 (1974) (denial of general assistance benefits to Indians living near the reservation held to be "inconsistent with 'the distinctive obligation of trust incumbent upon the Government in its dealings with these dependent and sometimes exploited people.'" Id. at 236 (quoting Seminole Nation v. United States, 316 U.S. 286, 296 (1942)); HRI, Inc. v. EPA, 198 F.3d 1224, 1245 (10th Cir. 2000) ("in some contexts the fiduciary obligations of the United States mandate that special regard be given to the procedural rights of Indians by federal administrative agencies") (quoting Felix S. Cohen's Handbook of Federal Indian Law 225 (1982)); Midwater Trawlers Cooperative v. U.S. Dep't of Commerce, 139 F. Supp. 2d 1136, 1145-46 (W.D. Wash. 2000) (consultation grounded in the trust relationship) aff'd in part and rev'd in part, 282 F.3d 710 (9th Cir. 2002).

Settled law confirms that federal agencies must strictly adhere to the ordinary duties of a private fiduciary when their actions impact Indian rights. Covelo Indian Community v. FERC, 895 F. 2d 581, 586 (9th Cir. 1990) ("the same trust principles that govern private fiduciaries determine the scope of FERC's obligations to the [Indian] Community"); accord Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation v. Board of Oil and Gas Conservation, 792 F.2d 782, 794 (9th Cir. 1986) (applying "the same trust principles that govern the conduct of private fiduciaries" to Department's authority over mineral royalties); Coast Indian Community

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United States, 224 U.S. 413 (1912); Choate v. Trapp, 224 U.S. 665, 675 (1912); United States v. Sandoval, 231 U.S. 28, 45-46 (1913); United States v. Pelican, 232 U.S. 442 (1914); United States v. Nice, 241 U.S. 591 (1916); Lane v. Pueblo of Santa Rosa, 249 U.S. 110 (1919); United States v. Payne, 264 U.S. 446 (1924); United States v. Candelaria, 271 U.S. 432 (1926); United States v. Creek Nation, 295 U.S. 103 (1935); Shoshone Tribe of Indians v. United States, 299 U.S. 476 (1937); United States v. Santa Fe Pac. R. Co., 314 U.S. 339 (1941); Tulee v. State of Washington, 315 U.S. 681 (1942); Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942); United States v. Alcea Band of Tillamooks, 329 U.S. 40, 47 (1946); United States v. Mason, 412 U.S. 391 (1973); Morton v. Ruiz, 415 U.S. 199, 236 (1974); Morton v. Mancari, 417 U.S. 535, 552-55 (1974); United States v. Sioux Nation, 448 U.S. 371, 408 (1980); Nevada v. United States, 463 U.S. 110, 142 (1983); County of Oneida v. Oneida Indian Nation, 470 U.S. 226, 247 (1985).

v. United States, 213 Ct. Cl. 129, 550 F.2d 639 (1977); Cheyenne-Arapahoe Tribes v. United States, 206 Ct. Cl. 340, 512 F.2d 1390 (1975); Menominee Tribe v. United States, 101 Ct. Cl. 10, 18-19 (1944); Navajo Tribe v. United States, 364 F.2d 320, 322-24 (Ct. Cl. 1966). Thus, EPA must strictly adhere to its duties as a fiduciary to ensure proper protection of FCPC's and other impacted tribes' rights and resources from mercury contamination.

(c) EPA's specific obligations to protect tribes' rights and resources, including their way of life and cultural resources. Applying this standard, the courts have restricted federal agencies' ability to permit actions which would interfere with Indian tribes' treaty rights. See, e.g., Northwest Sea Farms, Inc. v. Army Corps of Engineers, 931 F. Supp. 1515, 1520-22 (W.D. Wash. 1996); Muckleshoot Indian Tribe v. Hall, 698 F. Supp. 1504, 1510-16 (W.D. Wash. 1988). As the Court held in Northwest Sea Farms, the trust responsibility is not limited to the protection of treaty rights, reservation lands, and other property held in trust for the tribes. Rather, the trust responsibility applies to all actions of the federal government that may affect Indian tribes, 931 F. Supp. at 1520, and extends to all rights, resources and interests of Indian tribes which are recognized by treaty, statute, executive order or the common law. Simply stated, as trustee for the tribes, the United States "has a responsibility to protect their rights and resources." Klamath Water Users Protective Association v. Patterson, 204 F.3d 1206, 1213 (9th Cir. 2000).

These rights include tribal rights to the lands, waters and natural environment of the reservation. Winters v. United States, 207 U.S. 564 (1908); Arizona v. California, 373 U.S. 546 (1963) (water rights are reserved despite silence in treaties, statutes and executive orders creating reservations); United States v Shoshone Tribe, 304 U.S. 111 (1938) (same for minerals and timber). Tribes are entitled to sufficient water and other resources "to make the reservation livable," Arizona, 373 U.S. at 599, and "to maintain . . . their way of life." Indian tribes also hold rights to hunt, fish, and gather on Reservation lands and waters. Menominee Tribe v. United States, 391 U.S. 404, 406 (1968) (natural resource harvesting rights held on reservation whether mentioned in the enactment creating the reservation or not); see also Arizona, 373 U.S. at 598-99, concluding Indians are entitled to sufficient "water necessary to sustain life" on their reservations and observing that "water from the [Colorado River] would be essential to the life of the Indian people and to the animals they hunted and the crops they raised."

The trust responsibility also applies to tribal cultural resources. Indeed, Congress has specifically recognized the applicability of the trust responsibility in this area: numerous federal laws protect tribal historic and cultural resources. See National Historic Preservation Act, 16 U.S.C. §§ 470-470x-6; Archeological Resources Protection Act, 16 U.S.C. §§ 470aa-470mm; Antiquities Act of 1906, 16 U.S.C. §§ 431-433; Exec. Order No. 13,007, 61 Fed. Reg. 26,771 (May 24, 1996); Exec. Order No. 11,593, reprinted in 16 U.S.C. § 470 note. In addition, the American Indian Religious Freedom Act, 42 U.S.C. §§ 1996, 1996a, recognizes and protects the tribes' right to practice traditional religions pursuant to the First Amendment to the United States Constitution. See also Religious Freedom Restoration Act, 42 U.S.C. § 2000bb; Religious Land Use and Institutionalized Persons Act, 42 U.S.C. § 2000cc. Thus, it is critical that EPA act to ensure that the water resources and especially the cultural resources (e.g., Devils Lake) of FCPC and other impacted tribes are fully protected in accordance with EPA's fiduciary obligations from mercury-related impacts.

2. EPA's responsibility under the Environmental Justice Doctrine.

(a) General obligation under Environmental Justice Doctrine to identify and address disproportionately high human health and environmental effects. Executive Order 12,898 established the Environmental Justice Doctrine, amid growing concern that minority populations, low-income populations, and Indian tribes bear a disproportionate amount of adverse health and environmental effects. Executive Order 12,898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, 59 Fed. Reg. 7629 (1994), (E.O. 12898), mandates that:

> [E]ach federal agency shall make achieving environmental justice part of its mission by *identifying* and *addressing*, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

E.O. 12,898 (Section 1-101) (emphasis added). E.O. 12,898 expressly confirms that its provisions apply to federal programs, policies and activities involving Native Americans. 59 Fed. Reg. at 7632. Similarly, guidance released by the Council on Environmental Quality expressly incorporates Indian tribes into the definition of low-income populations and minority populations. See *Environmental Justice: Guidance Under the National Environmental Policy Act*, December 10, 1997. Accordingly, EPA must ensure that it identifies and addresses the disproportionately high and adverse impacts of mercury deposition to FCPC and other affected tribes.

(b) The Administration's endorsement of the Environmental Justice Doctrine and its commitment to ensure all people the same degree of protection from environmental and health hazards. On August 9, 2001 the current administration confirmed its commitment to environmental justice and endorsed E.O. 12,898. In a memorandum (2001 Memo)[6] sent to the leadership of the agency, the EPA Administrator stated:

> The Environmental Protection Agency has a firm commitment to the issue of environmental justice and its integration into all programs, policies, and activities, consistent with existing environmental laws and their implementing regulations.
>
> The Agency defines environmental justice to mean the *fair treatment* of people of all races, cultures, and incomes with respect to the development, implementation, and enforcement of environmental laws and policies, and their *meaningful involvement* in the decision making processes of the government.

2001 Memo at 1 (emphasis in original).

The memorandum specifies that this commitment to environmental justice includes, "[c]onducting our programs, policies, and activities that substantially affect human health and the

[6] This document can be found at: http://www.epa.gov/compliance/resources/policies/ej/admin_ej_commit_letter_081401.pdf.

environment in a manner that ensures the fair treatment of all people, including minority populations and/or low-income populations; . . . [e]nsuring greater public participation in the Agency's *development* and implementation *of environmental regulations* and policies; and [i]mproving research and data collection for Agency programs relating to the health of, and the environment of all people, including minority populations and/or low-income populations." Id. (emphasis added).

The memorandum concludes:

> In sum, environmental justice is the goal to be achieved for all communities and persons across this Nation. Environmental justice is achieved when everyone, regardless of race, culture, or income, enjoys the *same degree of protection from environmental and health hazards* and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

2001 Memo at 2. To ensure that everyone, regardless of race or culture, enjoys the same degree of protection from environmental and health hazards associated with mercury deposition, it is critical that EPA develop appropriately stringent mercury standards that are implemented in the near future, so that citizens, such as FCPC's members that rely heavily on fish consumption for cultural and other reasons, do not face disproportionately high environmental and health hazards from mercury contamination.

(c) Need for EPA to understand tribal culture and natural resource use to properly assess and address disproportionately high and adverse impacts of mercury deposition on tribes and to ensure tribes same degree of protection from environmental and health hazards. E.O. 12,898 and the Environmental Justice Doctrine have direct relevance to the promulgation of environmental regulations that could affect Indian tribes -- as the 2001 Memo explicitly recognizes. What may be less apparent is how disproportionately high and adverse human health or environmental effects on tribal individuals and/or communities can be properly assessed. In fact, such individuals and communities often experience environmental and other impacts differently from both the general population and from other minority populations. As Professor Dean Suagee explains:

> [I]f you look closely you are bound to find impacts that affect tribal people differently from the way they affect other groups. Any activity that affects the environment has the potential to cause impacts on a tribal community that are different from the impacts suffered by other communities because of the ways in which the natural world is important to tribes for cultural and religious reasons. [This] kind of disproportionate impact reflects a basic difference between tribes and other minority groups in this country. This distinction applies both within and beyond reservation boundaries. . . . Some tribes, and some people within any given tribe, are more dependent than others on traditional cultural practices for their basic survival needs. Traditional religions have more practitioners in some tribes than in others. But for all American Indian and Alaska Native people, traditional cultural and religious practices are an important aspect of tribal

identity. Impacts on culturally important biological communities or sacred places are bound to affect tribal communities differently.

Suagee, Dean B. *Dimensions of Environmental Justice in Indian Country and Native Alaska*, 7 (2002) (Second National People of Color Environmental Leadership Summit Resource Paper Series).

Thus, in order to assure that – in the words of the 2001 Memo – "everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards," the EPA must undertake the study necessary to properly understand tribal culture and use of resources of FCPC and other impacted tribes and then carefully assess how this rulemaking (including its failure to adequately limit mercury emissions) will affect those uses and resources.

3. Duty of EPA to consult with tribe, and tribe's request for consultation meeting to discuss mercury impacts and tribe's comments. EPA has a duty to consult with the potentially affected tribes in considering the impact of the proposed rule on their rights, resources and interests. This is an important part of the trust responsibility. Because of this duty, FCPC asks that EPA carefully consider these comments and meet with us to consult regarding our concerns.

Such consultation is specifically required by Executive Order 13,175, entitled *Consultation and Coordination with Indian Tribal Governments*. 65 Fed. Reg. 67249 (2000). Executive Order 13,175 was recently reaffirmed by the Bush Administration. See letter to the Honorable Frank Pallone, Jr. from Alberto R. Gonzales, Counsel to the President, dated June 19, 2002. Executive Order 13,175 also requires that "[e]ach agency shall have an effective process to permit . . . Indian tribal governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." 65 Fed. Reg. at 27655 (Section 3). Indeed, as outlined above, EPA has an Indian Policy that requires the Agency to "encourage [tribes] to participate in policy-making" and other appropriate roles in the management of reservation programs.[7]

Executive Order 13,175 and EPA's Indian Policy recognize that the trust responsibility includes the duty to consult with tribes and Indians to ensure their understanding of federal actions that may affect their rights and to ensure federal consideration of their concerns and objections with regard to such actions.

Accordingly, in fulfillment of its trust duties, the EPA is required to engage in meaningful consultation with the potentially affected tribes concerning the impacts of the proposed rule. Such consultation is also essential as a practical matter. The tribes are a primary source of knowledge and information regarding the lands, waters, natural resources, and historic

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[7] Note also, as outlined in Section IV.A.2.b above, that EPA recently reaffirmed that the environmental justice doctrine requires that the Agency ensure the "meaningful involvement in the decision making processes of the government" for environmental justice communities – which includes Indian tribes.

and cultural resources in the area that may be impacted by the proposed rule. Indeed, because the protection of historic and cultural resources often depends on maintaining the confidentiality of information about such resources, the tribes and their members are likely to be the only source of certain information. Consultation with the tribes is essential if the EPA is to consider and evaluate potential impacts to tribal rights, resources and interests from the proposed rule and fulfill its trust obligations.

In these comments, FCPC is presenting the substantial concerns of its members regarding the proposed rule. To date, except for holding a regional hearing open to any participant, EPA has taken no steps to specifically consult with FCPC or any other tribes (to our knowledge). Under Executive Order 13,175 and EPA's Indian Policy, the FCPC asks that EPA meet with it to discuss these comments.

B. FCPC's special expertise regarding mercury and mercury-related impacts to the tribe and its members. Over the past decade, with its study of the effects of mercury deposition and cycling in Devils Lake, FCPC has developed significant expertise regarding mercury-related issues. As discussed above, FCPC Tribal EPA, in conjunction with Dr. Carl Watras, has developed significant information regarding the mercury and methylmercury levels in Devils Lake and its surrounding waters, as well as data regarding the mercury content in fish found in the lake. As indicated above, Dr. Watras has executed a certification that he participated in the drafting of the sections of these comments that relate to his work regarding Devils Lake and Little Rock Lake and that those sections are a true and accurate representation of his work and findings.

In addition, the Tribe has substantial expertise regarding available mercury control technology for coal-fired power plants. In particular, FCPC has retained the services of Dr. Phyllis Fox, an expert in pollution control technology for power plants, and in particular, mercury control technology. A copy of Dr. Fox's curriculum vitae is attached as Exhibit H. A copy of Dr. Fox's expert comments on available mercury pollution control technology is attached as Exhibit I. Because this report contains detailed information regarding available mercury control technology, as well as numerous attachments that discuss the technology, FCPC requests that EPA carefully review Dr. Fox's report and its attachments.

Moreover, the Tribe has retained Mr. Ted Johnson, an expert in health risk assessment and statistical analysis to evaluate both the increased exposure of FCPC tribal members to mercury contamination and EPA's proposed methodology for developing its MACT floor. A copy of Mr. Johnson's curriculum vitae is attached as Exhibit J. A copy of Mr. Johnson's analysis of EPA's proposed MACT floor is attached as Exhibit K. Because of the importance of this analysis in developing appropriate and legally defensible mercury emission limits, FCPC requests that EPA carefully review Mr. Johnson's analysis.

Finally, the Tribe has clear expertise regarding its culture and way of life, as well as the impacts that mercury contamination has on its traditional activities. In addition to the vast knowledge of the Tribe's members and leadership with respect to its cultural activities and potential impacts to those activities, these comments reflect the input of Dr. Charles Cleland, an expert in tribal culture. A copy of Dr. Cleland's curriculum vitae is attached as Exhibit L.

Dr. Cleland has executed a certification that he participated in the drafting of the sections of these comments that relate to his area of expertise and the impact of mercury deposition on cultural resources and that those sections are a true and accurate representation of his work and findings. A copy of his Dr. Cleland's certification is attached as Exhibit M.

Accordingly, in order to meet its obligations under the trust responsibility as well as the Environmental Justice Doctrine, it is critical that EPA work closely and consult with the tribe to make sure that EPA's rule-making adequately and fully addresses mercury-related health, environmental, and cultural impacts to the Tribe.

V Utility coal plants are the key cause of mercury impacts in U.S. waters.

Utility units make up the largest domestic anthropogenic source of mercury emissions. In addition, EPA has found a plausible link between methylmercury concentrations in fish and mercury emissions from coal-fired power plants. Finally, studies have shown that reduction in mercury deposition results in substantial reductions in methylmercury in surface waters and fish. Accordingly, FCPC believes that it is critical that EPA take appropriate and significant action to fully and properly regulate emission of mercury from power plants.

A. Utility Units make up largest domestic anthropogenic source of mercury emissions. EPA estimates that approximately 60 percent of the total mercury deposited in the United States comes from U.S. anthropogenic air emission sources, and that the percentage is estimated to be even higher in some regions. See Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units, Notice of Regulatory Finding, 65 Fed. Reg. 79825, 79827 (Dec. 20, 2000) ("2000 Regulatory Finding"). As recognized by EPA, utility units are the largest domestic source of such mercury emissions. 69 Fed. Reg. 4659. Accordingly, coal-fired utility units are the key source of mercury emissions that must be significantly reduced to address the serious health-related and other costs associated with mercury. See 65 Fed. Reg. 79827 ("the available information indicates that mercury emissions from electric utility steam generating units comprise a substantial portion of the environmental loadings and are a threat to public health and the environment.").

B. EPA's finding of "plausible link" between utilities and mercury in fish. EPA has not quantified how much of the methylmercury in fish is due to utility units relative to other sources, but concluded that it was not necessary to do so for the purpose of its finding that regulation of utility units is appropriate and necessary. See 65 Fed Reg. 79827. In fact, in its 2000 Regulatory Finding, EPA specifically concluded that "there is a plausible link between methylmercury concentrations in fish and mercury emissions from coal-fired electric utility steam generating units." Id. at 79830.

C. Florida DEP and other findings that removal of mercury emissions results in direct, substantial, and timely reductions of mercury in fish and wildlife. It is critical to note that studies have shown that reductions in mercury emissions from utility units and other industrial sources would have an immediate beneficial effect. For example, according to the Florida Department of Environmental Protection, "over a single generation, mercury concentrations found in fish and wading birds in America's Everglades have dropped by 60-70

percent. The drastic reductions are directly linked to the installation of technology that reduced mercury in emissions in industries in south Florida by 100 fold in the last two decades. . . . significant reductions in concentrations lead the Department of Health to downgrade fish consumption advisories in central and northern areas of the Everglades this year (2003)." http://www.dep.state.fl.us/evergladesforever/news/2003/110603.htm (February 23, 2004).

Likewise, Dr. Watras' studies have found that when the mercury content in rain declines, so does the mercury and methylmercury content in the water and fish of impacted lakes. In particular, his five-year study of Little Rock Lake indicates that reductions in atmospheric mercury deposition of 10 percent per year resulted in reductions of roughly 5 percent per year for mercury in lake water and fish. Unfortunately, more recent information regarding the Little Rock Lake area indicates that mercury deposition may be rising again. Thus, not only is there a real need to address mercury deposition in the United States, but extant data indicate that substantial benefits may occur relatively quickly when mercury deposition is significantly reduced.

VI MACT regulation under Section 112 of CAA is legally required.

A. EPA's regulatory finding that regulation of utility units under Section 112 is appropriate and necessary cannot be reversed. In its 2000 Regulatory Finding, EPA determined that regulation of Utility Units under Section 112 is "appropriate and necessary." See 65 Fed. Reg. 79826. Although the Clean Air Act ("CAA") provides a procedure whereby regulation under Section 112 may be avoided if EPA demonstrates that emissions do not represent a threat to public health or the environment, EPA clearly cannot make such a showing for mercury emissions from Utility Units. Accordingly, EPA's 2000 Regulatory Finding cannot be reversed, and it must regulate mercury emissions from Utility Units under Section 112 of the Clean Air Act.

1. EPA's 2000 Regulatory Finding that regulation of coal and oil-fired utility units is appropriate and necessary. The Clean Air Act required EPA to "perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of [hazardous air] pollutants. . . ." 42 U.S.C. §112(n)(1)(A). After conducting the study required by section 112(n)(1)(A), EPA determined that "regulation of HAP emissions from coal- and oil-fired electric utility steam generating units under section 112 of the CAA is appropriate and necessary." 65 Fed. Reg. 79826. Accordingly, EPA added "coal- and oil-fired electric utility steam generating units to the list of source categories under section 112(c) of the CAA." Id. Since EPA has found regulation of coal- and oil-fired electric utility steam generating units under Section 112 to be appropriate and necessary, it must regulate HAP emissions from these sources under Section 112. 42 U.S.C. §112(n)(1)(A) ("The Administrator *shall* regulate electric utility steam generating units under this section [112], if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph" (emphasis added)).

2. Section 112(c) sets forth the standards for deleting a MACT source category. EPA now proposes to reverse its 2000 Regulatory Finding and proposes to "find that regulation of coal- and oil-fired Utility Units under section 112 is not 'appropriate and necessary' within the

meaning of section 112(n)(1)(A). As a consequence, EPA also proposes to delete such units from the CAA section 112(c) list." 69 Fed. Reg. 4683.

The Clean Air Act sets forth clear standards for any deletion of a source category from the list under section 112(c). In particular, the Clean Air Act states:

> The Administrator may delete any source category from the list under this subsection, on petition of any person or on the Administrator's own motion, whenever the Administrator makes the following determination or determinations, as applicable. . . In the case of hazardous air pollutants that may result in adverse health effects in humans other than cancer or adverse environmental effects, *a determination that emissions from no source in the category or subcategory concerned. . . exceed a level which is adequate to protect public health with an ample margin of safety and no adverse environmental effect will result from emissions from any source. . . .*

42 U.S.C. §112(c)(9)(B) (emphasis added).

Nowhere in EPA's proposed rule has the Agency determined that mercury emissions from Utility Units will not "exceed a level which is adequate to protect public health with an ample margin of safety" or that "no adverse environmental effect will result from emissions from" Utility Units. Indeed, the Agency has failed to provide any facts in the record that would support such a determination. Accordingly, EPA has failed to meet the statutory requirement to delete Utility Units from the list of categories under Section 112(c). As a result, because Utility Units are a listed source category under Section 112, the Clean Air Act specifically requires the EPA to "establish emission standards under subsection (d)" of Section 112 for such listed Utility Units. See 42 U.S.C. §7412(c)(2) ("For the categories and subcategories the Administrator lists, the Administrator shall establish emission standards under subsection (d) of this section, according to the schedule in this subsection and subsection (e) of this section").

3. Because coal-fired utility units emit mercury at levels that do not adequately protect public health, EPA cannot delete these facilities as a MACT source category. As explained above, EPA has not made the statutorily mandated finding required to delete Utility Units from the list of sources subject to regulation under Section 112. See 42 U.S.C. § 112(c)(9)(B). In fact, the Agency cannot make such a showing given its finding that "mercury emissions from electric utility steam generating units comprise a substantial portion of the environmental loadings and are *a threat to public health and the environment.*" 65 Fed. Reg. 79827 (emphasis added). Indeed, even in its current proposed rule, EPA states that it "continues to believe that emissions of Hg from coal-fired Utility Units. . . *pose hazards to public health. . .*" 69 Fed. Reg. 4683 (emphasis added). Accordingly, EPA is statutorily obligated to regulate mercury emissions from Utility Units under Section 112.

B. EPA's arguments in the pre-amble to the proposed rule to avoid MACT regulation lack merit. EPA attempts to sidestep the clear statutory procedure for delisting a source category set out in section 112(c)(9)(B) by claiming that "its initial decision to list coal- and oil-fired Utility Units under section 112(c) in December 2000 was without proper foundation." 69 Fed.

Reg. 4689. EPA apparently bases this claim on its belief that section 111 provides authority to regulate mercury emissions from Utility Units and that such authority will adequately address the public health hazards associated with mercury emissions. In particular, EPA makes the unsubstantiated claim "that the premise underlying its December 2000 'necessary' finding, that no other authority exists under the CAA to adequately address the public health hazards associated with Hg and Ni emissions, lacks foundation." Id.

As explained in greater detail below, EPA's claim that its original decision to list utility units was improper because of its asserted authority to regulate them under section 111 fails for at least three reasons: (1) EPA misreads section 112(n)(1)(A)'s requirement to consider other *requirements* under the Clean Air Act as allowing a consideration of EPA's overall *authority* to regulate even when no regulatory requirements exist; (2) EPA has not and cannot demonstrate that its proposed section 111 regulations will adequately address mercury health hazards; and (3) once a pollutant such as mercury is listed under section 112(b), section 111(d) prohibits EPA from establishing emission standards under Section 111 for any such source category.

1. EPA's assertion that MACT regulation is not required if there is other authority under the Clean Air Act to regulate mercury emissions is based on a mis-reading and mis-application of Section 112(n)(1)(A). In its attempt to avoid regulating utility units under section 112, EPA argues that it based its 2000 Regulatory Finding that it is necessary to regulate mercury emissions "solely on its belief, at the time, that there were no *other authorities* under the CAA that would adequately address Hg and Ni emissions from coal- and oil-fired Utility Units." 69 Fed. Reg. 4684 (emphasis added). Among other things, EPA argues that Congress intended "that Utility Units be regulated under section 112 only if the *other authorities* of the CAA, *once implemented*, would not adequately address those HAP emissions from Utility Units that warrant regulation." Id. (emphasis added). As support, EPA cites "the first sentence of section 112(n)(1)(A), which requires EPA to conduct a study that focuses on the hazards to public health that would exist following implementation of the *other authorities* of the CAA." Id. (emphasis added). Citing section 111 as the *other authority* under the CAA, EPA now "propose[s] to find that regulation of coal- and oil-fired Utility Units under section 112 is not necessary because CAA section 111 once implemented would adequately address the public health hazards posed by Utility Unit emissions of Hg and Ni." Id. at 4684.

However, EPA mis-reads the clear language of section 112(n)(1)(A) by replacing the word "requirements" with "authorities." As EPA is aware, section 112(n)(1)(A) provides in part:

> The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) of this section after imposition of the *requirements* of this chapter.

(Emphasis added). Since at the time of the study, as well as now, there was a clear lack of any existing mercury-control requirement or in fact any requirement for EPA to develop future mercury-control regulations outside of section 112, the 1998 EPA study properly evaluated the hazards to public health reasonably anticipated to occur as a result of emissions from these units without assuming required control under the Act. Consistent with the plain language of

section 112(n)(1)(A), EPA's 2000 Regulatory Finding found that "[i]t is necessary to regulate HAP emissions. . . under section 112 of the CAA because the implementation of other *requirements* under the CAA will not adequately address the serious public health and environmental hazards arising from such emissions . . . and which section 112 is intended to address." 65 Fed. Reg. 79820 (emphasis added).

In its attempt to avoid the effects of its proper 2000 Regulatory Finding, EPA now strains to read section 112(n)(1)(A) to allow, and in fact require, consideration of EPA's other *potential regulatory "authorities"* under the Act, even if *no requirements* have or even in the future must be issued under those authorities. Thus, in order to shoehorn section 111's potential regulatory authority into section 112(n)(1)(A)'s clear statutory language, EPA is forced to interpret section 112(n)(1)(A) to require EPA's utility unit study to evaluate only those impacts that remain, "after imposition of *[potential future]* requirements *[that could be promulgated under any other authority]* of this chapter." EPA cites no basis for its expansion of section 112(n)(1)(A) to include not only existing requirements of the Act but also any future actions EPA may take under other authorities accorded to it under the Act.

It is also important to note the context in which the "requirements of this chapter" is referenced in section 112(n)(1)(A). It is referenced with respect to EPA's study of the public health hazards associated with electric utility steam generating units' emissions, not to a later decision regarding whether to regulate those emissions under section 112. It is highly unlikely that Congress could have intended EPA to conduct a study of health effects that would occur only after the assumed imposition of then-unknown future potential but not required regulation. Indeed, if that were true and EPA were correct in its assertion that regulation of mercury emissions from generating units is authorized under section 111, EPA's strained and expansive interpretation of "requirements" would require EPA's study to have assumed that regulation under section 111 could/would address any mercury emissions, making EPA's study meaningless. It is difficult to imagine that Congress would require EPA to conduct such a fruitless exercise.

Accordingly, because there were and are no other statutory requirements currently in place to address mercury emissions from Utility Units, EPA's 1998 study correctly considered the health hazards that would occur after imposition of other statutory requirements. Thus, EPA's subsequent finding, that it is appropriate and necessary to regulate mercury emissions from Utility Units under section 112, is valid and cannot be reversed based on the theoretical and contrived premise that EPA has the, as yet unexercised, authority to regulate under some other provision of the Act.

2. EPA has not and cannot demonstrate that section 111 will adequately address the public health hazards from mercury emissions. Even if EPA were correct that it could avoid MACT regulation by relying on its potential section 111 authority, rather than on section 112, EPA has not and cannot support its determination that its proposed section 111 regulation would adequately address the public health hazards posed by mercury emissions from Utility Units.

EPA's section 111 proposal will not be fully effective until at least 2018, leaving large segments of the American population subject to significant health risks for almost a generation.

Moreover, EPA specifically states that even after the proposed regulation is fully in place, its cap-and-trade program for mercury emissions under section 111 "may not eliminate the risk of unacceptable adverse health effects of Hg emissions." 69 Fed. Reg. 4686. Similarly, EPA has recognized that under a trading program some utilities may purchase allowances instead of reducing emissions and that these continued "emissions may have adverse health impacts within the local area." Id.; see also, Obey, Doug, *New Hampshire Data May Aid Opponents Of Emissions Trading In Mercury Rule*, Inside Washington Publishers,[8] (April 8, 2004) (citing a recent study by New Hampshire state officials suggesting that localized mercury deposition is a much greater concern than EPA has recognized). Because of these significant remaining health concerns, EPA is proposing to evaluate the health risks that remain after implementation of the cap-and-trade program.

3. EPA's attempts to harmonize the 1990 House and Senate amendments to the Clean Air Act to allow regulation of mercury emissions from Utility Units under section 111(d) lacks merit. As EPA admits, prior to the 1990 Clean Air Act amendments, section 111(d)(1)(A)(i) prevented the establishment of standards of performance for existing sources under section 111(d) for any pollutant, such as mercury, which is listed as a hazardous air pollutant under section 112(b)(1)(A). 69 Fed. Reg. 4685. As EPA also explains, it appears that the House and Senate passed two conflicting amendments to section 111(d)(1)(A)(i) as part of the 1990 amendments to the Clean Air Act. Id. As EPA states, the House amendment provides that "a standard of performance under CAA section 111(d) cannot be established for any air pollutant that is emitted *from a source category regulated under section 112*." Id. (emphasis added). The Senate amendment provides that "a standard of performance under section 111(d) cannot be established for any *HAP that is listed in section 112(b)(1), regardless of what categories of sources of that pollutant are regulated under section 112*." Id.

EPA attempts to "harmonize" the Senate and House amendments by concluding that they together mean that "[w]here a source category is being regulated under section 112, a section 111(d) standard of performance cannot be established to address any HAP listed under 112(b) that may be emitted from that particular source category." Id. EPA apparently chooses this very narrow interpretation of section 111(d)(1)(A)(i), since otherwise regulation of existing Utility Units under section 111 would be barred by law, creating another clear legal barrier to EPA's attempt to overturn its 2000 Regulatory Finding.

EPA's proposed "harmonization" is improper for at least three reasons: (1) EPA's reading completely disregards the intent of the Senate simply to pass a conforming amendment and keep in place the existing bar on section 111 regulation of listed HAPs, (2) EPA's attempted harmonization violates hornbook law regarding statutory interpretation, and (3) the Statutes at Large, which EPA notes constitute the legal evidence of the law, clearly bar section 111 regulation for listed HAPs, regardless of whether they are from a listed source category.

As EPA recognizes in its proposed rulemaking, the Senate's amendment to section 111(d)(1)(A)(i) was merely a "conforming amendment" and was intended to maintain the

[8] http://insideepa.com/secure/docnum.asp?f=epa_2001.ask&docnum=482004_data

bar on section 111 regulation of any listed HAPs regardless of what categories of sources of that pollutant are regulated under section 112. Id. Despite this recognition of the Senate's clear intent, EPA completely disregarded this intent when it "harmonized" the Senate and House amendments. Indeed, EPA reads section 111(d)(1)(A)(i) directly contrary to the Senate's clear intent by asserting that this subsection only prevents section 111(d) regulation when a source category (as opposed to a HAP) is regulated by section 112 and only then for listed HAPs that may be emitted from the source category.

Moreover, since the Senate and House amendments resulted in the enactment of two substantially different versions of section 111(d), EPA's attempted "harmonization" [violates hornbook law regarding statutory construction.] When the houses of the legislature ". . . pass what purports to be the same bill but the contents differ substantially, the enrollment of the bill as finally passed is not conclusive, and the *bill is not law*." Norman J. Singer, Sutherland Statutes and Statutory Construction ¶15.16 (2004) (emphasis added) (citing Volusia County v. State, 125 So. 375, State ex rel. Caillouet v. Laiche, 29 So. 700 (La 1901), Bull v. King, 286 N.W. 311 (MN 1929), Moore v. Neece, 114 N.W. 767 (Neb. 1908)). Thus, since as EPA admits, the House and Senate amendments differ substantially, neither amendment is the law. Rather, the law on this issue is as it was prior to the 1990 Clean Air Act amendments. Accordingly, section 111(d)(1)(A)(i) bars regulation of existing units under section 111 for mercury emissions, since mercury is a listed HAP.

Finally, even if the conflicting House and Senate amendments could be read together to create one statement of the law, they would not support EPA's reading. As EPA states, the Statutes at Large "constitute the legal evidence of the laws. . ." 69 Fed. Reg. 4685. The Statutes at Large for section 111(d) provide that a standard of performance may be established under section 111(d) "for any existing source for *any air pollutant* (i) . . *which is not included on a list published under section 7408(a)* (*or* emitted from a source category which is regulated under section 112) (*or 112(b)*). . ." Id. (parenthetical in original and emphasis added). Thus, the Statutes at Large provide that regulation under section 111(d) is prohibited in any one of at least three instances: (1) where a pollutant is listed under section 7408(a) or (2) where a pollutant is emitted from a regulated section 112 source category or (3) where a pollutant is *included on a list published under section 112(b).*

For all of the above reasons, it is clear that regulation of mercury emissions under section 111(d) is prohibited. Therefore, EPA cannot legally regulate mercury emissions from existing units under section 111(d), and therefore, its arguments to overturn its 2000 Regulatory Finding lack merit.

C. NRDC settlement requires EPA to regulate utility units under Section 112. On October 26, 1994 EPA and the Natural Resource Defense Council, Inc. ("NRDC") executed a Settlement Agreement which provided that, by November 15, 1995 EPA must complete a health effects study and determine whether regulation of electric utility steam generating units under section 112 is appropriate and necessary. The Settlement Agreement also provided that if EPA found that regulation of utility units under section 112 was appropriate and necessary, then EPA would propose regulations under section 112 by November 15, 1998 and take final action on that proposal by November 15, 2000. See NRDC v. EPA, D.C. Cir. No. 92-1415 (Oct. 26, 1994).

The dates in the original Settlement Agreement were subsequently modified in a November 17, 1998 Stipulation to provide that EPA must make the appropriate and necessary determination no later than December 15, 2000 and if EPA finds that regulation is appropriate and necessary, then it must propose section 112 regulations by December 15, 2003 and take final action on the proposed rule by December 15, 2004.

Pursuant to the 1994 Settlement Agreement and the dates set out in the 1998 Stipulation, in December 2000 EPA determined that regulation of electric utility units under section 112 of the Clean Air Act is appropriate and necessary. See 65 Fed. Reg. 79825 (Dec. 20, 2000). EPA is therefore required by its agreement with NRDC to propose regulations under section 112 for electric utility units by December 15, 2003 and to take final action on those proposed rules by December 15, 2004.

EPA's January 30, 2004 proposed rule states that the EPA likely may not regulate utility units under section 112 of the Clean Air Act. Instead, EPA proposes to regulate such units under section 111. This attempt to avoid section 112 regulation conflicts with EPA's previous Settlement Agreement with NRDC. Any attempt to regulate utility units under section 111, instead of section 112, constitutes a breach of its 1994 Settlement Agreement and 1998 Stipulation Agreement with NRDC.

D. The trust responsibility requires EPA to regulate under MACT. The trust responsibility requires EPA to protect tribal resources, especially in circumstances when those resources are relied upon by Indian tribes and their right to harvest such resources is protected by federal law. Such rights are held by Indian tribes on, and in many instances, off the Reservation lands. This responsibility is enhanced by the Environmental Justice Doctrine and by Executive Order 12,898 regarding environmental justice, since as discussed in detail above, FCPC and other impacted tribes clearly face disproportionate and adverse impacts from mercury deposition. See Sections III and IV supra. Here the EPA has the ability to require substantial reductions in mercury emissions that harm FCPC resources and is under a legal mandate to do so. The trust responsibility is one additional reason why EPA must comply with the law and require coal-fired power plants to meet a protective MACT standard under CAA Section 112.

As discussed in Section IV.A.1 of these comments, under EPA's Indian Policy and under the federal trust responsibility (which the Indian Policy embodies), EPA has an obligation to protect tribal rights and resources -- including the lands, waters and natural environment of Indian reservations. Under the Policy and the case law cited above, the relationship between the EPA and FCPC is the same as that of a private fiduciary to a beneficiary.

This obligation is strengthened by EPA's commitment to the principle of fair treatment of people of all races, cultures, and incomes – including Indian tribes – under the environmental justice doctrine and Executive Order 12,898 regarding environmental justice. See Section IV.A.2. supra. In 2001 EPA specifically reaffirmed its obligations under the environmental justice doctrine and Executive Order 12,898. In so doing, EPA made clear that its commitment to environmental justice extends to the development and implementation of environmental regulations and policies.

In this rulemaking, EPA must consider the severe impact mercury pollution has on the FCPC reservation and on other lands owned and/or used by FCPC and its members for cultural purposes. As described above in Section III, mercury pollution of water and water-dependant resources has a severe impact on FCPC's ability to continue its cultural practices. It is clear, however, that the regulatory options EPA is considering in this rulemaking would not adequately address the mercury contamination of FCPC water, lands and cultural resources. The trust responsibility requires more than this.

Under the trust responsibility, federal agencies must administer their own programs and activities in a manner that avoids adverse impacts on Indian rights. This is shown, for example, by the decisions in Pyramid Lake Paiute Tribe v. Morton, 354 F. Supp. 252 (D.D.C. 1972), and Muckleshoot Indian Tribe v. Hall, 698 F. Supp. 1504 (W.D. Wash. 1988), cited above. The holdings of these cases reflect prior decisions of the Supreme Court which establish that the trust responsibility imposes legal duties on federal agencies separate and apart from the express provisions of a treaty, statute, regulation or executive order.

In Pyramid Lake Paiute Tribe v. Morton, the court enjoined diversions of water for a federal reclamation project which adversely affected a lake located downstream of the project on the Pyramid Lake Paiute Tribe's Reservation. In that case the Tribe's members lived on the shores of the lake and fished its waters for food. 354 F. Supp. at 254. Although the diversions violated no specific statute or treaty, the court held that the Agency's decision to divert water constituted a violation of the trust responsibility. Id. at 256. The court ruled that in order to fulfill his duties as trustee, the Secretary of the Interior was obliged to insure that the tribe received all water not otherwise obligated by court decree or contract. Id. Under the trust analysis of this case, EPA has a duty to prevent degradation due to mercury deposition of resources relied on by tribes, and to prevent impacts to tribal rights to such resources.

Making decisions under the Clean Air Act that affect tribal lands similarly implicates EPA's duty as a trustee to FCPC and to other tribes. This fiduciary responsibility requires a high standard of conduct by EPA. In Navajo Tribe v. United States, 364 F.2d 320, 322-24 (Ct. Cl. 1966), for example, an oil company had leased tribal land for oil and gas purposes. Upon discovering helium-bearing non-combustible gas which it had no desire to produce, the company assigned the lease to the Federal Bureau of Mines. The Bureau then developed and produced the helium under the terms of the assigned federal lease instead of negotiating a new, more remunerative lease for the tribe. The Court of Claims held this to violate the trust responsibility, and analogized these facts to the case of a "fiduciary who learns of an opportunity, prevents the beneficiary from getting it, and seizes it for himself." Id. at 324.

As Navajo Tribe exemplifies, the "most fundamental duty owed by the trustee to the beneficiaries of the trust is the duty of loyalty . . . to administer the trust solely in the interest of the beneficiaries." Pegram v. Herdrich, 530 U.S. 211, 224 (2000) (quoting 2A Austin W. Scott & William F. Fratcher on Trusts § 170 at 311 (4th ed. 1987)); accord NLRB v. Amax Coal Co., 453 U.S. 322, 327 (1981); Restatement (Second) of Trusts § 170 (1959); George G. Bogert and George T. Bogert, Law of Trusts and Trustees § 543, at 217-19 (2d rev. ed. 1993).

From the proposed rule it appears that EPA desires to abandon the requirements of CAA Section 112 and the development of a proper MACT standard that goes along with it. As these comments demonstrate, EPA can effectively limit mercury emissions, doing so has very positive benefits for those who live downwind of mercury-emitting power plants, and EPA has a legal mandate to properly restrict mercury emissions under CAA Section 112. That is exactly what EPA should be doing. Any other path is inconsistent with EPA's trust responsibility to FCPC and to other tribes. Failing to properly regulate mercury emissions would also be contrary to EPA's commitment to fair treatment of Indian tribes under the Environmental Justice Doctrine.

VII EPA's MACT floor analysis is improper and sets emission limits that are several times higher than appropriate.

A. EPA's methodology for developing MACT floor must be reasonably based (i.e., it must reasonably estimate the performance of the relevant best-performing plants) and must be demonstrated with substantial evidence. While EPA likely has the authority to devise the methodology of deriving the MACT floor, such methodology must reasonably estimate the performance of the best performing units, and the Agency must demonstrate with substantial evidence why its methodology provides a reasonable estimate. See Northeast Maryland Waste Disposal Authority v. EPA, 358 F.3d 936, (D.C. Cir. 2004) ("To satisfy [Clean Air Act] requirement, EPA must demonstrate with substantial evidence -- not mere assertions -- that the chosen floors represent 'a reasonable estimate of the performance of the [best-performing] units.") (internal quotations omitted; citation omitted); Cement Kiln Recycling Coalition v. EPA, 255 F.3d, 855, 862 (D.C. Cir. 2001) ("While acknowledging that EPA has authority to devise the means of deriving [the MACT floor]. . . the method the Agency selects must 'allow[ ] a reasonable inference as to the performance of the top 12 percent of units. . .'[and] EPA must show not only that it believes its methodology provides an accurate picture of the relevant sources' actual performance, but also *why* its methodology yields the required estimate.") (emphasis in original) (citing Sierra Club v. EPA, 167 F.3d 658, 663); National Lime Association v. EPA, 233 F.3d 625, 632 (D.C. Cir. 2000) (". . .to comply with the statute, EPA's method of setting emission floors must reasonably estimate the performance of the relevant best performing plants.").

B. EPA's proposed methodology fails to reasonably estimate the performance of the relevant best-performing plants and EPA cannot demonstrate that its methodology is reasonably based because it improperly uses a short-term worst-case analysis to develop a long-term average standard. To establish the MACT floor, EPA essentially adopted a utility industry-friendly methodology prepared by ENSR Corporation for WEST Associates. See Memorandum from William H. Maxwell to the Utility MACT Project Files, *Analysis of variability in determining MACT floor for coal-fired electric utility steam generating units*, Nov. 26, 2003 (EPA's "MACT Variability Analysis") ("A multi-variable analysis provided by WEST Associates... appeared to provide the most comprehensive approach and *has been adopted*, with modifications... by the EPA in determining the MACT floor.") (emphasis added). See also, *Multivariate Method to Estimate the Mercury Emissions of the Best-Performing Coal-Fired Utility Units Under the Most Adverse Circumstances Which Can Reasonably be Expected to Recur*, March 4, 2003. In fact, EPA took additional steps, discussed below, to make the methodology even more friendly to the utilities.

As indicated above, FCPC has retained the services of Mr. Ted Johnson, an expert in exposure assessment and air quality analysis to review the methodology used by EPA to establish the MACT floor. Based on Mr. Johnson's analysis, it is clear that EPA's adopted methodology fails to reasonably estimate the performance of the best-performing units, and cannot be supported by substantial evidence for the following reasons.

1. EPA fails to reasonably estimate the performance of the relevant best performing plants since it uses a *short-term worst-case* emission rate to calculate a *long-term average* standard. EPA is proposing that "[c]ompliance with the Hg emission limit would be determined based on a rolling 12-month average calculation." 69 Fed. Reg. 4663. EPA has also determined that mercury is highly toxic, persistent, and bioaccumulates in the food chain, and that "[f]ish consumption dominates the pathway for human and wildlife exposure to mercury." 65 Fed. Reg. 79827. Since it appears that the primary health hazard associated with mercury emissions is due to long-term or chronic exposure. EPA's development of a *long-term average compliance standard* appears to be reasonably based.

However, EPA then adopted the utility industry's variability analysis that calculated the long-term coverage emissions standard using a *short-term worst-case emission rate.* This calculation method is wholly inappropriate and prevents EPA's MACT floor methodology from reasonably estimating the performance of the relevant best performing sources. As Mr. Johnson notes in the attached memorandum, it is clear that the averaging time for compliance demonstrations should be consistent with the averaging time of the data used to establish the emission limit. See Memorandum from Mr. Ted Johnson, TRJ Environmental, Inc., *Comments on the Proposed MACT Floors for Mercury Emissions from Coal-Fired Utility Units*, April 27, 2004 ("Johnson Comments") (attached as Exhibit K). For example, if the compliance demonstration was to be based on an hourly emission rate, then it would be appropriate to establish an emission limit based on the potential emissions that could occur in any 1-hour period over the full range of possible operational scenarios. Similarly, if the compliance demonstration is to be based on based on a *12-month rolling average*, the emission limit should likewise be based on the *average* emissions over the range of possible operational scenarios that that could occur over the course of *a year.* As indicated earlier in these comments, because of the importance of developing appropriate and legally defensible mercury emission limits, FCPC requests that EPA carefully review Mr. Johnson's analysis contained in the Johnson Comments.

EPA apparently adopted the utility industry's variability analysis because it believes that mercury emission rates would be greatly influenced by coal composition. See 60 Fed. Reg. 4672 ("The variability of Hg emissions from coal-fired units is significantly influenced by the variability over time in the composition of the coal burned as fuel"). Moreover, because the available stack test data was representative of the coal being burned at the time of the test, EPA apparently believed it was necessary to estimate the mercury emissions that may be expected to occur over the full range of coal compositions. To account for variability in coal composition (e.g., heat content, mercury content, chlorine content) the utility industry developed and EPA adopted a correlation equation and estimated the mercury removal fraction based on coal composition data from the ICR (Information Collection Request) data base. Id. ("The purpose of deriving a correlation equation. . . was to provide a numerical means of predicting the fraction of Hg removed for the best-performing sources over the entire range of fuel variability experienced

by each of those sources over the course of a year."). However, where the correlation equation was deemed to be a "poor fit," the utility industry and EPA based the mercury removal fraction on the average mercury removal fraction observed in the actual stack tests. Id. at 4673.

For each of the best performing units, the utility industry and EPA then calculated the mercury emission rates over the full range of coal compositions presumed to be used by that unit and sorted those emissions from smallest to largest to obtain a cumulative frequency distribution. Id. EPA then decided, without any rational basis, to discard 97.5 percent of the best emission results of the relevant facilities and to propose a standard based solely on the worst 2.5 percent of emissions from the relevant sources. As EPA notes, it determined that "[t]he 97.5 percentile value of this distribution (i.e., an emission rate that is expected to be *exceeded only 2.5 percent of this time*) would represent the operation of the unit under conditions reasonably expected to occur at the unit." Id. (emphasis added); see also, MACT Variability Analysis, at 7 ("The EPA chose to use the 97.5th percentile (as opposed to the 95th percentile used in the WEST analysis) value of this distribution (i.e., an emission rate that is expected to be exceeded only 2.5 percent of the time) to represent the operation of the unit under '*worst conditions*.'") (emphasis added).

EPA has not and *cannot* demonstrate why its proposed use of a short-term worst condition approach reasonably estimates the performance of the best performing units given its long-term average standard. This is because the use of short-term worst case data clearly and substantially overstates the long-term (e.g., 12-month) emissions from the best performing units. EPA's own documents show this fact. EPA's MACT variability analysis shows that the 97.5th percentile emissions are substantially greater than the average or median emissions from these plants. For example, for the Mecklenburg 1 bituminous-fired unit, the 97.5th percent emission level is approximately 1.8051 lbs/TBtu, the average emissions level is 0.5700 lbs/TBtu (less than *one-third* of the 97.5th percent emission level), and the median is 0.1385 lbs/TBtu (less than *one-twelfth* of the 97.5th percent emissions level). MACT Variability Analysis, Mecklenburg 1: 97th percentile = 1.8051 lb Hg/TBtu Graph.

This type of unsupported and inappropriate methodology clearly does not satisfy the requirement for the EPA to adequately explain why its methodology is reasonable and for EPA's methodology to reasonably estimate the performance of the best-performing units. For example, in Cement Kiln, the D.C. Circuit vacated EPA's MACT standards for hazardous waste combustors in part because EPA had not adequately explained why its MACT setting approach was reasonable. 255 F.3d at 865 ("Some of the agency's citations to the record merely contain assertions that '[the] approach... fully accounts for normal process variability.'") (citing EPA's *Final Response to Comments: MACT Floor Approaches* at 59) (quotations and omissions in original). Likewise, in Northeast Maryland Waste Disposal Authority, the D.C. Circuit made clear that "to satisfy [Clean Air Act] requirements, EPA must demonstrate with substantial evidence – not mere assertions – that the chosen floors represent 'a reasonable estimate of the performance of the [best-performing] units." 358 F.3d at 936 (internal quotations omitted; citing Cement Kiln at 866).

Accordingly, EPA's use of a 97.5 percentile (i.e., short-term worst-case) factor to calculate a long-term average MACT floor standard is inappropriate, lacks merit and cannot be

demonstrated to reasonably estimate the long-term average performance of the relevant best performing sources.

2. EPA's own documents recognize that its variability analysis is inconsistent with setting a standard that is enforced on a long-term average basis. In setting the MACT floor, EPA states that although it believes the available emission data is representative of the industry, the data exhibited a significant degree of variability. See MACT Variability Analysis, at 1 ("Although EPA is confident that the data available are representative of the industry, it is evident that the test report data exhibit a significant degree of variability, even within a given subcategory."). EPA thus concluded that "it was necessary to develop a methodology to address the multiple sources of the observed variability in order to assure that an emission limitation value could be derived that would be achievable." Id. As a result, it appears that EPA attempted to account for the variability in emissions that could occur on a short-term worst-case basis. In other words, EPA attempted to establish a long-term emission limit that would normally not be exceeded at any time during any operational scenario by basing the limitation on a short-term, worst-case variability analysis.

However, EPA's own documents acknowledge that its variability analysis is inappropriate where a long-term compliance average period is allowed. EPA's MACT Variability Analysis "found that there are *two fundamentally different approaches* to incorporating variability into the proposed rule: (1) including variability in the MACT floor calculation, or (2) including variability in the compliance method." Id. at 2 (emphasis added). Regarding the second method, EPA stated that "[a]ddressing variability in the compliance method would involve allowing an averaging time for compliance that would accommodate variations in pollutant emissions over time." Id.

Thus, according to the MACT Variability Analysis, it is appropriate to choose *one* of two *fundamentally different* methods to account for variability in the data. Unfortunately, EPA chose to use *both* methods in the proposed rule. That is, not only did EPA allow compliance determinations "based on a rolling 12-month average calculation" but it also went to great lengths to "adjust" the available emission data to account for variability. 69 Fed. Reg. 4663.

As Mr. Johnson notes, allowing compliance to be determined based on a 12-month rolling average is more than adequate to account for any short-term variations in emissions that a particular source may experience. See Johnson's comments at 6. But it is not just Mr. Johnson that says this, EPA's own documents plainly state "averaging over a month or year of data will provide opportunity for variations in the amount of a constituent in the fuel to be accommodated without exceeding the emission limitation." MACT Variability Analysis, at 2. Accordingly, given EPA's long-term compliance demonstration period, there is no need for EPA's proposed short-term, worst-case variability analysis. Rather, the MACT floor should be set simply using the mathematical average of the emission data for each of the top 12 percent of existing sources (or the top performer in the case of new sources).

3. EPA also improperly inflates the average emissions of the relevant best performing plants in setting the MACT floor for existing sources by using a 97.5 percent upper confidence level. After applying the 97.5 percentile short-term worst case factor discussed

above, EPA takes the additional unusual step of applying yet another variability factor to "account for inter-unit variability among the top performers for existing sources." 69 Fed. Reg. 4673. Without any explanation, EPA states that "[a] focus on within-unit variability alone is not expected to capture the full range of emission variability among the best-performing sources. The EPA accounted for this variability by calculating a 97.5 percent upper confidence level for the mean by use of the student t-statistic." Id.

(a) Applying a 97.5 percent upper confidence level to estimate the emissions of top-performing units for which EPA does not have emission data violates the Clean Air Act. Although the preamble is unclear, it appears EPA is applying the 97.5 percent upper confidence level to the existing emission data for the top-performing units to estimate the emission rate that might be calculated if EPA had actual emission data from all top-performing units. For example, the MACT Variability Analysis states that "[t]his adjustment reflects the fact that the top performing sources in the data base do not represent the *full population* of the best performing 12 percent of coal-fired utility units." MACT Variability Analysis, at 7 (emphasis added). In other words, it appears that EPA believes that there are other units for which it doesn't have emission data that would nevertheless be in the top 12 percent of the subcategory.

Similarly, as Mr. Johnson explains in his comments a confidence interval, such as this used by EPA, "is typically used to indicate the degree to which a 'sample mean' – a mean determined from a relatively small sample of measurements – is likely to differ from the 'true (population) mean' – the mean that would be determined from a much larger (possible infinite) set of measurements." Johnson Comments at 7. Accordingly, the confidence interval should only be used if EPA were setting the MACT floor at the emission level achieved by the top 12 percent of units regardless of whether EPA had emission information from all such units.

However, whether the data base reflects the "full population of the best performing. . . units" is irrelevant to setting a proper MACT floor. The Clean Air Act clearly states that the MACT floor is to be based on the "average emission limitation achieved by the best performing 12 percent of the existing sources (*for which the Administrator has emissions information*) . . ." 42 U.S.C. § 7412(d)(3)(A) (emphasis added). Thus, the statute does not allow the EPA to try to guess what the performance of the top 12 percent would be if data were available from all of the top-performing units. Rather, the statute simply requires EPA to develop the MACT floor based on the sources for which EPA has emission data. Accordingly, EPA's attempt to manipulate the existing emission data to estimate what the emission rate might be if EPA had data from all top-performing units violates the Clean Air Act's clear mandate to consider only the units for which EPA has emissions information.

(b) Assuming a 97.5 upper confidence level on the top performing units is arbitrary and caprious and cannot be justified. As explained in the previous section, EPA cannot manipulate existing emission data to estimate missing emission data from other units. However, even if EPA could properly employ a confidence interval in its analysis, the use of EPA's proposed 97.5 percent upper confidence level would be arbitrary and caprious.

EPA chose a 97.5 percent confidence interval meaning that there is a 97.5 percent probability that the true mean will fall somewhere within that interval. See Johnson Comments

at 7. The choice of a 97.5 percent confidence interval means that there is a 2.5 percent chance of the true mean being outside this interval (i.e., a 1.25 percent chance of being above the upper confidence limit and a 1.25 percent chance of being below the lower confidence limit). Thus, there is a *98.75 percent* chance that the upper confidence limit *overestimates* the true mean (likewise there is a 98.75 percent chance that the lower confidence limit will underestimate the true mean). Accordingly, the use of a 97.5 percent upper confidence limit is not a reasonable estimate of the true mean of a population since there is almost a *99 percent certainty* that it overestimates the true mean.

Moreover, it is clear that the choice of the actual percent confidence level will greatly influence the upper and lower limits. Although EPA chose a 97.5 percent confidence level, it could just have easily chosen a 90 percent or other confidence level. See id. Accordingly, because EPA has not provided any justification as to why is choose the 97.5 percent confidence level, the use of such an upper confidence level is arbitrary and caprious.

(c) The use of a 97.5 percent upper confidence level is inconsistent with EPA's own guidance and past practices. EPA's use of the 97.5 percent upper confidence limit is contrary to its own practices and guidance regarding the setting of MACT standards. Early in the development of MACT standards, EPA determined that a simple average should be used. In particular, EPA found that "the most natural and straightforward reading of this language [in section 112(d)(3)(A)] would have EPA first determine the emission limitations achieved by sources within the best performing 12 percent, and then average those limitations." *National Emission Standards for Hazardous Air Pollutants for source Category: Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to they Negotiated Regulation for Equipment Leaks; Determination of MACT 'Floor,'* Final Rule, 59 Fed. Reg. 29296 (June 6, 1994). In this rulemaking, the term "average" was "interpreted to mean a measure of central tendency such as the arithmetic mean or median." Id.

EPA later restated its simple averaging approach when it developed general guidance for the MACT standards. See *Guidelines for MACT Determinations under Section 112(j) Requirements*, EPA 453/R-02-001 (Feb. 2002) (informing states that they should use the simple averaging approach set forth in the June 6, 1994 rulemaking when developing MACT standards). Moreover, as Mr. Johnson notes, EPA's historical use of the simple average is the best and least biased estimate of the "average" of a set of numbers. See Johnson Comments at 7. Accordingly, there is no reason for EPA to abandon this approach now.

Mr. Johnson has also conducted a review of the methodologies used by EPA to establish the MACT floor for other categories of sources regulated under section 112. Based on this review and consistent with EPA's 1994 interpretation, Mr. Johnson has concluded that "EPA should use the simple arithmetic mean of the four or five unit values in each category as the MACT floor, as the simple mean is the best (least biased) estimate of the average performance of these units, regardless of the degree of variability exhibited by these data." Johnson Comments at 7 (citing Snedecor and Cochran, *Statistical Methods*, Iowa State University Press, section 4.4, 1980). Indeed, while Mr. Johnson's review has found numerous examples where EPA has used a simple average of the relevant facilities to set the MACT floor, in *no* cases except the rules

EPA is proposing this spring has his review identified situations where any upper confidence limit in averaging has been used.

Accordingly, in setting the MACT floor for existing Utility Units, EPA is required to take a simple average of the emission rates achieved by the best performing 12 percent of the units in the source category.

(d) EPA's use of the 97.5 percent upper confidence level improperly results in a MACT floor that is in most cases higher than emissions from the worst-performing relevant units. The results of EPA's use of 97.5 percent upper confidence level demonstrate the problems with its approach. The plain language of the Clean Air Act requires that *the average* of the relevant units be used in creating the MACT floor. See 42 U.S.C. §7412(d)(3)(A) (requiring the MACT floor to be no less stringent than "*the average* emission limitation achieved by the best performing 12 percent of the existing sources . . . ."). In contrast, EPA's use of this upper confidence level causes it to create MACT standards that are in most cases *higher* than the *worst-performing* relevant facilities.

For example, the worst performing bituminous unit used by EPA to set its MACT floor had measured emissions of 0.10620 lbs/TBtu. See MACT Variability Analysis. After applying the 97.5 variability percentile factor, this unit had an adjusted emission rate of approximately *1.8 lbs/TBtu*. Id. However, the final proposed standard for bituminous units was calculated to be *2.0 lbs/Tbtu* (i.e., 11 percent higher than the emissions of the worst performer). Similarly, for subbituminous units, the worst performing unit had an adjusted emission rate of approximately *5.583 lbs/Tbtu*. EPA's proposed standard is *5.8 lbs/Tbtu* (i.e., 4 percent higher than the worst performer). The worst performing units for the waste coal and IGCC units had adjusted emission rates of approximately *0.158* and *7.34* lbs/TBtu respectively. EPA's proposed standards are *0.38 and 19* lbs/Tbtu (i.e., 141 and 159 percent higher than the worst performer). Only for lignite units is the proposed standard set below the worst performer. However, even here the final standard was set well above the average of the relevant facilities and almost as high as the worst performer (9.2 vs. 9.53 lbs/TBtu). Accordingly, rather than complying with the Clean Air Act and creating a standard that is the average of the relevant facilities for which EPA has data, EPA proposes a standard that in almost all cases allows for *more emissions* than the *worst-performing* relevant facility.

C. Trust responsibility heightens EPA's responsibility to properly develop MACT floor. As discussed above in Section VI.D of these comments, the trust responsibility based on federal Indian law and on EPA's Indian Policy requires EPA to protect resources that Indian tribes rely upon. In this case the resources affected by mercury contamination have particular cultural importance to FCPC. The surface waters that emissions from coal-fired power plants contaminate with mercury (which then becomes toxic methylmercury) are critical to FCPC cultural practices. FCPC members also fish, hunt, and gather materials (such as medicinal plants) that can be affected by mercury contamination. Each of these activities has a cultural dimension and harm to these resources harms FCPC members.

As presented above, the trust responsibility applies to actions by the federal government including agency actions such as rulemakings. As these comments make clear, EPA's proposal

strongly suggests that EPA will fail to properly develop the MACT floor (if the Agency even ends up acting under Section 112). Not only does the Clean Air Act require EPA to do this, but the trust responsibility and the environmental justice doctrine add substantial weight to this legal mandate.

D. EPA's improper calculation of the MACT results in a mercury standard that is up to five times higher than appropriate. Mr. Johnson calculated the MACT floor using EPA's general methodology but eliminating EPA's improper use of a short-term worst-case approach to develop a long-term average standard, and its improper use of a 97.5 percent upper confidence level. Mr. Johnson's corrected calculations demonstrate the EPA's proposed MACT floor standards for existing sources allow up to *five times more* emissions of toxic mercury than proper MACT floor calculations would permit. Likewise, Mr. Johnson's corrected calculations show that EPA's proposed MACT floor standards for new sources allow *up to four times more* emissions than proper MACT floor calculations would allow.

1. EPA's MACT standard should be based on the simple average of the 12-month emissions from the relevant best-performing sources. As explained in section VII.B. above, EPA has determined that a compliance demonstration based on a 12-month rolling-average is appropriate for the MACT standard. However, EPA inappropriately estimated its proposed long-term average emission limit based on a variability analysis that used a short-term worst-case emission rate. In addition, EPA discarded the requirements of Section 112 and its own guidance and precedents in setting MACT floors to apply a 97.5 percent upper confidence level, which substantially overstates the average emissions of the relevant facilities.

As explained in section VII.B., in order to be consistent with the 12-month compliance demonstration averaging period, EPA must develop the MACT limit based on an emission rate averaged over a similar 12-month period. Accordingly, it is improper for EPA to address short-term variability by applying its 97.5 percentile factor. Likewise, as discussed above, nothing in the Clean Air Act or EPA's history of creating MACT standards supports the use of EPA's proposed upper confidence level. Rather, the MACT floor should simply be set at the average of the emission rates achieved by the best-performing units.

2. Calculation of the MACT floor for existing sources using the simple average of 12-month emissions from the relevant best-performing sources yields emission limitations that are less than one-half to less than one-fifth of those allowed under EPA's proposal. Mr. Johnson has calculated the MACT floor by eliminating EPA's improper use of the 97.5 percentile short-term, worst-case factor and its additional 97.5 percent upper confidence level. In all other significant respects, Mr. Johnson's methodology follows EPA's.

The results obtained by Mr. Johnson show that when the MACT floor is properly calculated for the long-term compliance averaging period proposed by EPA, the emission limits are *less than one-half to less than one-fifth* of the limits established in the proposed rule. In particular, Mr. Johnson's corrected calculations of the MACT floors produce emission limitations of:

- 0.346 lbs/TBtu for bituminous-fired plants (less than one-fifth of EPA's proposed standard of 2.0 lbs/TBtu).

- 1.362 lbs/TBtu for subbituminous-fired plants (less than one-fourth of EPA's proposed standard of 5.8 lbs/TBtu).

- 4.050 lbs/TBtu for lignite-fired plants (less than one-half of EPA's proposed standard of 9.2 lbs/TBtu).

- 0.093 lbs/TBtu for coal refuse-fired plants (less than one-fourth of EPA's proposed standard of 0.38 lbs/TBtu).

- 4.237 lbs/TBtu for IGCC units (less than one-fourth of EPA's proposed standard of 19 lbs/TBtu).

See Johnson Comments, Table 2.

3. Calculation of the MACT floor for new sources using the one-year average emissions from the relevant best performing source yields emission limitations that are as low as one-fourth of those allowed by EPA's proposal. Mr. Johnson's calculations also show that EPA's proposed MACT floor for new sources allows for significantly greater emissions than appropriate. Indeed, with the exception of IGCC units, the proposed MACT floor standards allow for emissions that are approximately 19 percent to *more than four times too high*. This is because EPA's proposed MACT floor standards were developed using EPA's inappropriate 97.5th percentile short-term worst-case to develop long-term average standards. In particular, Mr. Johnson's corrected calculations of the MACT floor standards for new sources produce emission limitations of:

- 0.148 lbs/TBtu or approximately 1.55 10^{-6} lb/MWh for bituminous-fired plants (just slightly over one-fourth of EPA's proposed standard of 6.0 10^{-6} lb/MWh).

- 1.006 lbs/TBtu or approximately 10.6 10^{-6} lb/MWh for subbituminous-fired plants (just slightly over one-half of EPA's proposed standard of 20 10^{-6} lb/MWh).

- 1.285 lbs/TBtu or approximately 13.5 10^{-6} lb/MWh for lignite-fired plants (less than one-fourth of EPA's proposed standard of 62 10^{-6} lb/MWh).

- 0.085 lbs/TBtu or approximately 0.893 10^{-6} lb/MWh for coal refuse-fired plants (approximately 19 percent lower than EPA's proposed standard of 1.1 10^{-6} lb/MWh).

See Johnson Comments, Table 2.

Indeed, the only units for which EPA's proposed standard is less than a properly calculated MACT floor is for the IGCC units, where EPA appropriately requires a 90 percent reduction based on the use of carbon bed technology.

VIII Need for EPA to set standard more stringent than MACT floor.

Both the Clean Air Act and EPA's trust responsibility clearly require it to establish a MACT standard that is more stringent than the MACT floor when such a more stringent standard is feasible.

A. EPA must establish a MACT standard that results in maximum degree of reduction achievable considering costs and other concerns. Section 112 requires EPA to set a standard that does not merely meet the MACT floor, but also results in the maximum degree of reduction in emissions that is achievable taking into account cost, non-air quality health, and environmental impacts, and energy requirements. In particular, section 112(d)(2) provides that MACT standards "shall require the *maximum* degree of reduction in emissions . . . 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. § 7412(d)(2) (emphasis added). This maximum degree of reduction is often referred to as the "beyond-the-floor" standard. See, e.g., 69 Fed. Reg. 4675. As EPA has stated in previous rulemakings, "[t]he object of a beyond-the-floor standard is to achieve the maximum degree of emission reduction without unreasonable economic, energy, or secondary environmental impacts." 64 Fed. Reg. 52828, 52852, *Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, Final Rule*, Sept. 30, 1999.

1. EPA's improperly fails to consider achievable mercury controls solely because they may not be applicable to all sources within a category or sub-category and as a result fails to establish a proper beyond-the-floor standard. EPA concludes that several of the technologies discussed in the preamble are not viable because they may not be applicable to all sources within a category or sub-category. For example, EPA states "that pre-combustion measures are not a viable emissions reductions approach for *all* units in the category . . . ." 69 Fed. Reg. 4669 (emphasis added). Similarly, EPA states that it "believes that 90 percent emission reductions cannot be achieved across *all* Utility Units in the proposed section 112 time frame." 69 Fed. Reg. 4674 (emphasis added).

EPA's reliance on a particular control technology being available to all units across the county is misguided and inconsistent with the Clean Air Act's mandate to require the maximum degree of emissions reductions. See 42 U.S.C. §7412(d)(2). Section 112 is clear that the required degree of emission reductions can be achieved through the application of a variety of "measures, process, methods, systems or techniques." Id. These measures can include, process changes, material substitutions, elimination of emissions, capture and treatment controls, and design, equipment, work practice or operational standards or any combination of the foregoing. See 42 U.S.C. §7412(d)(2)(A)-(E).

Moreover, EPA guidance to the states makes it clear that a MACT standard may be a numerical emission limit, a production ratio, a concentration limit or a performance-based standard (e.g., a 90 percent reduction from a baseline). See *Guidelines for MACT Determinations under Section 112(j) Requirements*, EPA 453/R-02-001 (Feb. 2002). EPA also indicated that "[t]he MACT emission limitation may be based on a design, equipment, work practice, operational standard, or any combination of these." Id.

Accordingly, it is clear that the emission standard does not need to be based on any single type of control technique. Rather, the standard must be based on the maximum degree of emission reductions achievable through any combination of emission control or reduction techniques. Thus, even if a particular control technique is not universally applicable to all Utility Units, the proper focus should be on whether there are other available techniques that would allow all Units to achieve the required standard. For example, if there is a suite of control options available, none of which could be implemented by all Units, but where all Units could implement at least one or more of the control options, EPA is required to adopt a MACT standard reflective of the overall level of emission reductions that could be achieved when each Unit implements the control options that are available to that particular Unit.

Dr. Fox, the FCPC's expert in pollution control technologies notes that "[n]o single technology is likely to universally apply to all facilities due to the differences in the design of the pollution control train used to control other pollutants (NO_x, SO_2 PM10, H_2SO_4), differences in coal type, and differences in boiler design." Fox, J. Phyllis, *Comments on Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units*, 3 (April 27, 2004) ("Fox Comments"). However, Dr. Fox has identified "many technologies that are currently commercially available or soon to be commercially available" and concludes that "[o]ne or more of these technologies from this portfolio could be deployed today *to reduce Hg from each of the plants in the entire US fleet of coal-fired power plants by at least 90%*." Id. at 4 (emphasis added). As indicated earlier in these comments, because the Fox Comments contain detailed information regarding available mercury control technology, as well as numerous attachments that discuss the technology, FCPC requests that EPA carefully review Dr. Fox's report and its attachments.

Indeed, EPA itself has recognized the value of a "portfolio approach" to mercury emissions control. In its Supplemental Notice for the proposed mercury reduction rule, EPA acknowledges that "[m]ercury-specific pollution control device development has made major strides since the EPA announced its Information Collection Request in 1998. Currently, there are a broad range of technologies under consideration, consistent with the view that the EPA believes a portfolio approach is required to adequately and effectively implement significant reductions in mercury emissions from coal-fired power plants." 69 Fed. Reg. 12398, 12401 (March 16, 2004).

Accordingly, it is clear that EPA's failure to consider all available control options and its refusal to establish a proper beyond-the-floor MACT standard violates the Clean Air Act's mandate to require "the maximum degree of reduction in emissions . . . 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. § 7412(d)(2).

2. EPA has found that some utility units can achieve 90 percent mercury emission reductions. In response to a report from Environmental Defense indicating that coal-fired power plants should be able to achieve 90 percent Hg emission reductions, EPA states that it "expects that some Utility Units can achieve such high reduction rates." 69 Fed. Reg. 4674 (citing *Out of*

Control and Close to Home: Mercury Pollution from Power Plants, Environmental Defense, 2003). However, EPA further states that it "believes that 90 percent emission reductions cannot be achieved across *all* Utility Units in the proposed section 112 time frame." Id. (emphasis added). Although EPA tries to distinguish coal-fired boilers from municipal waste combustors and health, medical and infectious waste incinerators, which are currently required to achieve an 85 percent reduction in mercury emissions (see e.g., 40 C.F.R. §60.52b(a)(5); 40 C.F.R. Subpart Ec, Table 1) such a distinction does nothing to address EPA's conclusion that at least some Utility Units can achieve very high levels of mercury reductions. Indeed, Dr. Fox cites an example of a pollution control vendor that will guarantee "up to a 90 percent control for Hg emissions from coal-fired power plants based on its experience in the waste-to-energy industry. Fox Comments at 10; see also, id. at 8-12 (indicating that experience with waste combustors and incinerators is applicable to Utility Units). Unless EPA explains why the same or similar level of control cannot reasonably be applied to all Utility Units, the Agency cannot meet its burden to "require the maximum degree of reduction in emissions of the hazardous air pollutant . . . ." 42 U.S.C. §112(d)(2).

3. Numerous commercially available and technically feasible control techniques exist that would lower mercury emissions below the MACT floor. Throughout the preamble to the proposed mercury rule as well as other documents in the docket, EPA cites to numerous emission control and other technologies that can effectively reduce mercury emissions from Utility Units. For example, EPA cites sorbent injection, including activated carbon (AC) and chemically-impregnated AC, and selective catalytic reduction (SCR) and "[t]wo technologies that possibly could be used to further reduce the amount of vapor-phase Hg emitted from utilities." 69 Fed. Reg. 4676. Some of these control technologies are discussed below.

(a) Sorbent injection. EPA indicates that "due to their multiple internal pores and high specific surface areas, sorbents have the potential to improve the removal of Hg (mostly through the enhanced capture of elemental Hg; sorbents will also remove Hg++) as well as other gaseous pollutants . . ." 69 Fed. Reg. 4676. However, EPA concludes that "[a]lthough AC, chemically impregnated AC, and other sorbents show potential for improving Hg removal by conventional PM and SO_2 controls, this technology is not currently available on a commercial basis and has not been installed, except on a demonstration basis, on any electric utility unit is the U.S. to date . . . Therefore, we do not believe these technologies provide a viable basis for going beyond-the-floor." Id. Elsewhere EPA states that "sorbent injection is not currently available on a commercial basis and has not been demonstrated on a utility unit operating at full capacity over an extended period of time." Id. at 4679.

However, as indicated by Dr. Fox, sorbent injection is a commercially available, technically feasible technology. See generally Fox Comments at Section III.A. For example, Dr. Fox points out that emission data from "similar sources" both in the U.S. and abroad demonstrates that sorbent technology is achievable for Utility Units. Id. Dr. Fox also correctly notes that there is no requirement in Clean Air Act that a control "technology must operate 'at full capacity over an extended period of time' before it qualifies as a beyond-the-floor technology." Id. at 14. In fact, as Dr. Fox indicates, "[o]ne can determine, based on pilot-, field, and/or full-scale demonstration tests that a technology 'is achievable' . . . ." Id.

Accordingly, it is clear that sorbent injection is a commercially available, technically feasible and achievable method for reducing mercury emissions from Utility Units, and this technology must be considered and incorporated into EPA's beyond-the-floor MACT analysis.

(b) Selective catalytic reduction. EPA states that "SCR has been shown... to have the ability to transform certain species of Hg into other speciated forms that are easier for conventional PM and SO_2 controls to capture." 69 Fed. Reg. 4676. However, EPA also found that "SCR has not shown the same change-in-speciation effect on Hg emissions on all types of coal sources." Id. at 4679. EPA also concluded that there was insufficient test data for lignite-fired units and across all type of coal. See Id. at 4676. As a result, EPA did not explore the possibility of requiring SCR as a beyond-the-floor requirement. See id. ("With regard to the use of SCR, the EPA has inadequate information on which to base a beyond-the-floor standard.").

However, once again, Dr. Fox presents clear evidence that SCR is a commercially available, technically feasible control technology. See generally Fox. Comments at Section III.B. Dr. Fox points out that the "absence of data for one type of coal, lignite, is not a valid reason for rejecting it for all other coal types." Id. at 20. Moreover, Dr. Fox cites several test results and concludes that "[t]his data is more than adequate to conclude that SCR plus downstream particulate and SO_2 removal technologies are commercially available and achieve much higher Hg removals than proposed by EPA." Id. at 22.

Accordingly, it is clear that SCR is a commercially available, technically feasible and achievable method for reducing mercury emissions from Utility Units, and this technology must be considered and incorporated into EPA's beyond-the-floor MACT analysis.

(c) Coal washing. EPA indicates its desire to "promote, and give credit for, coal preparation practices that remove Hg before firing (i.e., coal washing or benefication)," but no coal preparation practices are addressed or considered in EPA's analysis of beyond-the-floor standards. 69 Fed. Reg. 4672; see also, *Beyond-the-floor analysis for existing and new coal- and oil-fired electric utility steam generating units national emission standards for hazardous air pollutants*, Memorandum from Jeffrey Cole, RTI International to Bill Maxell, EPA, OAQPS, December 2003 (this technical analysis does not include any discussion of pre-combustion techniques such as coal washing or fuel substitution). EPA has not demonstrated that coal washing is not currently available to all units. Accordingly, its complete failure to address this important mercury reduction technique is a major flaw in EPA's analysis of beyond-the-floor standards.

In fact, Dr. Fox indicates that "[a]bout 80 percent of the eastern and midwestern bituminous coal is currently washed to meet customer specifications for heating value, ash content, and sulfur content. Other coals could also be washed. Thus, this is a mature technology that should have been evaluated as a technically feasible portfolio technology." Fox Comments at 26-7. Dr. Fox also cites several studies indicating the availability and effectiveness of coal washing as a technology to remove mercury. See generally id. at Section III.E. Moreover, the EPA has recognized coal washing as a viable method for removing mercury from coal. See U.S. EPA, *Mercury Study Report to Congress, Volume I: Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units – Final Report to Congress*, Report EPA-453/R-

98-004a, ES-19 (February, 1998) ("Other various pollution prevention strategies, such as coal cleaning, have shown some effectiveness in reducing utility emissions of mercury."). Dr. Fox also indicates that "[t]he European Commission identified coal washing as a viable method to reduce Hg emissions from coal-fired plants." Fox Comments at 29-30 (citation omitted). Likewise, the Massachusetts Department of Environmental Protection "concluded that coal washing is a feasible method for control of Hg from coal-fired power plants." Id. at 30.

Accordingly, it is clear that coal washing is a commercially available, technically feasible and achievable method for reducing mercury emissions from Utility Units, and this technology must be considered and incorporated into EPA's beyond-the-floor MACT analysis.

(d) In addition to the methodologies identified by EPA, numerous additional practicable mercury control technologies are available or are currently under development. In addition to sorbent injection, SCR and coal washing, Dr. Fox has identified numerous other control options that are currently available or are under development. For example, Dr. Fox has identified fixed carbon beds and combustion modifications as two technologies that are currently available. See Fox Comments at 25-6. Moreover, Dr. Fox has also identified numerous additional control technologies that are currently under development and that are reasonably expected to become commercially available. These additional control technologies include: multipollutant removal processes that achieve greater than 90 percent mercury reduction; sorbents such as sodium tetrasulfide, amended silicates, and various carbon-based sorbents that are cheaper and more effective than activated carbon; mercury oxidizing methods; amalgamation with noble metals; plasma enhanced electrostatic precipitator technology; and enhanced wet scrubbing. See generally id. at Section IV. Dr. Fox concludes that "[t]hese near-commercial technologies are generally applicable to all coals," have demonstrable potential to "achieve over 90 percent Hg removal in commercial applications . . . are cost effective and have no adverse non-air quality health and environmental impacts or energy requirements." Id. at 2.

Accordingly, these additional mercury control technologies must be considered and incorporated into EPA's beyond-the-floor MACT analysis.

4. EPA fails to provide any evidence that the above achievable additional reductions are not cost effective, result in non-air quality health or environmental impacts, or cause energy requirement concerns. As required by the Clean Air Act, EPA must "require the *maximum* degree of reduction in emissions . . . 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. §7412(d)(2) (emphasis added). As shown above, there are numerous emission control and pre-combustion techniques that are currently available and economically viable for reducing mercury emissions from Utility Units. Beyond some general statements that such technologies have not been adequately tested or may not be feasible for all units in a source category, EPA has failed to provide any evidence that such technologies would not support a beyond-the-floor standard due to cost, non-air quality health and environmental impacts or energy requirements. Indeed Dr. Fox has concluded that "[t]here are a large number of technically feasible, economic, technologies with no adverse non-air quality health and environmental impacts and energy requirements, which can be used to control Hg." Fox Comments at 3. Accordingly, EPA is required to develop beyond-the-floor

MACT standards that require the degree of emission reductions achievable by those technologies.

5. Greater than 90 percent mercury reduction is currently feasible for all Utility Units. As Dr. Fox notes in her comments, several state agencies have determined that a very high reduction of mercury from coal-fired power plants is currently achievable. For example, Dr. Fox notes that Massachusetts has recently concluded "that there is strong evidence that the removal of 85-90+% of the mercury in the flue gas is technologically and economically feasible for coal-fired power plants *at the present time*." Fox Comments at 45 (emphasis added, citation omitted). Similarly, Connecticut has enacted legislation that requires a 90 percent mercury removal efficiency for coal-fired Utility Units. See id.

Moreover, Dr. Fox cites an October 2002 press release from the Northeast States for Coordinated Air Use Management ("NESCAUM") that reported that "[t]oxic mercury emissions from power plants could be reduced by over 90 percent - from 48 tons annually down to only 7 tons annually - through a combination of benefits achieved from existing air pollution controls and utilization of commercially available mercury reduction technologies." Id. at 46-7 (citation omitted).

In addition, Dr. Fox references a consent decree that U.S.EPA recently signed with PSEG Fossil in New Jersey that requires a 90 percent reduction in mercury emissions. See id. at 47. Dr. Fox also notes that "recent case-by-case best available control technology ("BACT") and MACT analyses prepared for new coal-fired power plant air permit applications have concluded that 90% to 95% Hg control is feasible." Id. at 44.

As the evidence above and in Dr. Fox's comments indicate, it is clear that reductions in mercury emissions of 90 percent or greater is achievable and that the control technology is currently available, is technologically and economically feasible and is being applied in many instances throughout the U.S.

6. The Clean Air Act requires EPA to develop a MACT standard that requires at least 90 percent reduction of mercury emissions from Utility Units. As indicated above, the Clean Air Act requires EPA to establish a MACT standard that results in the maximum degree of reduction in emissions that is achievable taking into account cost, non-air quality health and environmental impacts and energy requirements. See 42 U.S.C. §7412(d)(2). Moreover, it is clear that the determination of achievable emission reductions is not limited to emission reductions that are achievable through application of a single control technology, but rather the determination must be based on a consideration of all available control options (i.e., a portfolio approach). As is demonstrated in Dr. Fox's comments, the portfolio of commercially available control technologies includes numerous technologies that are cost effective and have no adverse non-air quality health and environmental impacts or energy requirements. While not all of these technologies may be available to each and every coal plant, each plant has the ability to use one or more of the technologies to achieve very significant (i.e., 90 percent or greater) mercury emission reductions. Accordingly, Dr. Fox has concluded that "[o]ne or more of these technologies from this portfolio could be deployed today to reduce Hg from each of the plants in the entire US fleet of coal-fired power plants by at least 90%." Fox Comments at 4.

Therefore, EPA is required to consider and incorporate the entire portfolio of control technologies and develop a MACT standard that requires mercury reductions of at least 90 percent.

B. Trust responsibility requires EPA to go beyond the MACT floor. It is critical to keep in mind the human cost of the decisions involved in this rulemaking. The mercury contamination of resources that FCPC members count on for their culture creates an unfair dilemma. FCPC members have to choose between, on the one hand, risking their health and the health of loved ones if they continue to use water, fish, and other resources tainted with lethal methylmercury, and, on the other hand, stopping cultural activities that connect them to their community, their past, and to their natural surroundings.

The question of where to set the MACT floor is, in essence, a question of how much pollution should be condoned by EPA. Where good science demonstrates that reductions much more significant than those contemplated by EPA in this proposal are possible and feasible, the trust responsibility requires EPA to rethink its proposal in consultation with the tribes. EPA's Indian Policy, which EPA specifically reaffirmed in 2001, underscores EPA's commitment to protecting resources that tribes rely upon.

IX Regulation Under Section 111.

A. EPA is required to regulate under Section 112, not Section 111. As explained in detail in section VI of these comments, EPA is required to regulate mercury emissions from Utility Units under section 112 of the Clean Air Act. EPA has previously found that regulation of Utility Units under section 112 is appropriate and necessary and has listed coal- and oil-fired electric utility steam generating units as a source category under section 112(c) of the Act. 65 Fed. Reg. 79826. This regulatory finding cannot be undone simply because EPA now believes it also has the authority to regulate Utility Units under section 111. In fact, EPA cannot regulate under section 111 because mercury is a listed HAP. See 42 U.S.C. §111(d)(a)(A)(i). Moreover, EPA cannot delist Utility Units from the list of source categories required to be regulated under section 112 absent a finding that mercury emissions from Utility Units will not be a hazard to public health or the environment. This is a finding that EPA has not and cannot make. Accordingly, EPA is statutorily required to regulate mercury emissions from Utility Units under section 112 of the Clean Air Act.

B. Even if EPA could properly regulate mercury emissions from utility units under section 111 rather than section 112, its proposed cap-and-trade program fails to meet clear Clean Air Act requirements. Section 111 requires the EPA to establish "standards of performance" for new and existing source categories that EPA determines "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." See 42 U.S.C. § 7411(b) and (d). The term "standard of performance" is *defined as "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction* which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." 42 U.S.C.

§ 7411(a)(1) (emphasis added). For the reasons discussed below, EPA's proposed cap-and-trade program cannot qualify as a proper standard of performance under section 111.

1. Lack of authority for trading under Sections 111. EPA interprets the term "standard of performance" in section 111 to include a cap-and-trade program. See 69 Fed. Reg. 4697 ("In today's action, EPA proposed to interpret the term 'standard of performance,' as applied to existing sources, to include a cap-and-trade program."). The term "standard of performance" is defined as "a *standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction* which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (emphasis added).

EPA admits that the term does not "explicitly . . . include or exclude an emissions cap and allowance trading program." 69 Fed. Reg. 4697. This is in stark contrast to other provisions of the Clean Air Act where Congress expressly indicated its desire for an emissions trading program. For example, in the acid rain provisions, Congress clearly authorized an "allowance transfer system." See 42 U.S.C. §7651b(b) ("Allowances allocated under this subchapter may be transferred among... affected sources under this subchapter and any other person who holds such allowances . . . ."). Similarly, Congress authorized emission trades in its offset provisions relating to nonattainment areas. See 42 U.S.C. §7503(c) ("The owner or operator of a new or modified major stationary source may comply with any offset requirement . . . by obtaining emission reductions ... from the same source or *other sources* in the same nonattainment area . . . .") (emphasis added). Accordingly, it is clear that where Congress envisioned an emissions trading program it expressly provided for such a program in its statutory language. This is not the case in section 111.

Nevertheless, EPA makes a strained and unsupportable reading of the term standard of performance by parsing the definition into small components, skipping important elements (e.g., deleting the word "best" from the phrase "best system of emission reduction") and then boot-strapping each component into a definition that supports a trading program.

> This interpretation is supported by a careful reading of the section 111(a) definition of the term... A requirement for a cap-and-trade program (i) constitutes a "standard for emissions of air pollutants" (i.e., a rule for air emissions), (ii) "which reflects the degree of emission limitation achievable" (i.e., which requires an amount of emissions reductions that can be achieved), (iii) "through application of (a)... system of emission reduction" (i.e., in this case, a cap-and-trade program that caps allowance at a level lower than current emissions.)"

Id.

This type of strained and unsupportable interpretation is inconsistent with a natural reading of the standard which implies a straightforward numerical emission limitation. Indeed, section 111(a)(1) specifically defines a "standard of performance" as "standard for emission of pollutants which reflects the *degree of emission limitation achievable through application of the*

best system of pollution reduction." Thus, section 111 requires EPA to develop emission standards that reflect the degree of emission limitation that is achievable using the best system of pollution reduction, not simply propose a cap-and-trade system in which caps are not tied to the emission reductions achievable with the best system of pollution reduction.

EPA also "proposes to determine that a cap-and-trade program has been adequately determined to be the best system for reducing Hg emissions from coal-fired Utility Units." 69 Fed. Reg. 4697. As support for its proposal, EPA cites the acid rain SO_2 and 1998 NO_x SIP Call rules as effective and successful examples of trading programs. See id. at 4696 ("The success of the Acid Rain cap-and-trade program for utility SO_2 emissions, which EPA duplicated in large measure with the NO_x SIP Call cap-and-trade program for, primarily, utility NO_x emissions, leads EPA to conclude that a cap-and-trade program for Hg emissions from utilities qualifies as the 'best system of emission reductions' that 'has been adequately demonstrated").

However, even if it is assumed that the acid rain and NO_x SIP Call trading programs are effective and successful, such trading programs have no application to a mercury control program. Clearly SO_2 and NO_x are quite different contaminants than mercury. Some of the most important differences include different dispersion patterns, different health and environmental effects and different control technologies for reducing emissions. As a result, trading programs for SO_2 and NO_x provide no support that a trading program for mercury will be effective or successful. Indeed, EPA has provided no evidence that the SO_2 and NO_x trading programs are even the "best system" for reducing SO_2 and NO_x emissions. Accordingly, EPA has not met its burden of adequately demonstrating that a cap-and-trade program will be the best system for reducing mercury emissions.

2. The emission levels proposed under EPA's cap-and-trade program fail to meet section 111's emission limitation requirements. In its proposed rule, EPA "proposes to determine that a cap-and-trade program has been adequately determined to be the best system for reducing Hg emissions from coal-fired Utility Units." 69 Fed. Reg. 4697. However, EPA does not and cannot demonstrate that the emission reductions required under its proposed cap-and-trade program reflect "the *degree of emission limitation achievable through the application of the best system of emission reduction* . . . [which] has been adequately demonstrated." 42 U.S.C. §7411(a)(1) (emphasis added)

EPA's proposed cap (eventual 70 percent reduction) and the extensive timeframe EPA proposes to allow to meet the cap (at least until 2018) clearly do not require the level of emissions reductions that is currently achievable with available and demonstrated control technology. This fact is shown by the attached comments by Dr. Fox, which show that reductions of greater than 90 percent are achievable now. See Fox Comments at 2 ("[t]echnologies are generally applicable to all coals and coal-fired boilers and are able to achieve over 90% Hg removal, either individually or in combination, from the entire existing coal-fired fleet."). Moreover, EPA specifically recognizes that the level of emission reductions under the proposed cap-and-trade program may not constitute the "best system" of emission reductions. See 69 Fed. Reg. 4687 ("The EPA retains the authority to revise its conclusions as to what constitutes the 'best system' of emissions reductions for existing sources, and, therefore, to revise the standard of performance, to require additional reductions or controls . . .").

Under its proposed cap-and-trade program, EPA states that its "primary goal is to reduce power plant emissions of Hg by 70 percent from today's levels by 2018." 69 Fed. Reg. 4698. However, EPA provides very little support or rationale for its goal of a 70 percent reduction in mercury emissions beyond stating that "[o]ur proposed 15 ton cap in 2018 is grounded largely in the modeling completed in support of the President's Clear Skies initiative." Id. at 4699. Indeed, EPA admits that "we fully expect other Hg air pollution control technologies such as ACI and/or one or more of the breakthrough technologies will have been adequately demonstrated before 2018."

EPA also proposes to set a phase I mercury cap to be implemented by 2010. However, this cap simply relies on other controls required as part of a different rulemaking for other air contaminants. Id. ("We are also proposing to set a near-term cap in 2010 at a level that reflects the maximum reduction in Hg emissions that could be achieved through the installation of FGD and SCR units that will be necessary to meet the 2010 caps for SO_2 and NO_x in our proposed IAQR."). As a result, Utility Units will not be required to take any actions specifically designed to reduce mercury emissions for almost a decade and a half.

C. Any 111 standard should be at least as stringent as a properly implemented MACT standard. It is important to note that the substantive emission standards under section 111 are essentially equivalent to the MACT standard under section 112. Section 111 requires a standard of performance "which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." 42 U.S.C. § 7411(a)(1). Similarly, section 112(d)(2) requires "the maximum degree of reduction in emissions. . . 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. § 7412(d)(2). Thus, one standard requires application of the "best system demonstrated," while the other standard requires the "maximum degree of reduction achievable," with each taking into consideration the same cost, non-air health and environment impacts and energy requirements.

As demonstrated in section VI above, a correct MACT floor analysis clearly shows that a MACT standards under section 112 can be set at levels much lower than those in EPA's current proposal even without considering the application of additional mercury control technologies. Indeed, a proper MACT floor analysis results in standards that allow less than one-half to less than one-fifth of the emissions that EPA's proposed MACT standards and its similar Phase I mercury cap would allow. Moreover, this corrected MACT floor analysis shows that these reductions, which are likely substantially greater than what EPA proposes to achieve in 2018 (i.e., fourteen years from now) are *presently* available.

In addition, as described above in section VIII.A, there are numerous pre-combustion measures and control technologies that are currently available and could be employed to reduce mercury emissions even further -- to at least 90 percent control -- under a corrected beyond-the-floor MACT standard. All of these measures and technologies are cost effective, and do not create significant non-air health or environmental impacts or energy requirements. Accordingly,

if EPA regulates mercury emissions through a cap-and-trade system, the actual cap level as well as the time allowed to meet that cap should be at least as stringent as the level of control that would be achieved under a correct beyond-the-MACT-floor analysis pursuant to section 112.

D. The presumed efficiencies inherent in a trading program support a cap lower than that achievable with a traditional MACT standard. EPA argues that a trading program will produce greater reduction than a section 112 MACT standard. For example, EPA states that "a trading approach is better suited to stimulating development and adoption of new technologies [to reduce mercury emissions]." 69 Fed. Reg. 4688. EPA also argues that "a MACT approach will not stimulate innovation in Hg control technology as well as a cap-and-trade approach because it does not reward reductions beyond the required levels." Id. In its Regulatory Finding, EPA concluded that "[t]rading also can allow for a greater level of control because it offers the opportunity for greater efficiency in achieving control." 65 Fed. Reg. 79830. Likewise, EPA now cites the acid rain SO_2, and NO_x SIP Call programs as examples of successful and effective emission trading programs. See 69 Fed. Reg. 4697.

Thus, EPA has found that a trading program will stimulate development of new and better mercury control technologies and allow for a greater level of control. Accordingly, to meet section 111's requirement of setting a standard of performance that reflects the degree of reduction achievable, EPA should establish a cap level that would be reflective of the greater levels of mercury reductions that would be achievable under a trading program. If EPA's stated premise is correct, this level should be considerably lower than the level that would be achieved by applying a correct beyond-the-floor MACT analysis.

E. Under trust responsibility, EPA is required to act more quickly and forcefully in regulating mercury emissions under Section 111. If EPA chooses to improperly rescind its Section 112 determination and to pursue regulation under Section 111 instead, it is still obliged to take all steps necessary to fulfill its trust responsibility to tribes. FCPC and other tribes affected by mercury emissions from coal-fired power plants will continue to be harmed until EPA acts to curb this deadly pollution.

The trust responsibility requires EPA to act towards FCPC and other affected tribes as a fiduciary would act towards a beneficiary. This means that, even if EPA mistakenly chooses Section 111 as the vehicle for curbing mercury emissions from coal-fired power plants, it must aggressively take up this task and set the most protective emission limit consistent with science and the Clean Air Act.

X Trading program must address "hot-spots."

Although EPA's authority to promulgate a cap-and-trade program is unclear at best, if such a program is ultimately selected, EPA must ensure that toxic hot-spots are not created as a result. Indeed, in its Regulatory Finding, EPA recognized the "concerns about the local impacts of mercury emission and any regulatory scheme for mercury that incorporates trading or other approaches that involve economic incentives must be constructed in a way that assures that communities near the source of emission are adequately protected." 65 Fed. Reg. 79830. Furthermore, as other stakeholders have noted, "modeling results suggest that Hg deposition

from emission from Utility Units may be higher in certain regions of the country... In addition, the ecosystems in some regions (e.g., the lakes regions of the Upper Midwest) may be more sensitive to Hg deposition." 69 Fed. Reg. 4701. Indeed, the lake region of the Upper Midwest is the home to the FCPC and is of utmost concern to its people. Moreover, a recent study by New Hampshire state officials suggested that localized mercury deposition is a much greater concern than EPA has recognized. See Obey, Doug, *New Hampshire Data May Aid Opponents Of Emissions Trading In Mercury Rule*, Inside Washington Publishers,[9] (April 8, 2004).

Despite the real and serious concern about toxic hot-spots, EPA claims that it "does not expect any local or regional hot-spots." Id. at 4701. EPA makes several brief arguments to support this claim (see generally id. at 4702-3), however, these arguments are anecdotal at best, and are not supported by adequate science. For example, EPA concludes that large Utility Units with large localized deposition footprints, will be most likely to control emissions and generate emission credits. Id. at 4702. However, there is no support for this argument and it is just as likely that the decision to install controls or buy credits will be based on the type of coal burned and the existing configuration of the Utility Unit rather than simply the size of the Unit.

EPA also argues that "the economics of the trading system are likely to favor controls of Hg that are likely to be deposited locally, thereby reducing any local hot-spots." Id. However, this argument assumes that the types of mercury that are deposited locally are limited to Hg++ and particulate mercury, and that gaseous mercury will be transported long distances and will not affect local or regional deposition. EPA then argues that Hg++ and particulate mercury are the forms most easily controlled and that these forms of mercury will be effectively controlled as Utilities comply with other emission requirements (i.e., EPA's new fine particle and ozone control requirements). However, EPA does not support the assumption that gaseous mercury will not contribute to hot-spots or that other emission requirements will effectively address the localized deposition of Hg++ and particulate mercury. Accordingly, if a trading program is promulgated, EPA must take all appropriate actions to ensure that local or regional hot-spots are not created as a result of emission trades.

A. Hot-spots in upper midwest are a real concern because of the use of western subbituminous coal, from which it is more difficult to obtain mercury reductions than eastern bituminous coal. The toxic hot spot concern discussed above is a primary concern of the FCPC. Indeed, EPA has recognized that the very area so critical to the FCPC's way of life is at increased risk to mercury deposition. 69 Fed. Reg. 4701 ("[T]he ecosystems in some regions (e.g., the lakes regions of the Upper Midwest) may be more sensitive to Hg deposition."). Of particular concern to the FCPC is the fact that most Utility Units in the upper midwest burn a western subbituminous coal. *It is apparently much more difficult and costly to reduce mercury emissions from western subbituminous coal than it is from eastern bituminous coal.* See Fox Comments at 2 ("the costs to control Hg from units fired on lignites and sub-bituminous coals will generally be higher than on units fired on bituminous coals"). As a result, utilities burning eastern bituminous coal will be more likely to install mercury control technologies than will the utilities burning western subbituminous coal. Thus, utilities in the upper midwest are likely to

[9] http://insideepa.com/secure/docnum.asp?f=epa_2001.ask&docnum=482004_data

forego emission controls and would instead purchase emission credits from the utilities burning eastern coal that have installed mercury controls. Because the utilities burning eastern coal are likely to be located on the eastern side of the United States, it is unlikely that the upper midwest will realize any localized benefit from the mercury reduction efforts undertaken by those utilities. The end result is that FCPC's home and indeed the entire lakes area of the upper midwest (which is particularly sensitive to mercury deposition and thus most needing of real reductions in mercury emissions) may experience *little-to-no* benefit from EPA's proposed rule.

B. Requirement under trust responsibility and Environmental Justice Doctrine to fully analyze and address hot-spot concerns to ensure that tribes are not adversely effected. It is hard to overstate how troubling the hot-spot is to FCPC. EPA, which has a clear legal mandate to reduce the mercury emissions that threaten the health, environment, and spiritual well-being of FCPC members, is not only not proposing means that would be the most certain of addressing this toxic threat, it is proposing an alternative that seems destined to leave FCPC out of the solution.

As discussed above, the power plants that pollute the lands and waters that FCPC members rely upon for cultural and other needs are unlikely to reduce their mercury emissions under the proposed trading scheme. This means that, despite a clear legal mandate to reduce mercury emissions and despite their duty to protect public health and the environment, EPA is contemplating a scheme that would do nothing whatsoever for FCPC and other tribes. If the EPA Indian Policy and the federal trust responsibility are to mean anything, they have to mean that this is wrong.

It is well established that, under the trust responsibility, federal agencies such as EPA must act with regards to tribes in the same way that a fiduciary must act towards a beneficiary. Here we see EPA proposing the opposite. The result of the trading scheme would be to place FCPC in a worse position than many non-native populations. Not only would FCPC members continue to face mercury poisoning of their resources, but the impact will continue to be more substantial that what non-natives would experience because of the added cultural importance these resources have to FCPC members.

EPA has reaffirmed that the environmental justice doctrine requires "the fair treatment of people of all races, cultures, and incomes with respect to the development, implementation, and enforcement of environmental laws and policies. . . ." It is in no way fair that the mercury emission trading scheme outlined in the proposed rule would leave behind native populations like FCPC's.

At the very least, the trust responsibility and the environmental justice doctrine require that EPA much more carefully analyze the potential impact of the proposed trading scheme on FCPC and other similarly situated Indian populations.

C. Potential means of preventing hot-spots. Given the serious concerns regarding the creation of toxic hot-spots under the proposed trading program, if EPA adopts a cap-and-trade rule, it must take all appropriate actions to ensure that such hot-spots do not result from its program. Some of the actions EPA should take are described below.

(a) Require excess "offsets." Although EPA claims that local or regional hot-spots will not occur, it nevertheless requests comments on "whether it would be appropriate to adjust the geographic scope of this program to introduce trading ratios between regions as a way of addressing regional differences should they occur." 69 Fed. Reg. 4701. Because EPA has not and cannot adequately demonstrate that hot-spots will not occur under its proposed trading program, the EPA should require a greater amount of emission reductions or "offsets" for each trade.

The offset ratio should be adjusted based on the ability of mercury reductions at one source to reduce mercury deposition in the area of influence of another source. For example, the trading ratio should be increased based on the distance from the utility units generating the credits to the utility unit purchasing the credits, since the greater the distance between the sources the less effect that reductions at one source will have at the other. Similarly, the trading ratio should be increased if the prevailing winds limit the ability of reductions at one plant to benefit the area impacted by another plant. The goal of such enhanced-offset requirements would be to ensure that any mercury reductions realized at units generating credits would have an equivalent environmental effect in the local area surrounding a unit that is purchasing those credits.

These types of enhanced offset requirements would encourage sources to install mercury controls and would thus promote real and tangible reductions in mercury emissions by discounting credits, especially those credits received from sources located great distances from the unit purchasing the credits. Furthermore, because a greater number of credits would be required from units that are less likely to have a beneficial effect on the area impacted by the purchasing facility, this policy would encourage more trading that would result in true "localized" reductions of mercury.

(b) Limit trades to a regional or basin-wide area. In addition to the enhanced offset requirements, trading should be limited to the region or basin in which mercury reductions will have a substantial impact. In other words, trading should be limited to those areas where it is shown that reductions at one unit will have a substantial positive impact (i.e., net reduction in mercury deposition) in the area surrounding the other unit.

(c) Limit amount of credits that can be purchased to meet emission limits. In order to ensure that all areas and regions of the country experience some benefit from the mercury reduction rule, all utility units should be required to achieve some level of mercury reduction through the addition of add-on controls or other mercury reduction technologies.

(d) Creation of natural resource damages fund to attempt to compensate entities impacted by hot-spots. Because of the high likelihood that a trading program, even with the protections identified above, will allow mercury hot-spots to continue to persist, EPA should also create a fund to compensate tribes, states, and other natural resouce trustees for the damages cause by these hot-spots. This fund could be created by assessing a surcharge on all mercury reduction credits that are traded. The creation of this fund would help to at least somewhat address the liability exposure of utilities to states, tribes, and others because of the damages that have been and will continue to be caused by their mercury emissions.

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