

New York State Department of Environmental Conservation

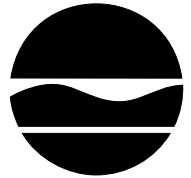
Deputy Commissioner

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Erin M. Crotty
Commissioner

January 3, 2005

Air Docket
Clean Air Mercury Rule
Attn: Docket No. OAR -2002-0056
U. S. Environmental Protection Agency
Mail Code 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

***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:
Notice of Data Availability; 69 FR 69864 - 69878 (December 1, 2004)***

Dear Docket Administrator:

The New York State Department of Environmental Conservation (the Department) appreciates the opportunity to comment on the above-referenced supplemental notice of data availability (NODA). The Department has numerous comments to offer on the NODA, but would like to reiterate its comments on the original proposal which were submitted on June 28, 2004. The Department does not support the United States Environmental Protection Agency's (EPA's) current proposal to control mercury emissions from the utility sector as discussed in the Federal Register on January 30 and March 16, 2004.^{1 2} The Department believes the options contained in the current EPA proposal will prove to be detrimental to the public health and natural resources of New York. The Department wishes to state its serious reservations about the schedule that EPA provided the public to review the vast amount of information contained in the NODA. The NODA broadly outlines many studies and investigations which are underway or

¹ "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". 69 FR 4652 - 4752 (30 January 2004).

² Supplemental Notice and Extension of the Comment Period for the 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 FR 69864 - 69878 (16 March 2004).

being planned to improve the output of the Integrated Planning Model (IPM) and inform the regulatory decision-making process. However, the details of this effort, such as the use of the Regional Modeling System for Aerosols and Deposition (REMSAD) and Community Multiscale Air Quality (CMAQ) models for mercury are conspicuously missing from the NODA and air docket. Allowing the public only 30 days to review and comment on such a large amount of technical information is inadequate and undermines the ability of states and other interested parties to provide meaningful public input into this extremely important rulemaking.

Currently, mercury emissions continue to be a major threat to public health and natural resources in New York State. Due to the high levels of mercury in freshwater fish, the Department and the New York State Department of Health have issued specific warnings advising that pregnant women and children should not consume any servings of specific fish species that are caught in 49 lakes and more than 265 miles of rivers in the State. The New York State Department of Health publication, *Chemicals in Game and Sportfish 2004-2005*, identified 8 new areas with elevated mercury levels in fish since the 2003-2004 edition, bringing the number of lakes in New York State with specific fish advisories for mercury to 49.³ In addition, there is a general fish advisory alerting the public not to eat more than one meal (one-half pound) per week of fish taken from New York's fresh waters and some marine waters at the mouth of the Hudson River. This list of restricted water bodies and fish species continues to grow each year. Many of the lakes sampled are in remote rural and mountainous areas of the State that do not have any known mercury inputs other than atmospheric deposition.

The Department is still quite concerned with the deficiencies associated with the EPA's development of the appropriate maximum achievable control technology (MACT) standards for mercury emissions from Utility Units pursuant to Clean Air Act (CAA) section 112. The Department urges EPA to abandon the proposed alternative strategy and develop a strong set of MACT standards to reduce mercury emissions from coal fired utility units. The Department refers you to its June 28, 2004 comment letter (Air Docket OAR-2002-0056-3210) for a more thorough review of its specific recommendations.

EPA Has No Authority To Delist Utility Units From The CAA Section 112(c) Source Category List Absent Compliance With CAA Section (c)(9)(B)(ii)

The Department agrees with EPA's December 20, 2000 finding pursuant to CAA section 112(n)(1)(A) that it is appropriate and necessary to regulate coal- and oil-fired Utility Units under section 112(d).⁴ EPA lacks any authority to rescind this finding. EPA is obligated to promulgate appropriate MACT standards that would significantly reduce the current emissions of mercury and nickel as well as other hazardous air pollutants from Utility Units.

³ New York State Department of Health. *2004-2005 Health Advisories: Chemicals in Sportfish and Game*. ONLINE. 2004.
<http://www.health.state.ny.us/nysdoh/fish/fish.htm>

⁴ "Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units." 65 FR 79825 - 79831 (20 December 2000).

The listing of Utility Units as a source category under CAA section 112 was the result of years of peer-reviewed scientific studies and technical analyses performed by EPA, the United States Department of Energy (DOE) and the National Academy of Sciences, as mandated by Congress. The majority of the information contained in the NODA is an attempt by EPA to offer additional technical analyses to counter its previous finding of “appropriate and necessary,” so as to delist Utility Units. CAA section 112(c)(9)(B)(ii) states EPA must demonstrate that there are no sources in this category that emit any hazardous air pollutants “that may result in adverse health effects in humans other than cancer or adverse environmental effects” and that the emissions from any source in this category “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.” Since EPA cannot make this factual determination, then it must proceed with establishing appropriate MACT emission standards under CAA section 112(d).

EPA’s Request for Specific Issues Relevant to Electric Utility Sector Modeling

Under the NODA, EPA identified the need for the Integrated Planning Model (IPM) to predict how the power sector would respond to a particular regulatory approach. The Department contends that the results of the numerous modeling summaries provided in the NODA are only as good as the input variables. The December 2000 finding clearly established an “appropriate and necessary” finding to reduce mercury emissions by properly developing a National Emission Standard for Hazardous Air Pollutants (NESHAP) for coal fired utility plants. The Department believes the use of activated carbon injection and other alternative sorbents which will reduce mercury emissions from both bituminous and sub-bituminous coals has advanced greatly and would be available much earlier than 2010 as speculated in some of IPM runs provided in the NODA. The Department is also concerned that the EPA did not conduct, and provide for comment, the additional modeling with the IPM to evaluate the more stringent MACT options. This was previously requested by the state environmental agency representatives who served on the Federal Advisory Committee Act Utility Workgroup.

EPA Understates The State of Mercury Control Technology

The IPM input data comparing MACT based approaches with alternative regulatory approaches relies solely on the projected mercury reductions achieved with using activated carbon injection (ACI) or similar sorbents. The analysis presented by Cinergy used a stringent MACT value for all subcategories of coal but questioned the ability of ACI’s availability by 2010. The Department of Energy (DOE) recently announced that six new projects would be in their second round of field testing for ACI and new sorbents. (This is in addition to last year’s selection of eight projects by DOE.) Both rounds of testing are aimed at meeting the DOE’s near term goal of having technologies that can capture 50 to 70 percent of mercury emissions ready for commercial demonstration by 2005 for plants burning bituminous coal and by 2007 for those burning lower rank coals and blends. By 2010, the DOE expects costs to be reduced by 25 to 50 percent.⁵

⁵ TECH News, National Energy Technology Laboratory (NETL), DOE Announces Further Field Testing of Advanced Mercury Control Technologies, issued November 5, 2004

In the January Federal Register proposal, EPA fails to acknowledge the ongoing work being conducted under the United States Department of Energy/National Energy Technology Laboratory (DOE/NETL) Mercury Control Technology Research Program on coal fired power plants.⁶ Four full-scale demonstration projects have tested the effectiveness of carbon injection in tandem with conventional criteria air pollution control devices currently in use at utilities. Specifically, the E.C. Gaston plant in Alabama burning low sulfur bituminous coal achieved greater than a 90 percent mercury removal rate using carbon injection, along with a hot side electrostatic precipitator (ESP) and a compact hybrid particulate collector (COHPAC) baghouse for particulate control. The Brayton Point plant in Massachusetts burning low sulfur bituminous coal achieved a 90 percent mercury removal rate using carbon injection in combination with a cold-sided ESP. The Pleasant Prairie plant in Wisconsin burning sub-bituminous coal achieved a 65 percent removal rate using carbon injection with a cold-sided ESP. Significantly, the E.C. Gaston Plant achieved a high mercury removal rate and used considerably less carbon injection as a result of the addition of a COHPAC baghouse or fabric filter in comparison to the other projects. The additional pollution control equipment has the potential to significantly increase mercury removal rates from sources burning both bituminous and sub-bituminous coal.

Real reductions for both mercury and sulfur can be achieved when Utility Units install wet scrubbers or spray dryer adsorbers, in conjunction with fabric filters. According to the Information Collection Request III data, the lowest emissions of mercury and sulfur were achieved when these pollution control devices were used. The Department analyzed emissions data from Utility Units in eight states surrounding New York. This analysis showed that the Utility Units achieving the greatest mercury reduction were ones utilizing fabric filters. Several of the better controlled units have ESPs but also used a wet scrubber for sulfur control. The Department has experience with municipal waste combustors (MWCs) in New York that use carbon injection in combination with fabric filters or ESPs. These MWCs equipped with carbon injection and ESPs achieve mercury emissions reductions of at least 85 percent. MWCs equipped with carbon injection and fabric filters achieve reductions greater than 90 percent. Mercury is predominantly emitted in the oxidized form by MWCs.

The Supplemental Notice and a letter to the Air Docket from the DOE (OAR-2002-0056-0044) describe the need for six years to adequately conduct a commercial demonstration of mercury controls. The Department believes that this long time frame is not justifiable and it appears that EPA is attempting to selectively develop time lines to justify a cap-and-trade program. Upon closer examination, the average six year figure includes a pre-award period greater than 12 months, with each full-scale demonstration project taking another 12 months, and allows for inflation during the operation and reporting time line by including the time it takes to prepare a report on the project. A more realistic value for commercial demonstration is in the range of three to four years, especially in light of all of the full-scale mercury demonstration projects already completed or currently being conducted.

The goal of the DOE/NETL Mercury Control Technology Research Program is for these technologies to be available for bituminous sources by 2005 and for lignite and sub-bituminous

⁶ “Department of Energy (DOE) National Energy Technology Laboratory (NETL) Environmental and Water Resources Program Mercury Control Technology R and D Project Fact Sheets.” Air Docket # OAR-2002-0056-0045.

sources by 2007. The program also describes the commercial development of advanced mercury control technology that will achieve a 90 percent mercury reduction for all coal types by 2010. In fact, the field testing of this technology at a number of coal fired units was already underway in 2003. If these goals are attained, widespread commercial deployment of extremely efficient mercury air pollution control technologies could begin to occur in 2008 for bituminous sources and 2011 for lignite and sub-bituminous sources.

Lack of Discussion of the MACT floor Variability Analysis

The EPA received a significant number of comments on the variability analysis conducted for the MACT-floor determination during the comment period for the Proposed NESHAP for Electric Utility Steam Generating Units. The improper application of the variability analysis was discussed in numerous states' environmental agency comments and was also addressed in STAPPA-ALAPCOs⁵ comments as well as the Department's. The outcome of the variability analysis used to determine the MACT-floor is crucial when conducting a revised benefits analysis. The Department believes that this variability analysis, based upon the number of comments submitted regarding the inappropriate determination of a MACT floor and its importance to the IPM, was inappropriately absent from the NODA.

An Analysis of the Mercury Reduction Benefits That Strong MACT Standards Will Provide for New York

In addition to its previous comments on this subject the Department has developed a graph detailing projected trends in mercury emissions which have the potential to be deposited in New York and the northeast region. Based upon modeling for fine particulates, sulfur dioxide and NO_x, the major states affecting deposition in the northeast are Illinois, Indiana, Ohio, Pennsylvania, Michigan, West Virginia, New York and New Jersey. Figure 1 depicts the different regulatory scenarios offered under the proposed NESHAP, but also includes a revised MACT floor based on the Department's analysis and provided in its June 28, 2004 docket letter. Figure 1 clearly shows the reductions in total mercury emissions that can be achieved from the coal fired utility source category in the above mentioned states by EPA implementing an appropriate national MACT standard (i.e., DEC MACT). The reductions in total mercury emissions can be achieved almost 10 years earlier than proposed under the cap and trade program. The Department is seriously concerned that the information provided in the NODA does not address this issue that all of the modeling analyses done with the proposed weaker MACT limits (i.e., EPA MACT) underestimates mercury emissions and subsequent deposition rates thereby creating an illusion that the cap and trade proposal is superior to the proposed MACT approach. A real MACT standard will reduce mercury emissions and deposition in the Northeast in a much shorter timeframe.

Other Sources of Mercury Emissions

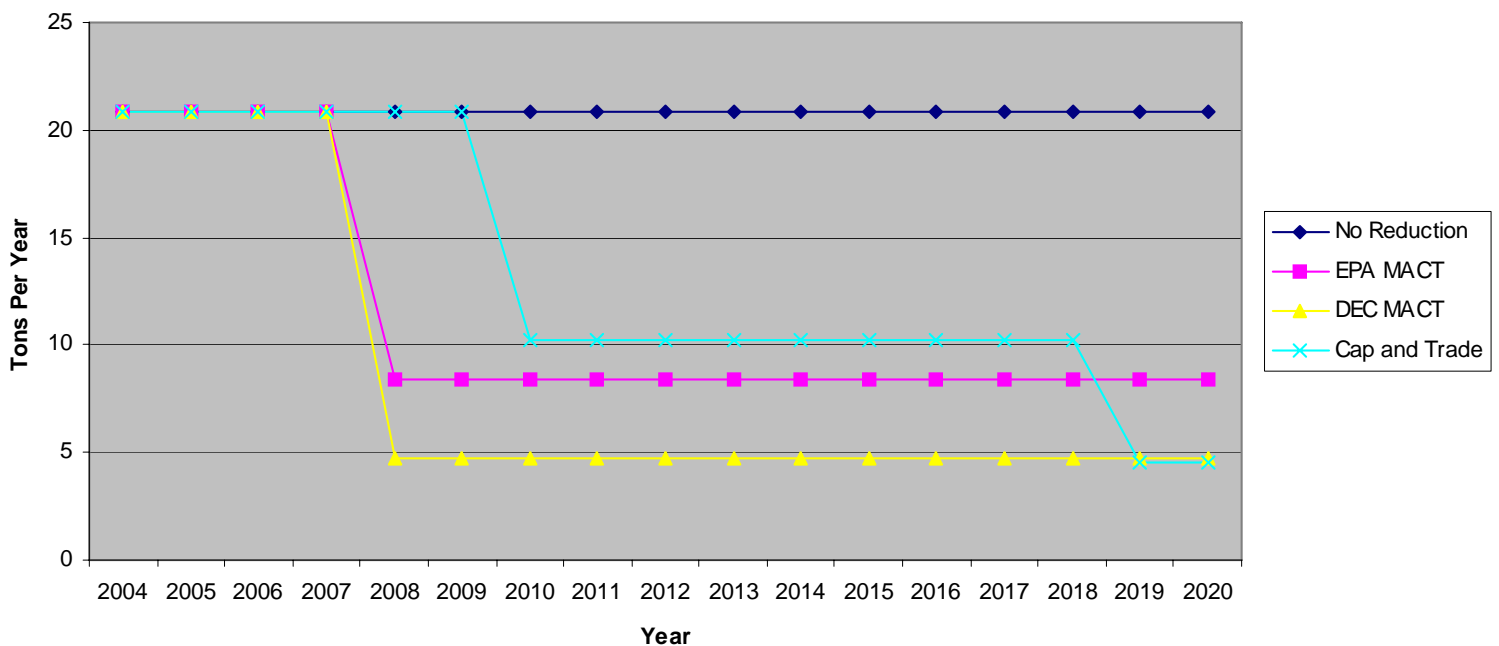
⁵ STAPPA-ALAPCO's letter to the docket dated June 29, 2004

Under III.B., the EPA had several issues to contend with if it intended on conducting an IPM on mercury emissions. The first was the magnitude and nature of current and forecasted mercury emissions from coal fired power plants. In the case of New York, several coal fired plants have switched to blends of bituminous and sub-bituminous coal. This practice, with the current level of pollution control equipment, will increase the amount of elemental mercury emitted in New York State. Any regulatory strategy focusing on sulfur control and expecting mercury reductions should anticipate the practice of switching to western sub-bituminous coal or some form of blending. This will increase the amount of mercury being emitted, not reduce it.

The EPA requested that stakeholders identify sources of mercury emissions other than coal fired utilities for inclusion into the IPM. The lack of mercury source data in the 1999 National Emission Inventory (NEI) is a direct result of the Agency’s decision not to include hazardous air pollutants in its Consolidated Emission Reporting Rule. Other source categories not regulated for mercury emissions include sewage sludge incineration and Portland cement plants that burn coal. Of combustion sources, coal fired utilities make up half the mercury emitted in New York State. The Department has promulgated and implemented more stringent state regulations that contain stricter emission limits for mercury emissions for the municipal waste combustion source category than promulgated by the EPA. The current estimated mercury emissions inventory for stationary sources in New York is attached as Table 1. The Department is evaluating other source categories for reductions and hopes that EPA will propose a NESHAP for the utility sector that will provide meaningful reductions of national mercury emissions.

Figure 1. Projected Trends for Mercury Emission from Coal-Fired Utilities Which Impact the Northeast States.

Comments on the Mercury Speciation Issue and Atmospheric Deposition of Mercury



The Department agrees with the subcategorization of coal types for regulatory purposes in response to II.C.3.b. but disagrees with the standard (or average) speciation profile in modeling analysis. Work conducted by the Department on the 1999 Information Collection Request (ICR) shows that the majority of mercury emitted in the eastern half of the US is predominantly in the oxidized form. The speciation profile cited in the NODA, 54% elemental, and 43 % oxidized and 3% particulate mercury, is a national average and does not represent the Northeast States potential deposited burden. The Department's analysis of the ICR data indicates a profile closer to 30% elemental, 65% oxidized and 5% particulate mercury for sources which are impacting New York.

The NODA focuses on industry sponsored research about the speciation of atmospheric mercury after it exits the stack and how emissions rapidly converted to elemental mercury in the plume will not be deposited in the United States due to their long atmospheric residence time (Air Docket OAR-2002-0056-2928 and OAR-2002-0056-2848). This entire data set was not included in the docket and the Department could not locate any information which indicates the data had undergone any public and peer review. The EPA must cautiously evaluate the results and conclusions drawn from this research in light of the unknown and non-linear relationship between mercury emissions and deposition. There are many factors which need to be assessed when evaluating atmospheric mercury transformation and potential deposition scenarios. The NODA must consider the emerging science about the atmospheric chemistry and deposition of mercury. These recent findings indicate that the abundance of oxidized mercury increases with altitude in the troposphere, and airborne halogens and oxidants, such as ozone facilitate the oxidation of elemental mercury, which in turn increases both wet and dry deposition of mercury. The reactions are occurring in areas with high seasonal ozone levels and also appear to take place in the temperate coastal zone.^{6 7 8 9} Researchers have concluded that a short half-life for elemental mercury is probable.¹⁰ As stated in the Department's previous comments to the docket, mercury deposition is not only a local hot spot issue, but also a seasonal, widespread regional deposition issue. The Department believes the use of this new information is critical to any benefits determination conducted by the EPA.

Comments on the Mercury Hot Spot Issue

The Department does not agree with the EPA formal definition of a mercury hot spot. The definition based on modeling mercury deposition rates by utilities and determining how the

⁶ Ebinghaus R. et al. "Antarctic Springtime Depletion of Atmospheric Mercury," *Environ. Sci. Technol.* 36 (2002) 1238- 1244.

⁷ Lindberg SE et al. "Dynamic Oxidation of Gaseous Mercury in the Arctic Troposphere at Polar Sunrise," *Environ. Sci. Technol.* 36 (2002) 1245 - 1256.

⁸ Stedding D. and R. Flegal. "Mercury Concentrations in Coastal California Precipitation: Evidence of Local and Trans-Pacific Fluxes of Mercury to North America." *Journal of Geophysical Research* 107 (2002) 4764.

⁹ Rolffhus K and W Fitzgerald. "The Evasion and Spatial/Temporal Distribution of Mercury Species in Long Island Sound, CT - NY." *Geochimica et Cosmochimica Acta* 65 (2001) 407-418.

¹⁰ Renner, R. "Rethinking Atmospheric Mercury." *Science News*. October 20, 2004.

removal of those emissions will hypothetically reduce the amount of methylmercury in fish is flawed logic. A mercury hot spot is an existing area or region which already has had its natural resources (fish and wildlife) adversely impacted by mercury emissions resulting in the issuance of fish advisories to protect public health. Existing mercury concentrations in fish and wildlife should be used to define mercury hot spots.

Comments on EPA's Proposed Revised Benefits Methodology: Approaches for Modeling the Anticipated Response of Fish Tissues MethylMercury Concentrations to Declines in Deposition

The proposed scale of modeling responses of fish tissues to changes in mercury emissions to the atmosphere is unclear in the NODA. National-scale modeling would appear to have a tendency to dilute or obscure the benefits of reduced mercury emissions, particularly for the northeastern and east coast states. This dilution or obscuring of benefits is not scientifically sound or acceptable. For fresh waters of the United States, modeling should be scaled to at least a regional basis although benefits of mercury emission reductions will be even greater in localities and waters with closer proximity to the sources of mercury emissions.

Comments on EPA's Proposed Revised Benefits Methodology: Fish Consumption and Human Exposure

The EPA and EPRI comment that existing freshwater fish data collected by the States may be biased because it is collected in areas of suspected contamination is misguided. The Department has a fish sampling program that was developed to protect public health and has been collecting samples in areas where the only known mercury contribution is from atmospheric deposition. To suggest that the National Study of Chemical Residues of Lake Fish Tissue Study is superior for use in a mercury benefits determination over data collected by the State Fish surveys is a serious error in judgement by the EPA. The EPA must analyze and integrate the existing fish concentration data collected by the States in any assessment of fish consumption. Contrary to the statement in the NODA that this data will overestimate exposure to anglers and their families, the Department believes this data could be used to get a realistic estimate of exposure to anglers and their families, especially if the anglers are female and of child-bearing age.

The Department is concerned about the use of the National Listing of Fish Advisories.¹¹ If this database is to be used, it is acknowledged that a bias toward overestimation of mercury concentrations will occur on a national scale. However, other information is available within the states for other waters and/or species which could reduce or eliminate this bias. The data would be difficult, at best, to accumulate within the time frame necessary for consideration within this rule-making. A further confounding factor is a lack of uniformity among the states in the criterion used to cause placement of a health advisory on a fishery containing excessive mercury concentrations. For example, many states use the EPA mercury criterion of 0.3 mg/kg, whereas some states, including New York, use the US Food and Drug Administration criterion of 1.0 mg/kg for the establishment of health advice for mercury in fish. Further, for states with a

¹¹ U.S. Environmental Protection Agency. Fish Advisories. 2004. ONLINE:
<http://www.epa.gov/ost/fish/>

large number of waters (such as New York with over 7800 lakes, ponds and reservoirs, over 52,000 miles of streams, and 1.1 million acres of marine waters), it is physically and fiscally impossible to examine fish from all waters for mercury concentrations. Therefore, it is a certainty that the National Listing of Fish Advisories will significantly underestimate the numbers and acreage of waters containing fish with mercury in excess of the EPA criterion. Also, upon review of EPA's National Listing of Fish Advisories web-page, the Department found the data presented for individual fish from New York waters are for the years 1990-1997 only, thus, it is somewhat dated, limited and incomplete. The listing of health advisories is current through 2003, but of little value for EPA's purposes (i.e., to estimate methylmercury concentrations in fish and consumption rates of such fish) because actual mercury concentrations are not given and only species with mercury concentrations above the advisory criterion are listed.

The National Study of Chemical Residues in Lake Fish Tissue was designed to provide a statistical representation (with stratified random sampling by size of lakes) of the relative distribution of mercury in fish throughout the US, although it excludes the Great Lakes.¹² The study was designed to select one composite of a bottom dwelling fish species and one composite of a predator fish species. Recommended bottom dwelling species included brown bullhead or similar catfish species, carp, or white sucker. All these bottom dwelling species are not good accumulators of mercury since they represent lower trophic levels, typically are not predatory, and often do not show substantial accumulations of mercury even when concentrations may be elevated in other species. The predatory species recommended in the project design include largemouth and smallmouth bass and walleye, among others, which represent top level predator species that are good indicators of mercury concentrations within a waterbody, provided they are present within the water. Not all waters sampled will contain one or more of these predator species. Other predator species included in the study (several species of trout plus northern pike and black or white crappie) provide indications of mercury concentrations that are intermediate between the bottom dwelling fish and the top predators.

Use of the National Study of Chemical Residues in Lake Fish Tissue results could present bias based on how the data is presented. First, the five Great Lakes are excluded, and each of the Great Lakes are known to contain species of fish which exceed the EPA mercury criterion of 0.3 mg/kg, therefore, millions of acres of water may be excluded from consideration, i.e., 2.65 million acres in New York alone. Second, the relative proportion of lakes adversely affected by mercury could be characterized as either numbers of waters or surface acreage. Characterization by both methods should be incorporated into an evaluation to give a more accurate description of impact and potential benefits to be derived. Other concerns that the Department has about the utility of this study as it relates to EPA's goals include: 1) measurements of variability in the data will be limited because samples are composites (i.e., only one data record for each species per lake); 2) sample composites limit assessments to one size class of fish per lake, restricting the chance to examine fish size-mercury concentration relationships; 3) this study will only provide a very generic regional assessment of fish mercury concentrations because less than 0.5 % (n = 25) of the lakes in the state were sampled and the distribution of those lakes selected do not reflect the distribution of lakes within the state (lakes in the Adirondacks, a six million acre area known to have mercury issues, represent over 60 % of lakes in New York while only 36 % of the national study lakes in New York were from the Adirondacks); 4) the analysis of only two species per lake is restrictive and the data are further

¹² U.S. Environmental Protection Agency. 2000. Field Sampling Plan for the National Study of Chemical Residues in Lake Fish Tissue. Office of Water and Office of Science and Technology, U. S. Environmental Protection Agency, Washington, DC.

diluted because species selection varied by lake; and 5) overall this was a screening-level study with limited application for determining important regional and size/species-related mercury concentration patterns in a variety of popular and edible fish species.

The Department is concerned with some of the potential assumptions that can be used to determine human exposure and requests that the EPA adhere to the maximum individual risk (MIR) concept as discussed in the Residual Risk Report to Congress.¹³ In the case of methylmercury exposure, the MIR represents the highest estimated risk to an exposed individual based on realistic high-end consumption and fish mercury concentration inputs. The use of the average mercury concentration for the average fish combined with the average fish consumption rate will result in an average benefit determination that will underestimate the benefits of reducing mercury emissions. The EPA exposure handbook has fish consumption rate for the 95th percentile at 25 grams per day for non-subsistence people and 170 grams per day for subsistence fish eaters.¹⁴ The EPA Methyl Mercury Water Quality Criterion uses freshwater fish consumption rates of 156.3 grams/day for children, 165.5 grams /day for women of child-bearing age and 17.5 grams/day for adults in the general population.¹⁵ The benefits analysis should reflect the MIR concept and use the high-end consumption parameters for fish consumption for women of child-bearing age and children to insure a proper accounting of the benefits of reducing mercury emissions for this sector of the population.

Comments on EPA's Proposed Revised Benefits Methodology: How Will Reductions in Population -Level Exposure Improve Public Health

The Department believes the benefits analysis must be focused on the neurodevelopmental health of children. In the benefit analysis referenced in the proposal and identified in the NODA, IQ reduction was chosen as the health endpoint to quantify the benefits of reducing methylmercury exposure in children. The Department is concerned about the use of IQ as the endpoint for benefits quantification across the three major epidemiological studies used to develop the methylmercury reference dose (RfD) because IQ was only directly measured in the New Zealand study. Based upon notes from the Mercury Neurotoxicity Workshop, the selection of IQ as the neurological endpoint for quantification seems to be based almost entirely on the fact that decrements in IQ can be monetized.¹⁶ Therefore, the Department will reserve its comments on this aspect of the benefits analysis until it is available for public review and comment.

¹³ U.S. Environmental Protection Agency. (1999). Residual Risk Report to Congress. Office of Air Quality Planning and Standards. Research Triangle Park, N.C. EPA-453-R-99-001.

¹⁴ U.S. Environmental Protection Agency. Exposure Factors Handbook. 1997. ONLINE: <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12464&CFID=395714&CFTOKEN=21231422>

¹⁵ U.S. Environmental Protection Agency. Water Quality Criteria. Human Health: Methylmercury Criteria Document. ONLINE: <http://www.epa.gov/waterscience/criteria/methylmercury/document.html>

¹⁶ U.S. Environmental Protection Agency. 2002. Mercury Neurotoxicity Workshop Notes. ONLINE: <http://www.epa.gov/ttn/ecas/regdata/Benefits/mercuryworkshop.pdf>

Conclusion

In summary, the NODA contained very little new information and cannot justify a proposed cap and trade program for mercury. The reductions achieved under a stringent MACT emission limit will change many aspects of the IPM, most notably the benefits of the proposed cap and trade program. The benefits analysis should also reflect the MIR and use high-end consumption parameters for fish consumption for women of child-bearing age to insure proper accounting of the public health benefits of reducing mercury exposure for this sector of the population. The Department reiterates its position that the December 2000 finding was correct. The Department opposes EPA's current proposal to control mercury emissions from the utility sector since it will unnecessarily prolong the damage which is occurring to New York's natural resources and sport fishing industry, and continue to present a threat to children's health. The development of a strong set of MACT standards is not only the legally mandated path but also constitutes a more efficient way to reduce all emissions of hazardous air pollutants from the coal fired utility units in a timely manner.

Sincerely,

/s/ - Carl Johnson

Carl Johnson
Deputy Commissioner
Office of Air & Waste Management

Enclosure

Table 1. Estimate of Anthropogenic Mercury Emissions from Stationary Sources in New York

Emission Source	Hg (lbs/yr) in 2003	% of NY Total
FUEL COMBUSTION		
COAL COMBUSTION		
Electric Utilities	976.4	21.6
Residual	6.16	0.1
Industrial/Commercial Boilers	9.9	0.2
OIL COMBUSTION		
Electric Utilities	162.7	3.6
Residual	498	11.0
Industrial/Commercial Boilers	8.6	0.2
NATURAL GAS COMBUSTION		
Electric Utilities	32.4	0.7
Industrial/Commercial Boilers	10.6	0.2
Stationary Internal Engines	318.9	7.1
Residential	NA	
WOOD COMBUSTION		
Electric Utilities	1	0.0
Residual	NA	
Industrial/Commercial Boilers	4	0.1
Fuel Combustion Totals	2028.7	
INCINERATION		
Sewage	614.8	13.6
Hospital Waste	34	0.8
Municipal Waste	678.4	15.0
Hazardous Waste Incineration	3.6	0.1
Incineration Totals	1330.8	
INDUSTRIAL SOURCES		
Cement Manufacturing	601	13.3
Industrial Source Totals	601	
AREA SOURCES		
Cremation	12	0.3
Lamp Manufacturing/breakage	463	10.3
Dental Amalgam	72	1.6
Landfills	3.2	0.1
Area Source Totals	550.2	
Total Hg Air Emissions	4510.7	1.