Testimony of
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New York State Assembly
Committee on Environmental Conservation Hearing:

Mercury Exposure

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Good morning, Assemblyman Sweeney and members of the Assembly Committee on Environmental Conservation. My name is Val Washington and I am the Deputy Commissioner for Remediation and Materials Management for the New York State Department of Environmental Conservation (DEC). Thank you for inviting DEC to testify today. Commissioner Grannis sends his regrets that he is not able to be here to discuss with you the measures DEC believes can and should be taken to reduce mercury impacts on human health and the environment.

Because mercury is one of the most serious environmental contaminants, DEC works to reduce the use, and environmental releases, of mercury. DEC, by necessity, takes a multi-discipline approach to managing mercury. Many DEC program areas share responsibility for environmental protection on mercury issues— from educating the public about mercury issues, regulating mercury air emissions, and remediating and preventing mercury spills, to regulating the management of mercury containing packaging and products and assisting businesses in finding mercury-free alternatives. DEC also monitors water and air concentrations and measures mercury in fish and wildlife to insure the protection of public health and New York's natural resources.

In 1994, New York was instrumental in the establishment of a multi-state collaborative to evaluate and assemble all the information that was available about mercury contamination in the Northeast. The end result was the publication of the *Northeast States and Eastern Canadian Provinces Mercury Study: A Framework for Action*, published in February 1998. This document provided a roadmap for reducing releases of mercury into the environment, as well as the establishment of regional mercury monitoring programs in air, water, fish and wildlife to measure future progress.

In 1998, DEC established a Mercury Work Group which continues to coordinate DEC's response to issues on mercury and the environment. The Mercury Work Group's *Recommendations to Meet the Mercury Challenge* issued in December 2006 describes DEC's efforts to manage mercury pollution issues in New York State and reflects the its vision for moving forward. The Work Group is currently reviewing this document to determine where there is a need to update recommendations to reflect progress and to assess current mercury management issues that were not included in the 2006 document. A copy of the 2006 document can be found on DEC's website at: http://www.dec.ny.gov/chemical/41169.html.

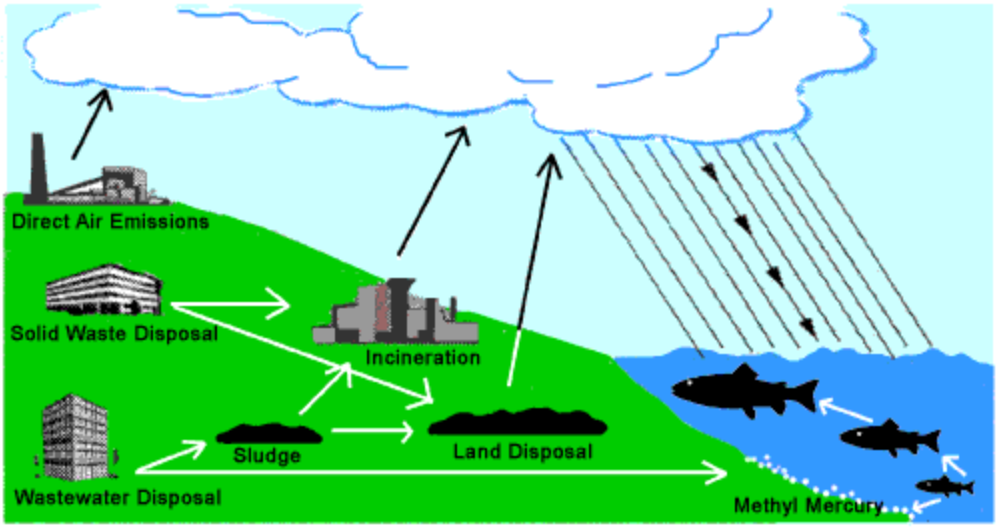
The Advisory Committee on Mercury Pollution, established within DEC under Environmental Conservation Law (ECL) §27-2109, is charged with examining, evaluating and making recommendations concerning the prevention and cleanup of mercury pollution, and the latest technology for the remediation of mercury pollution. The Committee has begun the process of preparing a report to the Governor and the Legislature that addresses several specific mercury related issues, including the extent of any health risks from mercury contamination in the State, especially to pregnant women, children and people that use fish as a major source of food; and the methods available, potential costs, and funding recommendations, to minimize the risks of further contamination or increased health risks to the public. The Committee has reached out to the Mercury Work Group and is reviewing the *Recommendations to Meet the Mercury Challenge* report as a basis for its efforts. The Committee's report is expected to be issued by 2011.

DEC also continues to participate in the Northeast Waste Management Officials' Association (NEWMOA) Interstate Mercury Education and Reduction Clearinghouse (IMERC). IMERC coordinates the efforts of numerous states to help implement their mercury product outreach and educational efforts as well as providing coordinated implementation of their product requirements and restrictions. New York's continued participation in IMERC is very important for New York's residents and businesses and DEC welcomes your support for continuing our membership and participation in IMERC.

I. HOW MERCURY ENTERS THE ENVIRONMENT

Mercury is a naturally occurring element that exists in trace amounts in the earth's crust. Once mobilized in the environment, either as a result of human or natural processes, mercury can undergo a number of chemical transformations and cycle through land, water and air. Mercury can exist as a gas, a liquid, or a solid.

The Mercury Cycle



Mercury is used in a number of common consumer products, such as batteries, fluorescent and compact fluorescent lamps and thermometers, is present as a trace element in oil and coal, and is emitted from electrical power generation facilities and a number of manufacturing processes, such as chlorine and cement production. The most common form, metallic or elemental mercury, is a silvery, odorless liquid; it is the form commonly found in household mercury thermometers. Elemental mercury easily evaporates at room temperature to form an odorless, colorless vapor that can be inhaled. It often escapes to the environment when items containing mercury are broken or thrown away and is released by the high temperature combustion of coal.

Mercury can combine with other elements to form both inorganic and organic compounds. It is toxic to humans and wildlife in both its organic and inorganic forms. Inorganic mercury is bound to other natural elements and is less toxic then organic mercury; it can enter the body through the mouth and skin from products such as disinfectants and fungicides. Inorganic mercury compounds are frequently found in school science labs.

When mercury is deposited from the air into an aquatic environment, inorganic mercury is transformed by bacterial action into biologically toxic, organic methylmercury, which is the most common form of mercury found in fish and wildlife. Exposure to high levels of metallic, inorganic, and especially organic mercury, can damage the nervous system and kidneys. Studies have shown that people who ate fish and grain which contained large amounts of methylmercury had permanent damage to the nervous system and kidneys. Exposure to methylmercury is more of a concern for children and unborn babies because their nervous systems are still developing and the nervous system is a target organ for mercury. Health effects include brain damage, and behavioral and developmental problems. Exposures to high concentration of methylmercury can lead to severe mental retardation and death.

Ingestion of fish is the most common route of exposure of methylmercury to humans. Fish absorb methylmercury directly from water and from eating smaller organisms that contain methylmercury. Greater amounts of methylmercury are found in older and larger fish which tend to eat other fish and organisms. Methylmercury is found throughout the part of the fish that is eaten; therefore, cleaning and cooking methods which may reduce exposure to other contaminants are not effective for reducing exposure to mercury.

II. MERCURY AIR EMISSIONS

Human-caused, or anthropogenic, emissions, both past and present, have resulted in increased concentrations of mercury in the environment. In 1997, it was estimated that approximately 158 tons of mercury are emitted from U.S. manmade sources every year. Over 85% of these emissions are from combustion sources, including fossil fuel and waste combustion. Rates of mercury deposition are increased in the Northeast relative to other parts of the country due to prevailing west to east wind patterns and mercury emissions within the region. In 2008, it was estimated that 50% of the mercury deposition in New York could be attributed to U.S. sources immediately upwind of the State. The mercury emissions from large stationary sources as reported in the 2007 Toxics Release Inventory indicates that the contribution from surrounding States is significant. Mercury emissions in New York were 1,188 pounds per year in comparison to 7,762 and 7,879 pounds per year from Pennsylvania and Ohio, respectively. These values also reflect the aggressive approach taken by DEC to reduce mercury emissions over the past decade.

The majority of mercury in the atmosphere is in the form of gaseous elemental mercury. This form of mercury can travel long distances in the atmosphere for many months. Some of this gaseous mercury is converted into a more water soluble form of mercury, divalent or oxidized mercury, or it can bind with particulate matter or aerosols to form particulate mercury. Oxidized and particulate mercury are inorganic forms of mercury and are rapidly removed from the atmosphere in precipitation and fall onto land and into waterbodies, including the ocean.

In waterbodies and in the sediments of waterbodies, as mentioned above, this mercury may be converted by bacterial action into methylmercury. Acidic lake conditions and elevated ozone levels promote this conversion. By reducing mercury emissions to the atmosphere from anthropogenic combustion sources, DEC hopes to reduce the level of mercury in fish flesh and decrease the subsequent threat to the health of humans and wildlife.

DEC has adopted a number of regulations since 2000 to reduce mercury emissions from anthropogenic sources.

In September 2002, DEC adopted revisions to 6 NYCRR Part 219, Incinerators to reduce mercury emissions from incinerators and municipal waste combustors. Promulgation of this rule lowered the mercury emission limit for large municipal waste combustor plants from 80 micrograms per dry standard cubic meter (ug/dscm) or 85% removal, whichever is less stringent, to 28 ug/dscm or 85% removal, whichever is less stringent. This regulation resulted in mercury emissions reductions of 96% from this source category from the 1998 baseline State mercury inventory. It also significantly reduced the subsequent environmental loading of mercury in New York and the Northeast, since the majority of mercury from this source was the form of inorganic mercury that readily deposits near the source.

In December 2006, DEC adopted 6 NYCRR Part 246, the Mercury Reduction Program for Coal-Fired Electric Utility Steam Generating Units. Part 246 requires the reduction of mercury emissions from the burning of coal in New York's electric generating units. Part 246 was enacted to comply with the federally mandated Clean Air Mercury Rule (CAMR). CAMR was based upon a cap and trade program which New York State opposed on grounds that the mercury pollution in the Northeast would not be sufficiently reduced. New York met the reductions slated for in CAMR and established additional provisions to reduce mercury deposition in a shorter timeframe. Also, New York, along with other States, opposed CAMR because it did not adhere to Section 112(d) of the Clean Air Act Amendments of 1990. On these grounds, CAMR was vacated on February 8, 2008 by the Circuit Court of Appeals for the District of Columbia. On May 20, 2008, the Appellate court rejected the U.S. Environmental Protection Agency's (EPA) and the electric utility industry's bid to overturn the ruling. EPA will need to proceed with the requirements of Section 112(d) of the Clean Air Act and propose a Maximum Achievable Control Technology (MACT) standard as required under the National Emission Standard for Hazardous Air Pollutants for the coal-fired electric utility sector.

Phase I of New York's Mercury Reduction Program for Coal-Fired Electric Utility Steam Generating Units goes into effect January 1, 2010. New York has adopted its own mercury regulations by establishing an emission cap (in pounds per year) for the years 2010-2014. Effective January 1, 2015, Phase II, in conjunction with other electric sector regulations such as the Regional Greenhouse Gas Initiative, and potentially the second phase of the Clean Air Interstate Rule, will establish a facility-wide emission limit for each applicable facility. Each existing facility shall not exceed the emission limit of 0.6 pounds mercury per trillion Btu (0.6 lb Hg/TBtu). DEC expects the mercury emissions to be reduced to less than 150 pound per year by 2015 as a result of the implementation of this rule. This rule will result in mercury emission reductions of 96% from the 1998 baseline State mercury inventory for this source category when fully implemented.

In January of this year, New York, along with the states of Connecticut, Delaware, Illinois, Maryland, Massachusetts, Michigan, New Jersey and Pennsylvania, reached a settlement with the EPA to enforce requirements of the Clean Air Act and require new limits on the amount of mercury and other toxic pollutants that cement plants may emit. The settlement required EPA to

propose new standards for mercury and other hazardous air pollutant emissions from cement plants by March 31, 2009 and, after taking public comment, adopt final standards by March 31, 2010. As required by the Clean Air Act, EPA must require MACT in setting these standards. On May 6, 2009, EPA proposed amendments to the "National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry". DEC submitted comments in support of the federal proposal on August 14, 2009.

Portland cement is the primary cement used in building projects and road construction; it is produced throughout the United States. New York State is home to three Portland cement plants: the Lafarge plant in Ravena, the St. Lawrence plant in Catskill, and the Glens Falls plant in Glens Falls.

DEC has recently worked with the Great Lakes Regional Collaboration (GLRC) to prepare a draft report entitled the "Great Lakes Mercury Emissions Reduction Strategy" for public review and release at the end of this year. The report is the result of collaborative discussions over the past two years among the eight Great Lake States and the EPA to develop mercury reduction approaches. The draft strategy provides recommendations on reducing mercury emissions from seven known sources of mercury contamination to the environment and includes a comprehensive discussion of what is known about other sources of mercury into the environment. DEC expects the draft to be released for public review and comment shortly.

DEC continues to actively pursue mercury emission reductions from all known source categories in a technically sound, legally defensible and scientific manner to protect human health and the natural resources of the State.

III. MERCURY IN WATER

Mercury enters our surface and groundwaters from waste or industrial discharges, runoff from land, atmospheric deposition from polluted air, sediment contamination, and leaks and spills. Fifteen percent of all waterbodies in New York State are impaired due to the atmospheric deposition of mercury. The majority of the waters listed as impaired are located in the Adirondack and Catskill Mountains. In fact, New York State has issued a regional advisory for women and children limiting consumption of fish from all Adirondack and Catskill waters for species of fish that typically have higher levels of mercury contamination.

DEC's Division of Water monitors mercury levels in surface waters and sediments across the state and regulates point source discharges of mercury. One hundred and forty-eight lakes, reservoirs and ponds have been tested since 2001.

In 2007, DEC, in conjunction with the New England Interstate Water Pollution Control Commission and the environmental agencies from Maine, Massachusetts, New Hampshire, Rhode Island and Vermont finalized, and the EPA approved, the Northeast Regional Mercury Total Maximum Daily Load (TMDL). This TMDL addresses 82 waters in New York State listed as impaired under the federal Clean Water Act §303(d) because of mercury contamination and associated fish consumption advisories. The Northeast Mercury TMDL provides the legal mechanism to achieve the Ambient Water Quality Standard (AWQS) for mercury in those 82

lakes. A TMDL is a calculation that establishes the maximum amount or load of a pollutant a waterbody can receive and still meet the AWQS for the waterbody's designated use. A TMDL allocates the allowable load between the various sources of pollution. In the case of this TMDL, the major source of mercury contamination is from atmospheric deposition. This TMDL calls for a 90% reduction in mercury emissions from out-of-state power plants. Achieving this goal is difficult since rainwater has mercury concentrations about 10 times higher than the AWQS.

The vast majority of mercury contamination can be attributed to atmospheric deposition as alluded to previously. The New England Governors and Eastern Canadian Premiers Mercury Action Plan, which calls for virtual elimination of anthropogenic sources of mercury pollution in the environment, led to regional mercury reductions of nearly 75% between 1998 and 2003. However, while this collaboration has worked to achieve regional reductions in mercury emissions, the lack of available options to control out-of-state sources of atmospheric mercury remains a challenge for the region.

In October 2008, the New England states and New York State filed a petition under Clean Water Act §319(g). The petition focuses on the need for a nationwide restrictive MACT standard for mercury emissions from electric generating units under the Clean Air Act Amendments of 1990. As mentioned earlier in my testimony, New York State promulgated 6 NYCRR Part 246, the Mercury Reduction Program for Coal-Fired Electric Utility Steam Generating Units, to reduce mercury emissions in this State by 2015. This emphasis derives from the fact that coal-fired power plants in many Midwest State are unregulated and that CAMR was an inadequate mechanism to reduce these emissions. However, in order to achieve mercury deposition reductions of the magnitude needed to address mercury impaired water-bodies in New York State and the Northeast, as required under the Clean Water Act, highly significant reductions will be needed from many anthropogenic source categories in addition to electric generating units.

DEC is currently developing new guidance to address the discharge of mercury from wastewater treatment plants. This guidance will set reduced discharge limits for mercury and require facilities to implement best management practices within their collection systems and plant sites to meet these limits. It is anticipated this guidance will be available for public comment in 2010.

IV. MERCURY IN FISH AND WILDLIFE

DEC's Division of Fish, Wildlife and Marine Resources is concerned about the impact of mercury on fish and wildlife and human consumers. While DOH is responsible for protecting human health, and setting fish and wildlife consumption advisories, the Division monitors and studies mercury in the environment. DOH's advisories are based on information DEC gathers on contaminant levels in fish and game.

The Division began monitoring mercury concentrations in fish in the late 1960s and conducted a comprehensive Statewide Toxic Substances Monitoring Program from 1976 until 1993. The Division has examined representative waters and fisheries from all major watersheds of the State. The existing mercury database encompasses over 20,000 measurements from greater than 300 waterbodies, including the marine district.

Continued monitoring is necessary to document changes over time and to evaluate the many lakes and ponds that have never been tested. Also, recent research has expanded to include monitoring of mercury in terrestrial animals, including birds, mammals, and invertebrates. This research is important for identifying areas where mercury deposition and accumulation is high and documenting potential impacts to wildlife populations. Details on a number of these studies can be found on DEC's website at: http://www.dec.ny.gov/chemical/8517.html.

V. MERCURY IN PRODUCTS AND SOLID WASTE

Mercury is present in our waste stream due to the discarding of numerous mercury-containing products manufactured and sold over the last several decades. Many products such as fluorescent lamps, batteries, medical equipment, thermometers, laboratory chemicals, and thermostats contain mercury. Improperly disposing of mercury or mercury-containing products through wastewater discharges, spills, or incineration can cause it to be released to the air, water or land.

DEC monitors for mercury at a number of different types of solid waste facilities to ensure adequate controls are in place to limit discharges of mercury to the environment. Monitoring is required for landfill leachate, for the use of compost, and for the land spreading of biosolids and sludges. Source controls and restrictions on mercury products and wastes will continue to improve and reduce mercury in the solid waste stream.

As you know, pollution prevention is the best way to prevent mercury from entering our environment. DEC's Pollution Prevention Unit and the Division of Solid and Hazardous Materials provide information and education to consumers, businesses and farmers to assist them in reducing the use of mercury. Pollution prevention means making changes to products or processes at the source or eliminating these sources so that less pollution is created, thereby minimizing risks to the environment and public health. DEC promotes many efforts to eliminate the use of mercury-containing products wherever possible, and to educate the public on how to properly clean up spills, how to recycle mercury-containing products, and how to properly handle and dispose of mercury-containing equipment. New York boasts one of the most comprehensive sets of mercury informational web pages in the country.

Additionally, a number of New York State laws have been enacted in the last decade to control the amount of mercury in consumer and other items; this will ultimately reduce mercury in the environment.

Effective March 16, 2003, ECL §27-0926 requires that all dentists recycle mercury and mercury amalgam waste generated in their practices. The law also requires that dentists use encapsulated mercury and prohibits the use or possession of elemental mercury not in capsules. Since May 12, 2006, pursuant to DEC regulations in 6 NYCRR Subpart 374-4, Standards For The Management Of Elemental Mercury and Dental Amalgam Wastes At Dental Facilities, dental facilities have been required to install amalgam separators that remove waste amalgam from dental facilities' wastewater. DEC will continue to monitor and enforce the implementation of these requirements.

Chapter 145 of the Laws of 2004 enacted Title 21 of ECL Article 27—Mercury-Added Consumer Products—based on model legislation developed by NEWMOA. Chapter 145 prohibits the sale of mercury-added novelty products and mercury-fever thermometers in New York State and requires labeling and proper disposal or recycling of other mercury-added consumer products. The law also prohibits primary and secondary schools from purchasing or using elemental mercury. This law was subsequently amended and broadened in 2005 (Ch. 676) to include additional products, and in 2006 (Ch. 611) to phase-out the use of mercury-added components in motor vehicles.

While DEC believes these efforts have made a significant impact in reducing mercury in the environment, we also think these laws should be strengthened, as proposed by DEC in its Departmental bill #336 in 2008. Title 21 presently includes batteries within the definition of "mercury-added consumer product" but then excludes button batteries. This needs to be changed. Button batteries should be included in the definition of "mercury-added consumer product" and then their sale prohibited in New York. There presently are non-mercury containing alternatives available for button batteries in consumer products and other states have already banned their sale.

Title 21 should also be amended to remove the exemptions provided to households and small businesses for disposal of mercury containing lamps. DEC believes there is not adequate justification to single out and exempt these specific mercury-added products when all other mercury-added consumer products are subject to Title 21 and need to be managed separately by households and small businesses. Additionally, the exemption for small businesses is inconsistent with existing hazardous waste management requirements for businesses, as required by the Resource Conservation and Recovery Act (RCRA) and Title 9 of ECL Article 27. By deleting this provision in Title 21, it would be clear that small businesses would be required to manage mercury-containing lamps under appropriate regulatory and statutory requirements already in place and specifically designed to ensure their proper management. This is very important as New York is authorized to administer the federal RCRA program and cannot be less stringent than the EPA. DEC also believe that manufacturers of all mercury containing lamps sold in New York State should be required to implement product stewardship programs, as discussed later in this testimony.

Another common sense amendment which should be made to Title 21, specifically ECL §27-2107, is to include express authority for the Commissioner to make a conditional affirmative finding that non-mercury alternatives exist for certain mercury-added products, with limited exceptions based on special circumstances or specific uses. On February 19, 2009, Commissioner Grannis issued *Final Written Findings on Non-Mercury Alternatives to Certain Mercury-Containing Products* pursuant to ECL § 27-2107(8). The Commissioner's findings can be found on DEC's website at: http://www.dec.ny.gov/chemical/41169.html. The statute restricts the Commissioner's findings to prohibiting the sale of mercury-added products for which non-mercury alternatives exist in all instances. There are very limited applications for which there are no non-mercury alternatives for mercury wetted reed relays, mercury flame sensors, mercury thermostats, and mercury thermometers, even though the vast majority of these items could be replaced by non-mercury alternatives. Therefore, the proposed amendment, consistent with other states' legislation, would result in many fewer mercury-added products on the market.

As mentioned earlier, New York State is a member of IMERC. This national organization is foremost in the country for providing information, guidance and assistance to states and businesses on mercury product requirements, restrictions and data. New York's membership leverages the participation of dozens of state government experts and staff to provide consistent and coordinated implementation of mercury product regulations and law. DEC hopes that the legislature will continue to support New York's membership and DEC's participation on this organization.

In 1990, New York State enacted Title 2 of ECL Article 37, Hazardous Packaging which sets concentration limits on four toxic heavy metals, lead, *mercury*, cadmium and hexavalent chromium, in packaging that the public purchases every day. DEC, in departmental bills over the last decade, has sought to update New York's hazardous packaging law to provide consistent implementation and direction with the other states that have adopted similar legislation and to keep it up-to- date with the most recent changes to the model legislation initially developed by the Coalition of Northeastern Governors. An important amendment to this law, as proposed by DEC in its Departmental bill #336 of 2008, would prohibit the sale, offer for sale, or distribution of packaging and packaging components in which the manufacturing process has intentionally introduced any amount of lead, cadmium, mercury or hexavalent chromium. The proposed amendment would prohibit the intentional addition of any of the toxic metals, regardless of concentration.

To fulfill a recommendation in the *GLRC Strategy to Restore and Protect the Great Lakes* to phase out mercury in products in the Great Lakes basin by 2015, the Great Lakes States, Tribes, and Cities commenced development in April 2006 of a basin-wide strategy for the phase-down of mercury in products and waste. This effort resulted in the "Mercury in Products Phase-Down Strategy" published June 12, 2008. The Strategy can be found on DEC's website at: http://www.dec.ny.gov/docs/materials_minerals_pdf/mercphsout.pdf. DEC participated in the development of this Strategy and is implementing many of its recommendations. New York should continue to implement the many recommendations of the Strategy and continue its participation in the basin-wide effort. Your review and consideration of its legislative recommendations and support of this continued effort would be appreciated.

Presently, the preferred management option for mercury containing items is to collect these products at the end of their useful life and send them to a facility to reclaim or sequester the mercury and remove it from the environment. Households and certain small businesses that generate small quantities of hazardous waste may be able to manage mercury containing waste through a local household hazardous waste program. Larger generators of hazardous waste are required to manage mercury containing equipment under DEC's hazardous waste regulations in 6 NYCRR Part 370 as hazardous waste, or may alternatively manage as Universal Waste. National and regional efforts to establish long-term storage options for the management and recycling of elemental mercury and mercury containing wastes must be strengthened. The federal government is working to establish procedures and protocols to sequester the reclaimed mercury from the environment and New York should continue to support these efforts.

Many household products containing mercury, including thermostats, electronic switches, and fluorescent lamps, are commonly accepted in many local household hazardous waste collection

programs. Some communities' programs also accept these items from small businesses. DEC provides partial funding to communities for these programs to encourage the proper management of hazardous materials; however these programs are often held infrequently, are inaccessible or are otherwise unavailable to residents. In these cases, mercury containing items are ultimately discarded in household trash to be landfilled or incinerated. New York State needs a comprehensive and fully funded hazardous household waste collection program statewide to ensure that hazardous materials are properly managed or recycled rather than ending up in the solid waste stream. Many Canadian provinces have established product stewardship programs through legislation to manage this stream.

Mercury containing equipment was recently added to the federal Universal Waste Rule to help properly manage the wide array of items in the commercial, institutional, or industrial waste streams. Mercury containing equipment includes various types of instruments that are commonly used in industrial facilities, hospitals and businesses. Some commonly recognized items include thermometers, thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches. The new rule allows mercury containing equipment waste to be managed as Universal Waste, to facilitate its collection, encourage mercury recovery, and promote safe management of mercury waste. A formal rulemaking to add spent mercury containing equipment to New York State's existing Universal Waste Regulations is underway and will be included in DEC's next hazardous waste rulemaking. In the interim, Commissioner Policy-39 provides for the use of enforcement discretion by DEC, allowing the regulated community to comply with EPA's final rule for mercury containing equipment until appropriate regulatory changes are made.

Finally, but most importantly, New York should implement product stewardship programs for mercury containing products that may still be sold, or in use or storage. New York's program should be consistent with programs adopted in other states and model legislative language developed by NEWMOA and the Product Stewardship Institute. While DEC supports product stewardship implementation for all mercury-containing products, DEC would also consider beginning with legislation that requires that manufacturers take responsibility for end-of-life management of the mercury thermostats, auto switches and lamps, because other states have already acted on these products.

Thermostats: As New York State homeowners take advantage of incentives under the federal stimulus plan to make energy efficiency upgrades, they will need to replace older mercury thermostats. While there is a voluntary manufacturer take back program available, it has not been effective. Manufacturers should be required to take back or fund the collection of old thermostats from consumers or contractors for proper management.

Auto Switches: While the use of mercury auto switches in new vehicles is prohibited in New York, millions of these switches exist in junkyards, scrap yards, driveways and on the highways. New York vehicle dismantlers are required to collect mercury switches before vehicles are crushed or shredded, and to properly manage and dispose of mercury switches; however there is not a convenient or cost-effective method for these businesses to do so. The voluntary incentive fund, under the End of life Vehicle Solutions program established by vehicle manufacturers, provided incentives for dismantlers to collect switches via the use-of postage-paid buckets; but

this fund is all but depleted. While manufacturer incentive payments will continue in states where they are required by law (AR, IL, IA, MA, NJ, RI, UT, and MD) or in those that have a state funded program (NC, SC, and WA), they will cease in states, like New York, that have only a voluntary program.

Lamps: Compact Fluorescent Lamps (CFLs) are now in widespread use in households and businesses. Because CFLs are significantly more energy efficient than incandescent bulbs, their use should be encouraged. However, CFLs contain a small amount of mercury; typically less than five milligrams, although some have been found to contain as much as fifteen milligrams or more. Currently, households and certain small businesses are allowed to legally dispose of mercury containing lamps in their trash, which is often where CFLs wind up because there are limited outlets available for proper end-of-life management. Some voluntary end-of-life management programs are in place, but there needs to be more comprehensive and sustainable long-term solutions to address this growing waste stream. New York should enact legislation that places limits on the amount of mercury in mercury containing lamps, prohibits their disposal, and establishes a free and easily accessible program for providing environmentally safe management alternatives at the end of their useful life.

VI. CONCLUSION

I hope this testimony has been helpful and has provided a further understanding of the broad work DEC's staff has undertaken, and continues to undertake, with regard to mercury management. This work includes monitoring of mercury in the environment, educating the public about mercury and its proper management, and further reducing the introduction of mercury into our environment.

Commissioner Grannis and I look forward to continuing to work with the Legislature to better protect New York's environment from the introduction of mercury, by passing legislation that implements common sense measures that remove mercury from the environment and mandates that manufacturers of mercury containing products manage the products at the end of their useful life. I trust that I have provided you with information that demonstrates the need for these common sense measures.

Thank you again for inviting DEC to this hearing. I am happy to answer any questions.