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"Better Service for a Better Environment"

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RUSSELL J. HARDING, Director

October 6, 1999

VIA E-MAIL

Mr. Greg R. Susanke
Office of Pollution Prevention and Toxics (7404)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Susanke:

SUBJECT: North American Regional Action Plan on Mercury (NARAP) –
Phase II, July 28, 1999

Thank you for sending us a copy of the July 28, 1999, draft North American Regional Action Plan on Mercury (NARAP), Phase II, for review. We appreciate this opportunity.

As the chairman of Michigan's Mercury Pollution Prevention Task Force, I want to offer the following detailed comments in the hope of sharpening the focus of the draft NARAP. My comments are as follows:

Page 3 - Goals: The goals of the mercury NARAP are weak and do not fully meet the recommendations made under Resolution 95-05, mentioned in the Preface. Resolution 95-05 includes a directive to incorporate precautionary approaches, to replace toxic chemicals with substitutes, and to ultimately phase out chemicals that pose unmanageable risks to human health and the environment. The persistence and bioaccumulative nature of mercury, as well as the difficulty in controlling the release of this substance is well known, and the action plan should be revised to better follow this resolution recommendation. Therefore, this NARAP for mercury should have an overall goal of eliminating the intentional mercury use in products and processes, which is a necessary step in achieving the stated goal in the NARAP of "...a reduction in the anthropogenic releases of mercury to the North American environment... to naturally occurring levels and fluxes." Any time mercury is used in products or processes, a proportion of the mercury will be inevitably released to the environment.

Page 4 - General Mercury Use Objective: It states that "where there is an unreasonable or otherwise unmanageable risk of release to the environment or risk to human health, phase-out or ban specific mercury uses." In certain cases, it has already been demonstrated that mercury used in certain settings has shown an unreasonable or

otherwise unmanageable risk of release to the environment or risk to human health. Mercury could be banned or phased out from use in schools. Other nonessential uses of mercury in items such as toys and clothes could also be banned or phased out.

Page 8 - Action item 1a: The major sources in Annex 1 should be listed by actual mercury emissions as opposed to facility capacity, because mercury emissions will vary based on differences in facility type and controls as well as raw material processed. Additionally, this list included in Annex 1 should also be expanded to include such sources listed in Action item 1b on page 9.

Page 8 - Action item 1a, i): The Commission for Environmental Cooperation (CEC) should follow the example already set by the Binational Toxics Strategy for mercury currently being implemented by the United States and Canada. A goal has been set to attain a 50 percent reduction in emissions AND USE of mercury by the year 2006, with the ultimate goal of "virtual elimination."

Including a goal of mercury use elimination will result in a subsequent reduction in mercury releases. Additionally, on page 9 (Action item 1b) these additional sources listed should also be included in the overall reduction goal. Many of these sources are already known to be a significant source of anthropogenic atmospheric mercury.

Page 10 - Action item 2a, iii): When considering a substitution for mercury that should be "cost-effective," the costs of controlling the release of mercury and/or cleaning up a mercury spill, as well as proper disposal from the use of the mercury-containing products, should be incorporated into the decision making process. Also, the costs of fish consumption advisories for mercury and their impact on human health and the recreation industry should be taken into consideration.

Page 11 - Action item 2b): The SAE paper cited here does not specifically recommend replacing mercury switches. It states that "Product Engineers apply life cycle principles to any new components in vehicles that utilize mercury. This would include pollution prevention, possible elimination, and reduced use of mercury in automotive products." Yet, the automobile manufacturers have already demonstrated that mercury switches used in automobiles have been, for the most part, replaced by alternative devices. For example, Chrysler has achieved a 100 percent reduction in mercury switches used for convenience lights switches (see attached letter). The only application where mercury is still used in Chrysler automobiles is within the ABS braking switch for a few select models. Other manufacturers use HID headlamps for a select number of automobiles. The action items should take into consideration the activities that have already been implemented in the United States and Europe and should be much stronger concerning phase-outs and mercury-free substitutions.

Page 12-13: The manufacturers of such mercury-containing items as batteries, electrical switches, relays and lamps should bear the burden for taking back these mercury-containing items at the end of the products' active life. First, mercury-free alternatives should be encouraged or required; however, if the manufacturers continue to manufacture certain essential mercury-containing materials, they should be required

to take these out-of-service materials back and ensure the product safe disposal. An example of this effort currently being implemented in the Great Lakes region and beyond is the Thermostat Recycling Corporation, whereby the mercury thermostats are sent back for proper disposal/recycling at the end of product life or replacement.

Page 14 – iii): Stronger recommendations pertaining to mercury amalgam use in the dental sector should be included. Recommendations strongly encouraging and providing an incentive to insurance companies to develop payment plans which include competitive coverage for alternatives to dental mercury amalgam should be included. The phase-out of mercury amalgams would obviate the need for sophisticated and expensive filtration systems, and proper handling procedures.

Page 16 - Action item 3b): While mercury use reduction and separation is important, both mercury reduction efforts AND mercury controls should be mandated for control of mercury from incinerator waste streams. Such mercury stack controls as scrubbers and activated carbon injection has been demonstrated to effectively reduce mercury emissions at the stack.

Page 16 - Action item 3d): Again, the collection of mercury-containing wastes should actively involve the manufacturer of the mercury-containing materials released into commerce.

Page 17 - Action item 3e): These recommendations should also incorporate a recommendation that addresses any stockpiled mercury. Stockpiled mercury should continue to be safely stored or sequestered as opposed to being sold into commerce.

Page 19 - Action item 4c): Research demonstrating deposition from an anthropogenic source of mercury to a specific water body is needed. Stable rare-earth isotopes could be utilized to trace the movement of the plume from a specific anthropogenic source to a local water body.

Page 19 - Action item 4d): Models that can be used for state and local scale modeling are greatly needed. Models that can be used within 50 km of a specific anthropogenic source are needed. Our understanding of speciation of mercury for this work is also critical.

Page 20 - Action item 4e): Additional inventories that should be utilized are the National Toxics Inventory (NTI) and the Regional Air Pollutant Inventory Development System (RAPIDS). The NTI is a national repository of inventory data and emissions estimates for hazardous air pollutants (HAPs) and their sources. The goal is to obtain facility-specific data such as facility name, location, stack information, emissions, and process descriptions. It is hoped that this data will be sufficient to support exposure modeling and risk assessments. Coupled with this national inventory is a regional inventory of air pollutants called RAPIDS. This EPA funded air pollutant data management system is already being used by the eight Great Lakes states. The RAPIDS provides a uniform method of data collection from each of these states, and is already able to produce

output on point source, area source and mobile sources for criteria and 188 HAP chemicals. Within the next few years, the NTI data will be derived from the RAPIDS system for the Great Lakes region.

Additional comments: From discussions with dairy farm inspectors and laboratory technicians it appears that certain national and international standards effectively require that mercury-containing equipment be used, such as mercury-containing thermometers. The organizations that set such standards (e.g. the American Society of Testing and Materials) should be approached to pursue the possibility of revising these standards to allow the use of mercury-free alternatives.

Generally, the NARAP is lacking a strong pollution prevention focus in terms of source reduction and use minimization.

One final comment. The NARAP offers many recommendations. Alas, resources and time are limited. Some effort at prioritization of effort, at least in a narrative form or introduction, might be helpful. Where do we start? Where are the low-hanging fruit? Where can we make the biggest reductions of mercury use or emissions at the lowest cost? Such an exercise might help get your stakeholders moving in the right direction.

Thank you for your consideration.

Sincerely,

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Attachment

cc: Mr. Russell J. Harding, Director, DEQ