October 7, 1999

North American Commission for Environmental Cooperation
Attn: Mr. Jorge Ocaña
393 St. Jacques Ouest, Bureau 200
Montreal, Quebec H2Y 1N9
Canada

RE: Comments on the North American Commission for Environmental Cooperation Phase 2 North American Regional Action Plan for Mercury

Dear Mr. Ocaña;

Thank you for the opportunity to comment on the Phase 2 North American Regional Action Plan for Mercury (NARAP-M), which the Commission for Environmental Cooperation (CEC) has been developing since the Phase 1 document was released in November, 1997. We support the CEC's focus on mercury in the Sound Management of Chemicals Initiative and the development of the NARAP. We commented on the Phase 1 document and state agency staff participated in two of the three workshops for the Phase 2 document. However, we have serious concerns about this document that we wish to convey to you.

Like its predecessor Phase 1 (November 1997), the Draft Phase 2 North American Regional Action Plan for Mercury relies and focuses heavily on management and relies strongly on vague terms such as 'risk' and 'life cycle management' to determine whether and how mercury should be managed, or occasionally phased out. There is an underlying theme that mercury can be used safely and that use reductions and phase-outs can only occur when life cycle analysis and risk assessment demonstrate that such an action is warranted. This approach to mercury, a persistent bioaccumulative toxic material, is not in our opinion consistent with the laws that established the CEC or with the CEC's own initiatives and resolutions. For these reasons, we believe that the Phase II North American Regional Action Plan for Mercury is not acceptable. It suffers from the same flaws as the Phase I document because it does not embrace, and in fact barely acknowledges, the need to eliminate mercury use in accordance with the CEC's Sound Management of Chemicals Initiative and Resolution 95-05.

The goal of the United States and Canada is Virtual Elimination of mercury release, as embodied in the Canada-US Binational Toxics Reduction Strategy (BNS). Interim targets are described in the challenges of the BNS:

> U.S. Challenge: Seek by 2006, a 50 percent reduction nationally in the deliberate use of mercury and a 50 percent reduction in the release of mercury from sources resulting from human activity. The release challenge will apply to the aggregate of releases to the air

> nationwide and of releases to the water within the Great Lakes Basin. This target is considered as an interim reduction target and, in consultation with stakeholders, will be revised if warranted, following completion of the Mercury Study Report to Congress. Canadian Challenge: Seek by 2000, a 90 percent reduction in the release of mercury, or where warranted the use of mercury, from polluting sources resulting from human activity in the Great Lakes Basin. This target is considered as an interim reduction target and, in consultation with stakeholders in the Great Lakes Basin, will be revised if warranted, following completion of the 1997 COA review of mercury use, generation, and release from Ontario sources.

At minimum, the goals, actions, and timelines of the NARAP-M should reflect the goals, actions, and timelines of the BNS and all three countries should strive to meet this highest common denominator. The NARAP-M's recommendations should not be curtailed because federal law in the three countries does not require certain actions; rather, the recommendations should be expansive so that they embrace the BNS goals and inspire strong action to virtually eliminate mercury use and release.

Detroit in May

The Draft Phase 2 NARAP-M was originally scheduled for public release at a meeting held in Detroit on May 5, 1999. Prior to the scheduled release, it was indicated in public communications and directly to us that this document had a very strong pollution prevention and use reduction focus, and did not suffer from the same deficiencies as the Phase 1 document. However, the attendees (including OEA staff) arrived at the meeting expecting to receive and discuss it, only to be advised that the Draft Phase II NARAP-M had been withheld on very short notice from this scheduled public release. Attendees were advised that its release was delayed because one or more of the three countries required that it go through additional internal governmental review.

If in fact the version scheduled for release in May 1999 did have a strong pollution prevention and use reduction focus, its original recommendations must have been eliminated and the public was never allowed to review or comment on them. The general philosophy of the current document (and many of its specific action items) is that mercury is safe to use and that releases do not represent an environmental health hazard. It appears to have been written by those who have an interest in the continued production, sale, and use of mercury, and who do not acknowledge that mercury is an environmental health hazard. This is clearly inappropriate and it limits public review and discussion of actions that might actually fulfill the goals of eliminating use and release of mercury. It appears that the interests that wish to continue to use mercury with little or no public oversight or regulation have been given the head seat at the discussion table. The Phase II NARAP-M appears to relinquish to these interests the power to define the mercury problem and the solutions to it. If these interests were to decide that there is a problem, their solution would be voluntary self-regulation with minimal public disclosure that mercury is being used. This approach does not provide any incentives for environmental protection and the elimination of environmental health hazards. Nor is this an effective approach for widely used, environmentally mobile, and persistent bioaccumulative toxic materials such as mercury. The Draft Phase 2

NARAP-M makes mention of legislation as needed, but provides no recommendations for legislation, nor any process for establishing legislation after a period of voluntary industry self-regulation. At the NARAP-M meeting held in Mexico City in September 1998 (attended by OEA staff) it was generally acknowledged that voluntary action or commitments are not by themselves sufficient.

Measures that are needed and are in the public interest, and to be phased in on a realistic timeline, are:

1. Formal voluntary agreements between government, industry, and non-governmental organizations with aggressive but realistic and measurable goals for reducing use and release of mercury.
2. Mechanisms to establish laws and regulations when and where voluntary initiatives are not being undertaken or are not adequate to achieve reduction and elimination goals.
3. Laws and regulations governing sales, use, labeling, disposal, and release of mercury by industry in all products and processes, including requirements for disclosure of use and product end-of-life manufacturer responsibility.
4. Dates and mechanisms for phaseout of mercury in products and processes.
5. International provisions for the permanent retirement of mercury removed from commerce
6. Legal and economic instruments to address mercury releases from the energy sector.

There are cost-effective and reliable non-mercury products and technologies on the market and in use today for virtually every mercury application. High-efficiency lighting is the sole product application where it is generally acknowledged that mercury use remains essential, at least for the next five to fifteen years. The lighting industry must continue R&D on efficient non-mercury technologies. Other than this, force of habit and ignorance of mercury's effects are two of the main reasons for continued use of most products. We believe there is no legitimate reason for the introduction of new mercury-containing products into the marketplace.

Specific Comments on the Phase 2 NARAP-Mercury:

Purpose and Goals:
These sections refer only to reduction of releases, and do not mention any reduction or elimination of use. We support the Purpose and Goals that are stated but they are incomplete.

General Release Objective and General Use Objective:
These objectives rely on so many vague and ambiguous terms that they provide no clear goal or direction for the plan. Together, the two objectives focus almost exclusively on releases and management, and do not articulate a goal of virtual elimination or provide direction for preventing or eliminating use wherever feasible. They discuss only *prevention of releases* and *phase-out of uses "where there is an unreasonable or otherwise unmanageable risk of release."* The availability and current use of non-mercury alternatives is not included as criteria in these objectives. As discussed earlier in this letter, these objectives are inconsistent with CEC Resolution 95-05. They could be made consistent by embracing the Precautionary Principle and

clearly stating an overall NARAP-M goal of phasing out of mercury use wherever possible and continued R&D in areas where phaseout is not currently thought to be possible.

We support Phase 2 NARAP-M action items not listed below, with the caution that reduction and elimination of mercury use should be included in the item wherever appropriate.

Action item 1 Management of atmospheric emissions of mercury
Under Action item 1a, we support consistency with the LRTAP-Heavy Metals Protocol language as contained in Annex 1 of the Phase 2 NARAP-M. However, there is considerable variability in facilities and their feedstocks. We believe that it would be more effective to regulate or prioritize major stationary sources on the basis of their annual mercury inputs and outputs (or emissions to air, land, and water). This list likely excludes some facilities or types of facilities that could be significant sources (such as those listed in Action Item 1b), and it may include facilities that have very low mercury inputs.

Action Item 2 Mercury management in processes, operations, and products
It is physically inevitable that mercury will be released to the environment through intentional use. Therefore it is not clear to us how it will be decided that policies and programs for reduction and elimination of mercury are warranted or who will decide that. Some uses of mercury are clearly unnecessary and pose high risk, e.g., school uses, toys, games, clothing, home use fever thermometers, and sporting goods. Use of the Precautionary Principle as embodied in CEC Resolution 95-05 eliminates the need for parties to attempt to reach consensus on such issues, where there is certain to be ambiguity and disagreement about risk and similar concepts, such as life cycle assessment protocols and interpretation of results. Noticeably absent from the plan is an aggressive recommendation for labeling of mercury-containing products. Competitive markets for product use and initiatives to virtually eliminate mercury release cannot function properly without comprehensive mercury product labeling.

We also strongly support efforts to reduce regulatory barriers for management of mercury wastes. For example, many states include mercury wastes in their universal waste rule. We support a coordinated North American Universal Waste-type regulatory structure for all mercury-containing wastes, including dental amalgam waste.

Action Item 2a Life cycle management practices for mercury
We support improved tracking of mercury imports, exports, sales, use, losses and so forth as described in items i. and ii., but we do not understand exactly how that fits into life cycle management practices or the goals or protocols for life cycle management.

Action Item 2b Automotive vehicle and equipment manufacturing sector
We offer extensive comment on this action item because we have had legislative and state agency involvement in this issue since 1992. We can provide supporting documentation to the CEC if so desired. In 1992, automobile manufacturers successfully opposed Minnesota legislation that would have established labeling and management requirements for mercury components in

automobiles, by asserting that they used little mercury and were in the process of phasing it out. In fact, neither was true. In 1995, the domestic auto manufacturers reported that they installed over 10 tons of mercury per year in automobiles. No reductions were documented between 1992 and 1995. In the eight model year changes since 1992, the domestic auto manufacturers have phased out less than half of mercury use, and this is due mostly to DaimlerChrysler's recent policy decision to eliminate mercury-containing switches for convenience lighting in Chrysler-Dodge-Plymouth products. Simultaneously, the industry has introduced and intends to expand a new mercury product application, high intensity discharge (HID) headlamps. Industry literature and promotion of HID headlamps to the general public does not state that these contain mercury. With technological advances in halogen lighting and reflector/lens design and manufacturing, there is no cost, safety, or performance need for the mercury headlamps.

The automakers have stated in meetings and letters that they cannot decide jointly among themselves to phase out mercury devices because that would violate United States antitrust laws. However, the automakers' actions represent a concerted and coordinated effort to block labeling, management, and phase-out requirements and maintain their freedom to use mercury components. Since at least 1995, the automakers have acted together through trade, research, and professional associations AAMA and successor AAM, AIAM, USCAR, and SAE[1] to jointly take actions that question the environmental and legal basis of automotive mercury labeling and phase-out proposals, oppose and delay phase-out proposals, oppose state labeling and management legislation, provide incomplete guidance for others to manage mercury components, and ensure that customers are not aware of mercury use and the availability of alternatives. The manufacturers are claiming that labeling and a phase-out are not warranted, and even if they were warranted, they are not feasible.

However, as noted above, DaimlerChrysler has demonstrated that it is possible to phase out a major mercury application (convenience lighting), and to date it has also chosen not to use HID headlamps in Chrysler-Dodge-Plymouth products.

A phase-out is feasible today. The automakers have access to non-mercury components that meet all desired and necessary performance characteristics. Use of the non-mercury technologies has a very small additional cost per vehicle (significantly less than one dollar per vehicle for all devices), which automakers appear to be unwilling to absorb. The result is that the costs of mercury use, control, and environmental degradation are externalized, rather than internalized through an automobile industry mercury phaseout or industry-funded management programs.

A phase-out is necessary today. Mercury in automobiles ends up in wastewater runoff from auto salvage facilities, in automotive shredder residue, and in emissions and waste products of scrap

[1] American Automobile Manufacturers Association and successor Alliance of Automobile Manufacturers, Association of International Automobile Manufacturers, United States Council for Automotive Research, Society of Automotive Engineers

iron smelters and processing facilities. Significant costs and environmental releases result from mercury in automobiles.

The CEC Action Item for mercury in the automotive industry relies heavily on, and specifically cites, an SAE document that represents guidance for design and mercury switch removal at the end of vehicle life, and shifts management responsibility and costs to auto dismantlers and recyclers. The SAE procedure represents industry's attempt to voluntarily regulate itself. However, the SAE procedure advises designers and engineers to apply life cycle principles when considering the use of mercury components but does not advocate the use of non-mercury components. Its information for end-of-life component removal and management covers only convenience lighting and does not address other automotive mercury components. Therefore the SAE procedure is a voluntary and incomplete solution to the problem of mercury in vehicles.

The automotive industry continues to oppose labeling and management requirements for mercury switches in automobiles. The industry does not want to voluntarily phase out existing mercury uses on an explicit timeline. The industry has also been unwilling to agree not to introduce new uses or not to expand uses that are currently on the market.

Eliminating mercury in automobiles is a cost-effective method of eliminating mercury releases. However, there are millions of automobiles in use which contain mercury components. The solution to mercury in automobiles has five parts:

1. Immediate and permanent tri-national voluntary phase-out of all mercury components in automobile manufacturing, assembly, and imports.
2. Industry-funded outreach to auto dealers, servicers, scrapyards, crushers, and recyclers, providing accurate and comprehensive information for the identification and removal of all mercury components at vehicle end of life.
3. Industry-funded collection and management programs for removed components.
4. Tri-national federal statutory prohibition on mercury components in automotive hulk crushing and recycling, with assignment of responsibility for removal and recycling costs.
5. Federal regulatory relief to remove barriers to removal, transport, and proper management of waste mercury components (Universal Waste/HM 200 approach).

Action Item 2c Mercury cell chlor-alkali sector

We support industry initiatives to reduce mercury use and release in this sector. We strongly urge Mexico’s mercury cell chlor-alkali manufacturers to join the reduction initiative of the US producers. We do not believe that new facilities should be constructed in North America. Many companies have made a policy decision to close or convert facilities of this type, so we believe that economic barriers are not the only factor governing closure/conversion. We strongly support site closure and clean-up measures and standards that prevent present and future mercury releases from closed facility sites. Many of North America’s closed facility sites are believed to be significant emission sources.

Action Item 2d Dry cell battery manufacturing sector
In the United States, Alexander Battery is believed to be the sole supplier of mercuric oxide batteries, primarily to the health care and military sectors. In the US, Alexander Battery provides mercuric oxide battery recycling at a reasonable price to its customers and to any other entity that has mercuric oxide batteries. While we prefer conversion to non-mercury oxide technology, we support and promote this manufacturer-based recycling program that Alexander Battery has established. We also encourage the development and use of non-mercury batteries that meet military specifications, as the military sector reportedly remains a major user.

Action item 2e Electrical switches and relays sector
We support these recommendations as they are the strongest endorsement of product stewardship and phaseout of mercury in the Phase 2 NARAP-Mercury.

With respect to relays, Minnesota state law requires the manufacturers of mercury displacement relays to operate and pay for relay collection and recycling programs for their customers. We believe that this requirement could be relatively easily extended to all of North America, provided that a Universal Waste-type regulatory system was in place. There are few relay manufacturers and these devices are used in specific commercial-industrial applications, so this can be accomplished more readily than it can be for other mercury-containing products. Such a program would be very cost-effective because there is a large quantity of mercury in each device.

Mercury-switch thermostat collection programs are in operation in some states in the US. This is largely a voluntary program operated and paid for by the manufacturers in states that have adopted the Universal Waste rule. We recommend continued work with this industry to ensure that a variety of thermostat collection options are readily available to all residents and businesses in North America and that there are no legal or regulatory collection and transportation barriers.

Action item 2f Lamp manufacturing sector
We support these recommendations and further recommend that lamps be included in Universal-Waste type regulatory programs in Canada and Mexico, as they have been in the US. This should include identification and elimination of any international transport barriers for recycling. Our limited research of the neon manufacturing sector indicates that neon lamp manufacturing and disposal may be a significant source of mercury release and worker exposure. We would support efforts to train neon sign makers in safe handling, use, and disposal practices, and to develop a reliable mechanism for safely dosing neon lamps with the minimum mercury necessary. Such technology may already be available but not used in the neon lamp manufacturing sector.
We also support international labeling of lamps for mercury content, as we support labeling of all mercury-containing products.

Action item 2g Health and dental care sectors
We particularly support item ii, as this is derived directly from the Memorandum of Understanding between the American Hospital Association and the US Environmental Protection Agency. We are also working with our state dental association and other groups to evaluate

amalgam waste collection equipment and develop amalgam waste best management practices and associated educational programs for dental professionals. A more aggressive approach to phasing out amalgam is being taken in Europe, and we should look to Europe for new policies and incentives for more rapid phase-out of mercury amalgam. Dental schools and Continuing Dental Education must have strong curriculum in the areas of non-mercury restoratives and amalgam waste management. Insurance policies that do not have comparable reimbursement for non-mercury restoratives should also be addressed.

Action item 3b Incinerator waste streams
We believe that this item requires a strong recommendation to phase out mercury use, especially in consumer products and dissipative uses, whose disposal in solid waste is not regulated and/or impossible to control. The single largest reduction in mercury use and waste combustor emissions has resulted from US state laws banning the use of mercury in dry cell batteries. This illustrates the value and effectiveness of eliminating mercury use. It also illustrates the effectiveness of local initiatives that do not rely on voluntary industry self-regulation.

Action item 3d Mercury waste collection and handling
We strongly support these recommendations, especially i. Minnesota is the only jurisdiction in North America that has a mercury product manufacturer stewardship requirement in law. We believe that all mercury product manufacturers should operate visible, convenient, and highly effective collection programs for their products, with no direct cost to generators at product end-of-life.

Action item 3f Continuation of reduction measures
We support the inclusion of a third recommendation related to research, education, incentives, and potential laws/regulations for adopting existing and new non-mercury technologies.

Action items under 4 Research, monitoring, modeling, assessment, and inventories.
We generally support all action items under 4, with the caveat that there is already too much mercury in the environment, and there are certain issues and activities that do not require additional study. Another important question remains – Under what organization's sponsorship and funding should these coordination activities take place?

We offer the following specific comments:

- 4c-ii.a. We believe that there is already a consensus on the relative contributions of natural and anthropogenic inputs to the global atmospheric pool and fluxes of mercury.
- 4c-iv. We strongly support this sole mention of alternatives to mercury, and this is needed for a few products and applications. Many alternatives are already in the marketplace and we urge aggressive implementation under Action Item 2.
- 4e-iii. We strongly support this recommendation for a mercury reporting threshold of 10 lb/5 kg in manufacturing, processing, use, release, or other management.

Action item 5 Communication activities
We strongly support all recommendations in Action item 5 as education and communication are critical to the efforts in all three countries, individually and collectively.

Finally, we are deeply concerned that the capability to implement the various provisions of both Phase 1 and Phase 2 NARAP-Mercury differ significantly among the three countries. The United States and Canada are clearly wealthier countries with significantly more resources, expertise, and staff. Both countries need to provide direct financial, technical, and staff support to Mexico. We cannot and should not expect Mexico to autonomously develop and fund its expertise and its activities. The US and Canada have these resources and should more willingly share them as an implicit obligation of NAFTA and NAAEC. There are also disparities between the US and Canada, but these are much less severe. Federal jurisdictions in the three countries should use (or establish) intergovernmental personnel policies that allow and fund these activities. Local jurisdictions in the three countries should be encouraged to do the same.

Thank you again for the opportunity to comment on the Phase 2 North American Regional Action Plan for Mercury. I sincerely hope that the CEC can modify the plan and its objectives to recognize the priority of mercury use reduction and elimination.

Sincerely,

(signature)

Art Dunn
Director

Enclosure and Reference:
Loeb, A.P., "Paradigms Lost: A Case Study Analysis of Models of Corporate Responsibility for the Environment," presented at the Business History Conference, Mar. 6, 1999, forthcoming in Business and Economic History 2000