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Document Control Office (7407)
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M St., SW
Washington, DC 20460

October 18, 1999

Re: Docket Control Number OPPTS-00276

Dear Sir:

GE Lighting appreciates the opportunity to comment on the draft of the second phase of the North American Regional Action Plan (NARAP) on Mercury that was made available in the Federal Register of September 16, 1999 (64 FR 50284). GE Lighting manufactures many lighting products in which mercury plays a critical role in both the functionality and efficiency of the product. For this reason, we have a keen interest in North American plans to address mercury in manufactured products and in the waste stream. In addition to the comments provided below, GE Lighting also supports the comments submitted by the National Electrical Manufacturers Association (NEMA).

The NARAP on Mercury contains four proposed action items related to the lamp manufacturing sector. We comment on each of these items in turn below. These items are listed under Action item 2f in the Plan and are as follows:

i. take actions to promote use of high efficiency low-mercury lamps;
ii. work in partnership with lamp manufacturers to develop a common standard for the maximum mercury concentration in lamps manufactured in North America;
iii. assess and develop management options for other mercury containing lamps, such as specialty lamps and lamps used in "neon" signs; and
iv. encourage sound life cycle management, including the removal and recycling of mercury from waste lamps, and the disposal of these lamps in a manner that precludes release to the environment.

Action item 2f i: take actions to promote use of high efficiency low-mercury lamps

The lamp manufacturing industry in general and GE Lighting in particular have been actively implementing this action item since the early 1990's and will continue to do so. First, the industry has reduced mercury in four foot fluorescents-by far the

largest product line that contains mercury-by over 75% since 1985. The average mercury level in four foot fluorescents has dropped from approximately 48 mg per lamp to less than 12 mg per lamp today. The industry is actively working to continue to reduce these levels and to reduce mercury levels in other lamp products as well.

Second, the industry continues to encourage the use of the most energy-efficient products-such as the T8 fluorescent and the compact fluorescent products, both of which have a low mercury content. Use of fluorescent products in general, and the use of the high efficiency products in particular, is expected to have a significant impact on mercury emissions from electric power plants over time.

GE Lighting plans to continue its efforts to reduce mercury levels in energy efficient products and to actively encourage the use of high-efficiency products. Governmental action in this area, especially in working with industry to encourage the use of energy efficient products, is consistent with GE Lighting's plans.

Action item 2f ii: work in partnership with lamp manufacturers to develop a common standard for the maximum mercury concentration in lamps manufactured in North America

This action item is the most problematic of the four. The establishment of maximum mercury concentrations is both impractical and unnecessary.

There are over one thousand different mercury-containing product types offered by many manufacturers-ranging from the ubiquitous four foot fluorescent to highly specialized technical lighting products. Each product contains a dose of mercury that is tailored to the design and purpose of the product. While industry is actively working to redesign products to reduce these mercury levels, there is no one mercury concentration that is applicable to all products. Therefore, the North American governments would have to create potentially hundreds of different mercury content standards-a truly daunting prospect that would take years to bring to reality. In addition, governments would have to constantly develop new standards as new products are developed. We seriously doubt whether the small amount of mercury contained in lamps truly merits the level of effort governments would have to make to set hundreds of environmentally meaningful content standards.

Even the establishment of maximum content standards for some of the most common product lines (T8s and T12s, for example) is inadvisable. First, mercury content in the most common products is rapidly approaching the lowest level that is needed to preserve the functionality and life of the lamp. This has been achieved without the governmental imposition of content standards-the driving force instead being worldwide concern about the disposal of mercury and hazardous waste regulations. When the environmental concern about a product derives from the escape of pollutants due to improper disposal at the end of life, the appropriate approach is to address management of the waste-not to dictate new product content standards. When the ultimate goal is

recycling, product content standards are completely unnecessary because the mercury is recovered and reused.

Second, the content standards would have to be set at exactly the right level in order avoid environmentally adverse effects. If standards were set too high, then governmental action is wasted because manufacturers can actually reach lower levels and are currently doing so on their own. If content standards were set too low, the life of the lamp would be shortened. Solid and hazardous waste generation rates would increase, mercury use in product manufacture would increase because more lamps would have to be manufactured, and energy efficiency benefits would be reduced.

Third, the standards would have to be flexible enough to take into account variability among plants within the same manufacturer and across the various manufacturers. Mercury levels can vary significantly because of variations in manufacturing equipment and in product design. A T12 produced in one plant does not necessarily have the same mercury level as a T12 manufactured on a different type of equipment in another plant. A T12 produced by one company does not necessarily have the same mercury content as a T12 produced by another company because of variations in lamp design. Given the amount of flexibility needed in a content standard, there is virtually nothing to be gained by establishing one.

For all of the above reasons, GE Lighting strongly encourages the removal of this item from the Action Plan.

Action item 2f iii: assess and develop management options for other mercury containing lamps, such as specialty lamps and lamps used in "neon" signs

GE Lighting is unable to fully comment on this proposed action item without knowing the problem it purports to address. Neon and other specialty lighting products are no different from any other lighting product. Disposal options that are appropriate for the most common lighting products are also appropriate for specialty products. GE Lighting does not believe that recycling or disposal of these products needs to be treated any differently from any other lamp. With no environmental basis for this action item, GE Lighting recommends that it be deleted.

Action item 2f iv: encourage sound life cycle management, including the removal and recycling of mercury from waste lamps, and the disposal of these lamps in a manner that precludes release to the environment

GE Lighting has always supported environmentally sound life cycle management of mercury-containing lamps. However, the risks and releases of each management practice must be well understood before sound life cycle management practices can be encouraged. GE Lighting believes that recycling and landfilling can be sound management practices for lamps if conducted properly. Recycling is not universally available and may not be best, economically or environmentally, if transportation distances are significant or lamp quantities are small. The markets for the

products recovered from lamps also fluctuate, which can result in the need to landfill large quantities of recovered materials for which there is no market. Therefore, while it is important to encourage lamp recycling, it is also important to retain disposal as an option for mercury-containing lamps.

If there are any questions about these comments, please contact me at 216-266-9729.

Sincerely yours,

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