

US EPA ARCHIVE DOCUMENT

DCN FLEP-00007

COMMENTS Gates Corporation

SUBJECT EXCL2

COMMENT In adopting the conditional exclusion proposal, Gates urges EPA to reexamine the necessity of requiring disposal of mercury-containing lamps only in landfills that are permitted under an EPA-approved Municipal Solid Waste permitting program. Because of the relatively low number of permitted MSW facilities, this requirement will limit the available landfill space for disposal of mercury-containing lamps and greatly increase the cost of lamp disposal. EPA should reexamine its scientific information to ensure that the use of MSW facilities is warranted by the environmental risks associated with these lamps. Gates believes that other solid waste disposal facilities could be more than adequate to insure protection of human health and the environment from the small quantity of mercury within the lamps.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

The Agency has concluded that the management of hazardous waste lamps in the municipal solid waste stream is inappropriate. The Agency published a Notice of Data Availability on July 11, 1997 (62 FR 37183). This notice presented data collected by the Agency and an assessment of potential mercury emissions from the management of spent hazardous waste lamps under several regulatory approaches. The Agency believes that management controls for hazardous waste lamps are necessary to minimize releases of mercury and other hazardous constituents to the environment during lamp accumulation and transport, to ensure safe handling of such lamps, and to keep hazardous waste lamps out of municipal waste facilities (both landfills and solid waste incinerators). Mercury is high on the Agency's priority list of toxic pollutants, along with other heavy metals such as cadmium and lead. These metals have been identified as constituents of some waste lamps. The primary health effects from mercury are on the neurological development of children exposed through fish consumption and on fetuses exposed through their mother's consumption of fish.

Spent hazardous waste lamps are a significant source of mercury in the municipal solid waste stream, possibly accounting for as much as 3.8 percent of all mercury now going to municipal landfills. The Agency does not have data characterizing the behavior of mercury in different types of landfills over long time periods, although available data from shorter-term studies suggest that

mercury can be, and has been released to groundwater and air from municipal landfills. (For a more complete discussion of mercury releases from landfills and fate and transport in groundwater, see the Toxicity Section of this Response to Comments document). Data available to the Agency show that mercury can be found in municipal landfill leachate, and EPA remains concerned that landfill releases may pose threats over the long term. The Agency has concluded that some management controls are essential for these wastes.

The universal waste rule ensures that mercury emissions are minimized during all stages of lamp management. The universal waste rule includes storage and packaging standards for handlers of hazardous waste lamps to ensure the proper management of spent lamps and to prevent uncontrolled and unintentional breakage during storage and transport to the recycling or treatment facility. Under the universal waste rule, destination facilities (i.e., recycling facilities and treatment facilities) are subject to all hazardous waste management requirements applicable to permitted or interim status hazardous waste treatment and storage facilities, including the land disposal restriction requirements of 40 CFR Part 268. Such requirements will ensure that mercury is treated prior to being land disposed or recycled. Today's final rule will greatly facilitate the environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

DCN FLEP-00010

COMMENTS Wisconsin Public Service Corporation

SUBJECT EXCL2

COMMENT Another reason for allowing disposal of this waste stream in a municipal landfill is the fact that landfills built today are better than they have ever been. In Wisconsin, current landfill standards require a leachate collection system which includes four feet of compacted clay and a 60 mil HDPE synthetic liner. The EPA's data show that lighting waste disposed of in municipal landfills is not likely to impact groundwater, and that data was collected from facilities prior to the implementation of current Subtitle D standards. Today's landfills are even less likely to impact the groundwater.

RESPONSE

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DCN FLEP-00013

COMMENTS Coors Brewing Company

SUBJECT EXCL2

COMMENT Limiting the proposed exclusion to landfills that are permitted by States that have incorporated EPA's new municipal landfill standards should assure that these lights will be safely managed.

RESPONSE

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DCN FLEP-00014

COMMENTS Diversey Corporation

SUBJECT EXCL2

COMMENT In our opinion, exclusion from the regulation as a hazardous waste is appropriate for mercury lamps provided they are disposed of in municipal landfills approved by the EPA or state agency for state approved solid management plans.

RESPONSE

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DCN FLEP-00068

COMMENTS H.B. Fuller Company

SUBJECT EXCL2

COMMENT Lamp disposal in landfills appears to be a good temporary approach as the reclamation industry builds to meet the demand for this service. We view lamp disposal in landfills as an undesirable option because of the limited data presented in this proposed rule preamble.

RESPONSE

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DCN FLEP-00101

COMMENTS Montana-Dakota Utility Company

SUBJECT EXCL2

COMMENT 5. It is important to note that the assumptions used in examining the leaching of mercury in municipal solid waste landfills did not consider the new requirements the municipal solid waste landfills must meet. The new MSW requirements were developed so the MSW landfills could handle conditionally exempt small quantity generator waste and household hazardous waste. Today's MSW landfills must have liners with a leachate collection system to meet their permit requirements. This type of facility can manage the light bulb waste effectively, and be protective to human health and the environment.

RESPONSE

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DCN FLEP-00157

COMMENTS American Trucking Association, Inc.

SUBJECT EXCL2

COMMENT Issue 2. Should EPA establish a conditional exclusion for mercury-containing lamps from the hazardous waste regulations provided that the lamps are disposed of in appropriately permitted municipal landfills (59FR38293)? Discussion. EPA has requested comment of whether a conditional exclusion should be

established for mercury-containing lamps. ATA fully supports EPA's intent to exclude mercury-containing lamps from regulation under the full subtitle C provisions. We encourage EPA to establish the proposed exclusion which would place a minimal burden on the regulated community. Recommendation. EPA should establish a conditional exclusion for mercury-containing lamps from the hazardous waste regulations provided that the lamps are disposed of in appropriately permitted municipal landfills.

RESPONSE

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DCN FLEP-00171

COMMENTS Monsanto Company

SUBJECT EXCL2

COMMENT The lamps must be disposed of in a municipal solid waste (MSW) landfill that is permitted under an approved MSW permitting program.

As discussed above, disposal of Hg-lamps in a MSW landfill should actually be preferred to the reclamation option, as it results in less environmental release. In fact, once the lamps have been buried in a landfill, the data shows that the mercury is extremely immobile and does not result in problematic releases to either air or the groundwater.

4. THE CONDITIONAL EXCLUSION SHOULD ALSO REACH TO DISPOSAL IN HAZARDOUS WASTE LANDFILLS.

As the conditional exclusion has been proposed by the Agency, it reaches only to: "Spent mercury-containing lamps which are disposed in municipal solid waste landfills in States or Indian Tribes with an EPA approved State or Tribal municipal solid waste landfill program or managed in mercury reclamation facilities that are permitted, licensed or registered by a State or Tribe...." The Agency should consider that generators may also elect to dispose of Hg-lamps, as non-hazardous wastes, in permitted or interim status hazardous waste landfills particularly where the generator owns or operates such a landfill. Clearly, the conditional exclusion should also shelter such disposal as also sufficient under the rules.

RESPONSE

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DCN FLEP-00174

COMMENTER Illuminating Engineering Soc. of N. Am.

SUBJECT EXCL2

COMMENT Position on Subtitle D Landfilling (for landfill owner/operators) A regulatory approach that allows landfilling of spent lamps in state-permitted municipal landfills that meet Subtitle D standards appears to be an appropriate method of disposal. EPA's own studies have demonstrated that landfilling mercury-containing lamps presents little risk to human health or the environment. Mercury has been shown not to leach, or otherwise escape from municipal landfills; air emissions due to breakage can be controlled through proper handling; regulatory provisions should address crushing of lamps as indicated earlier.

RESPONSE

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The current universal waste rule prohibits universal waste handlers from treating universal wastes (40 CFR ' 273.11 and 273.31). The final rule for hazardous waste lamps retains the treatment prohibition for universal waste handlers and applies the prohibition to handlers of hazardous waste lamps. The definition of treatment under RCRA includes any method, technique, or process...designed to change the physical, chemical, or biological character or composition of any hazardous waste, so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The crushing of hazardous waste lamps clearly falls within the definition of treatment under RCRA (40 CFR 260.10).

Some commenters to the proposed spent hazardous waste lamps rule requested that the Agency allow generators of such lamps to crush them on-site before sending them off-site for treatment or disposal. However, as explained in the preamble to the final universal waste rule (60 FR 25519), the Agency believes that it is not appropriate to allow universal waste handlers to treat universal wastes because the handlers are not required to comply with the Subtitle C hazardous waste management standards for generators (40 CFR Part 262). These hazardous waste generators must obtain EPA identification numbers, are subject to the 90-day (or 180-day) accumulation limit, and must comply with the technical standards of 40 CFR Part 265 for storage and accumulation units. Because these standards are relatively stringent, EPA's policy is that generators may treat hazardous wastes on-site, provided that they comply with all applicable requirements of 40 CFR Part 262 for storage and accumulation of hazardous wastes.

Universal waste handlers, on the other hand, are allowed a much longer accumulation time limit of one year and need not comply with specific technical standards for accumulation and storage units. Instead, they are subject only to the general performance standard of managing universal wastes in a manner that prevents releases to the environment. In addition, information available to the Agency on drum top crushing systems for lamps indicates that these units may allow

significant air emissions of mercury, particularly when the units are not in operation, and emissions often may exceed the OSHA limit of 0.05 mg/m³.

For these reasons, the Agency is not allowing crushing of hazardous waste lamps under Federal regulations. However, generators located in a state with an authorized universal waste program may be allowed to crush, universal waste lamps, if within the state authorization process the Agency determines that a state's program allowing generators to treat lamps under controlled or restricted conditions is equivalent (per RCRA ' 3006) to the Federal prohibition. EPA believes that this approach both ensures protection of human health and the environment while allowing for state regulatory programs that include specific standards for the safe crushing of hazardous waste lamps.

DCN FLEP-00176

COMMENTER Coalition of Lamp Recyclers

SUBJECT EXCL2

COMMENT On the other hand, landfilling would not provide any environmental protection for air emissions. In the proposed rule, EPA requests comment on the amount of protection that would be provided from an "EPA approved" municipal solid waste (MSW) landfill. The recyclers are concerned with the assumption that all operating MSW landfills are EPA (or State) approved. States could have partial programs, delaying their requirements for landfill upgrades and individual MSW landfills could have compliance schedules for upgrading that could be integrated over the next several years. The partial programs and compliance schedules for upgrade are not protective for the environment today. The variations of protective measures would be difficult to monitor and track. Another complication that occurs in cities and municipalities is there is no way to guarantee the MSW goes to one dedicated site or another.

RESPONSE

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DCN FLEP-00186

COMMENTS Building Owners or Managers Assn. Int.

SUBJECT EXCL2

COMMENT Conditions of Exclusion BOMA members believe it is reasonable to require as the conditions of this exclusion that the generator dispose of lamps in a municipal solid waste landfill that is permitted by a State/Tribe with an EPA-approved municipal solid waste permitting program or sent to a State permitted, licensed, or registered mercury reclamation facility. At the same time, BOMA urges EPA to also allow lamps to be

disposed of in non-municipal, solid waste, Subtitle D disposal facilities or municipal waste combustors should scientific evidence show that these options are sufficiently protective of the environment.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

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permitted or interim status hazardous waste treatment and storage facilities, including the land disposal restriction requirements of 40 CFR Part 268. Such requirements will ensure that mercury is treated prior to being land disposed or recycled. Today's final rule will greatly facilitate the environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

DCN FLEP-00190

COMMENTER Browning-Ferris Industries

SUBJECT EXCL2

COMMENT 4.0 Existing and Upcoming Regulations Applicable to Municipal

Solid Waste Landfills Are Comprehensive and Mitigate Risks of

Land Disposal of Mercury-containing Lamps 4.1 The Revised
Municipal Solid Waste Regulations Directly Address The Disposal
of-Household and Small Quantity Generator Hazardous Wastes.

Congress, in passage of the Hazardous and Solid Waste Amendments
of 1984 explicitly directed the Agency to revise municipal solid
waste landfill regulations because these facilities could

continue to receive household and small quantity generator
hazardous wastes. Section 4010 states that: "the Administrator
shall promulgate revisions of the criteria . . . for facilities
that may receive hazardous household wastes or hazardous wastes

from small quantity generators ... At a minimum such revisions
for facilities potentially receiving such waste should require
ground water monitoring as necessary to detect contamination,

establish criteria for acceptable location of new or existing
facilities and provide for corrective action as appropriate." In

fact, the Agency went beyond the statutory minimum by also
requiring design and operating requirements in addition to

ground water monitoring, location and corrective action
requirements (see 40 CFR Part 258). Specifically, the Agency

included design requirements for liner and cap systems as well
as requiring leachate collection systems. Additionally,

operating requirements require the removal of leachate (which
must be treated prior to discharge under a national pollution

discharge elimination system (NPDES) permit) and the control of
landfill gas migration (emissions from the control system are

regulated under Title I the Clean Air Act). It is worth noting
that the data available to Agency regarding mercury in municipal

landfill leachate and contaminated ground water comes from
facilities that pre-date the new 40 CFR Part 258 rules. In

addition, many of these landfills may have legally accepted
untreated waste streams containing mercury prior to 1980 that

are hazardous today. Thus, the low levels of mercury found in leachate from these older, less sophisticated landfills should indicate the upper bound of mercury concentrations. Municipal landfills that are in operation today are subject to both ground water monitoring and corrective action. Therefore, releases from municipal landfills that are significant will have to be remediated in a way that satisfies the requirements of 40 CFR Part 258. 4.2 Landfills Will Be Further Regulated In The Near Future Under the Clean Air and Clean Water Acts By this fall, the Agency will promulgate comprehensive landfill air emission regulations under section 111 of Title I of the Clean Air Act (see 56 FR 24468). These regulations will require aggressive gas recovery coupled with flaring or energy recovery. In addition, the Agency is developing treatment standards for landfill leachate under the Clean Water Act that are under court order to be finalized within the next several years (see 57 FR 41000). Finally, run-off from municipal solid waste landfills must be covered under a storm water permit.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

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DCN FLEP-00191

COMMENTS Utility Solid Waste Activities Group

SUBJECT EXCL2

COMMENT II. THE AGENCY HAS AMPLE LEGAL AUTHORITY TO PURSUE THE MSWLF OPTION In view of the technical record demonstrating that mercury-containing lamps do not pose a threat to human health and the environment when managed in MSWLFs, EPA is fully authorized under the statute to determine that the lamps do not warrant hazardous waste regulation when managed in these units.

As a preliminary matter, it is important for EPA to clarify in the final rule that the MSWLF option does not require that a qualifying landfill meet the new 40 C.F.R. Part 258 MSWLF requirements promulgated in October 1991 (56 Fed. Reg. 51016 (Oct. 9, 1991)), but rather that the landfill be permitted by a State/Tribe with an EPA-approved MSW permit program. While we understand that this position is consistent with the literal language of the proposed regulation (see proposed 40 C.F.R. 261.4(b)(16)) as well as with the technical record, the preamble to the rule is ambiguous on this point. Therefore, it is important that EPA eliminate any confusion when promulgating the final rule by making clear that the MSWLF option encompasses any MSWLF that has been permitted by a State/Tribe with an

EPA-approved MSW program and that conformance with the recently promulgated standards for new and expanded MSWLFs is not a precondition to qualifying for the option. [1] [Footnote 1: In fact, USWAG believes that the record evidence justifies extending the MSWLF option to encompass the management of mercury-containing lamps in non-municipal solid waste facilities as well. See 59 Fed. Reg. at 38294.]

RESPONSE

The Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

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hazardous waste lamps to ensure the proper management of spent lamps and to prevent uncontrolled and unintentional breakage during storage and transport to the recycling or treatment facility. Under the universal waste rule, destination facilities (i.e., recycling facilities and treatment facilities) are subject to all hazardous waste management requirements applicable to permitted or interim status hazardous waste treatment and storage facilities, including the land disposal restriction requirements of 40 CFR Part 268. Such requirements will ensure that mercury is treated prior to being land disposed or recycled. Today's final rule will greatly facilitate the environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

EPA does not disagree with the commenter on the authority provided by the statute to conditionally exclude hazardous waste lamps from Subtitle C regulation. However, in light of information obtained from recent studies and comments, the Agency has determined that the universal waste system is the best approach for streamlining the management standards for hazardous waste lamps while ensuring protection of the environment.

DCN FLEP-00201

COMMENTS WMX Technologies, Inc.

SUBJECT EXCL2

COMMENT SUBTITLE D WMX supports a regulatory approach that allows
landfilling of spent lamps in state-permitted municipal
landfills that meet Subtitle D standards for new landfill units.

RESPONSE

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DCN FLEP-00213

COMMENTER Consolidated Edison Company (Con Edison)

SUBJECT EXCL2

COMMENT Con Edison believes that management of mercury-containing lamps in qualified municipal solid waste landfills ("MSWLFs") is environmentally sound and safe. EPA's own data ["Management of Used Fluorescent Lamps: Preliminary Risk Assessment," May 14, 1993, RTI Project No. 94U-5400-010] demonstrate that mercury does not leach from MSWLFs at levels which pose a threat to human life and the environment and that mercury emissions from landfill gas are "very small." We agree with this assessment and point out that, although the recycling of spent lamps may appear to be a preferred alternative in some cases, the management of spent lamps in qualified MSWLFs, especially those equipped with liners and leachate collection systems, may actually be more environmentally protective than sending the lamps to a recycling facility where the method and degree of mercury recovery is uncertain.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

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hazardous waste lamps.

DCN FLEP-00215

COMMENTS Sterling Chemicals, Inc.

SUBJECT EXCL2

COMMENT B. Conditions to the Exclusion. EPA proposes to impose two conditions on the exclusion from Subtitle C for mercury-containing lamps: (1) that the lamps be disposed in State or Tribe-permitted MSW landfills, or sent to State-permitted, licensed or registered reclamation facilities, and (2) that a record be kept by the generator for each shipment of lamps sent off-site to management facilities. Sterling supports the first condition, but offers an alternative to the record keeping condition proposed by EPA.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

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The universal waste rule includes a basic record keeping requirement to track waste shipments arriving at and leaving from handlers of large quantities of universal waste (i.e., one who accumulates greater than 5,000 kg total universal waste at one time). The required records make take the form of a log, invoice, manifest, bill of lading, or other shipping document and are to be maintained for three years. The Agency believes that standard business records that would normally be kept by any business will fulfill this requirement.

DCN FLEP-00215

COMMENTS Sterling Chemicals, Inc.

SUBJECT EXCL2

COMMENT Subtitle D MSWs, if properly designed and operated, should provide ample protection to health and the environment from any potential for mercury to leach from crushed or broken lamps. EPA's data support this conclusion.

RESPONSE

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DCN FLEP-00239

COMMENTS National Sign Association

SUBJECT EXCL2

COMMENT In addition, Alternative I's mandate that waste lamp disposal only take place at EPA-approved, State permitted MSW landfills or recycling facilities provides further assurance that human health and the environment will be protected. The new requirements for MSW landfills promulgated on October 9, 1991 provide the essential controls, including location, design and operation, groundwater, monitoring, corrective action,

financial assurance, and closure conditions.

RESPONSE

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environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

DCN FLEP-00261

COMMENTS New Hampshire Dept. of Env. Services

SUBJECT EXCL2

COMMENT 1. The proposal to allow lamps to go to MSW landfills is based on an October 1992 study which EPA admits is based on incomplete data and did not include detailed modeling analyses or rigorous screening of data quality. 2. The study doesn't address concerns regarding methyl mercury which could be formed when bacteria present in the landfill come in contact with the inorganic mercury supplied by the lamps. Preliminary limited analyses in Minnesota found high concentrations of methyl mercury in condensate from one landfill's gas collection system. Methyl mercury is of much greater concern than inorganic mercury since it is the form of mercury that enters the food chain. 3. The study doesn't address the impact of cumulative landfill emissions of mercury over time.

RESPONSE

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landfills. The Agency does not have data characterizing the behavior of mercury in different types of landfills over long time periods, although available data from shorter-term studies suggest that mercury can be, and has been released to groundwater and air from municipal landfills.

(For a more complete discussion of mercury releases from landfills and fate and transport in groundwater, see the Toxicity Section of this Response to Comments document). Data available to the Agency show that mercury can be found in municipal landfill leachate, and EPA remains concerned that landfill releases may pose threats over the long term. The Agency has concluded that some management controls are essential for these wastes.

The universal waste rule ensures that mercury emissions are minimized during all stages of lamp management. The universal waste rule includes storage and packaging standards for handlers of hazardous waste lamps to ensure the proper management of spent lamps and to prevent uncontrolled and unintentional breakage during storage and transport to the recycling or treatment facility. Under the universal waste rule, destination facilities (i.e., recycling facilities and treatment facilities) are subject to all hazardous waste management requirements applicable to permitted or interim status hazardous waste treatment and storage facilities, including the land disposal restriction requirements of 40 CFR Part 268. Such requirements will ensure that mercury is treated prior to being land disposed or recycled. Today's final rule will greatly facilitate the environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

DCN FLEP-00285

COMMENTER Legislative Commission on Waste Mgmt.

SUBJECT EXCL2

COMMENT Similarly, mercury is emitted into the atmosphere from lamps destined for landfills after they are crushed during transport or, inevitably, crushed at the landfill. Many studies have shown that landfills emit mercury vapors into the environments logic dictates that if incineration is bad for the environment, landfilling, for the same reasons, is also detrimental.

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

The Agency has concluded that the management of hazardous waste lamps in the municipal solid waste stream is inappropriate. The Agency published a Notice of Data Availability on July 11, 1997 (62 FR 37183). This notice presented data collected by the Agency and an assessment of potential mercury emissions from the management of spent hazardous waste lamps under several regulatory approaches. The Agency believes that management controls for hazardous waste

lamps are necessary to minimize releases of mercury and other hazardous constituents to the environment during lamp accumulation and transport, to ensure safe handling of such lamps, and to keep hazardous waste lamps out of municipal waste facilities (both landfills and solid waste incinerators). Mercury is high on the Agency's priority list of toxic pollutants, along with other heavy metals such as cadmium and lead. These metals have been identified as constituents of some waste lamps. The primary health effects from mercury are on the neurological development of children exposed through fish consumption and on fetuses exposed through their mother's consumption of fish.

Spent hazardous waste lamps are a significant source of mercury in the municipal solid waste stream, possibly accounting for as much as 3.8 percent of all mercury now going to municipal landfills. The Agency does not have data characterizing the behavior of mercury in different types of landfills over long time periods, although available data from shorter-term studies suggest that mercury can be, and has been released to groundwater and air from municipal landfills. (For a more complete discussion of mercury releases from landfills and fate and transport in groundwater, see the Toxicity Section of this Response to Comments document). Data available to the Agency show that mercury can be found in municipal landfill leachate, and EPA remains concerned that landfill releases may pose threats over the long term. The Agency has concluded that some management controls are essential for these wastes.

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Simultaneous to the effort to modify the management of hazardous waste lamps, the Agency has been considering the regulation of mercury air emissions from a variety of sources. On December 19, 1995, the Agency issued a final rule that set air pollution limits for mercury in addition to eight other pollutants from large municipal waste combustors (60 FR 65387). The Agency has also finalized a rule that sets performance standards for new municipal solid waste landfills (MSWLFs) and emission guidelines for existing MSWLFs (61 FR 9905; March 12, 1996). The Agency has proposed rulemakings that limit emissions of various air pollutants including mercury from hazardous waste incinerators, cement kilns, and lightweight aggregate kilns, medical waste incinerators, and off-site waste operations (61 FR 17358, April 19, 1996). EPA is planning to propose rulemakings addressing air emissions from industrial and commercial waste incinerators

and boilers and additional controls for MSWLFs in the near future.

DCN FLEP-L0001

COMMENTER Environmental Technology Council

SUBJECT EXCL2

COMMENT The "conditional exclusion" option would allow these hazardous wastes to be placed in any municipal solid waste (MSW) landfill in any state with an EPA approved or partially approved solid waste program. The Agency's MSW regulations, however, are not intended to control air and groundwater releases of a toxic metal such as mercury.

VII. THE PROPOSED "CONDITIONAL EXCLUSION" HAS ALMOST NO CONDITIONS, AND WOULD NOT BE PROTECTIVE OF HUMAN HEALTH OR THE ENVIRONMENT Under the proposed "conditional exclusion," used fluorescent lamps could be disposed in "municipal solid waste landfills in States or Indian Tribes with an EPA approved State or Tribal municipal solid waste landfill program" (proposed option 1, new 261.4 (b)(16)). In general, however, municipal landfills are not designed, operated or enforced to prevent releases of hazardous wastes.

In addition, nothing in the regulatory language for the proposed exclusion mandates that mercury lamps be disposed of only in MSW landfills meeting the new Part 258 requirements. Instead, the lamps could be disposed of in any MSW landfill, as long as that landfill's located in a state with an EPA-approved MSW landfill program. Proposed ' 261.4(b)(16).

B. A "Conditional Exclusion" for Fluorescent Lamps from Federal Hazardous Waste Regulations Would Greatly Increase Confusion Under the proposed exclusion option, some fluorescent lamps would be regulated as hazardous waste and some fluorescent lamps would be exempt from hazardous waste regulations. Specifically, fluorescent lamps would be exempt if disposed in a municipal solid waste landfill in a state with an EPA approved state solid waste landfill program. [28] [Footnote 28: 59 Fed. Reg. At 38302.] Therefore, lamps would be hazardous if they could not be sent to a municipal solid waste landfill in a state with an EPA approved solid waste landfill program. Thus, in states without EPA approved programs or without a large number of municipal landfills, the lamps would likely end up as hazardous. In other words, by the very nature of the proposed exemption, in some

states used fluorescent lamps would be hazardous waste, and in some states they would not. In fact, depending upon the status of specific landfills, some used lamps would be hazardous waste in the same state that other used lamps were not. Talk about confusion!

RESPONSE

In today's rule, the Agency is not finalizing the conditional exclusion option for the management of hazardous waste lamps. Today's final rule adds hazardous waste lamps to the universal waste regulations under 40 CFR Part 273. The universal waste rule provides a reduced, or streamlined set of requirements for handlers of hazardous waste lamps (i.e., universal waste rule is less stringent than full Subtitle C management standards).

The Agency has concluded that the management of hazardous waste lamps in the municipal solid waste stream is inappropriate. The Agency published a Notice of Data Availability on July 11, 1997 (62 FR 37183). This notice presented data collected by the Agency and an assessment of potential mercury emissions from the management of spent hazardous waste lamps under several regulatory approaches. The Agency believes that management controls for hazardous waste lamps are necessary to minimize releases of mercury and other hazardous constituents to the environment during lamp accumulation and transport, to ensure safe handling of such lamps, and to keep hazardous waste lamps out of municipal waste facilities (both landfills and solid waste incinerators). Mercury is high on the Agency's priority list of toxic pollutants, along with other heavy metals such as cadmium and lead. These metals have been identified as constituents of some waste lamps. The primary health effects from mercury are on the neurological development of children exposed through fish consumption and on fetuses exposed through their mother's consumption of fish.

Spent hazardous waste lamps are a significant source of mercury in the municipal solid waste stream, possibly accounting for as much as 3.8 percent of all mercury now going to municipal landfills. The Agency does not have data characterizing the behavior of mercury in different types of landfills over long time periods, although available data from shorter-term studies suggest that mercury can be, and has been released to groundwater and air from municipal landfills.

(For a more complete discussion of mercury releases from landfills and fate and transport in groundwater, see the Toxicity Section of this Response to Comments document). Data available to the Agency show that mercury can be found in municipal landfill leachate, and EPA remains concerned that landfill releases may pose threats over the long term. The Agency has concluded that some management controls are essential for these wastes.

The universal waste rule ensures that mercury emissions are minimized during all stages of lamp management. The universal waste rule includes storage and packaging standards for handlers of hazardous waste lamps to ensure the proper management of spent lamps and to prevent uncontrolled and unintentional breakage during storage and transport to the recycling or treatment facility. Under the universal waste rule, destination facilities (i.e., recycling facilities

and treatment facilities) are subject to all hazardous waste management requirements applicable to permitted or interim status hazardous waste treatment and storage facilities, including the land disposal restriction requirements of 40 CFR Part 268. Such requirements will ensure that mercury is treated prior to being land disposed or recycled. Today's final rule will greatly facilitate the environmentally-sound collection and increase the proper recycling or treatment of spent hazardous waste lamps.

DCN SCSP-L0009

COMMENTS National Electric Manufacturers Assn.

SUBJECT EXCL2

COMMENT To err on the side of caution, however, NEMA recommends that lamps containing mercury only be disposed in State-permitted landfills meeting the Federal standards.

RESPONSE

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leachate, and EPA remains concerned that landfill releases may pose threats over the long term. The Agency has concluded that some management controls are essential for these wastes.

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DCN FLEP-00268

COMMENTS Indiana Chamber of Commerce

SUBJECT EXCL2

COMMENT Selection of the conditional exclusion alternative would mean continued viability of cost-effective methods for businesses concerned about environmental protection but unable to absorb additional tracking and compliance mandates. Substantial protection against environmental degradation is provided by allowing properly permitted landfills to accept these lighting wastes. Permitted landfills are equipped to handle and dispose of lighting wastes in the most efficient and effective manner, both in terms of cost and environmental protection.

RESPONSE

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The Agency has concluded that the management of hazardous waste lamps in the municipal solid waste stream is inappropriate. The Agency published a Notice of Data Availability on July 11, 1997 (62 FR 37183). This notice presented data collected by the Agency and an assessment of potential mercury emissions from the management of spent hazardous waste lamps under several regulatory approaches. The Agency believes that management controls for hazardous waste lamps are necessary to minimize releases of mercury and other hazardous constituents to the environment during lamp accumulation and transport, to ensure safe handling of such lamps, and

to keep hazardous waste lamps out of municipal waste facilities (both landfills and solid waste incinerators). Mercury is high on the Agency's priority list of toxic pollutants, along with other heavy metals such as cadmium and lead. These metals have been identified as constituents of some waste lamps. The primary health effects from mercury are on the neurological development of children exposed through fish consumption and on fetuses exposed through their mother's consumption of fish.

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The universal waste rule includes a basic record keeping requirement to track waste shipments arriving at and leaving from handlers of large quantities of universal waste (i.e., one who accumulates greater than 5,000 kg total universal waste at one time). The required records make take the form of a log, invoice, manifest, bill of lading, or other shipping document and are to be maintained for three years. The Agency believes that standard business records that would normally be kept by any business will fulfill this requirement.