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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Secretary, U.S. Nuclear Regulatory Commission
Washington DC 20555
ATTN: Rulemaking and Adjudications Staff

RE: Rulemaking on Controlling the Disposition of Solid Materials: Scoping Process for Environmental Issues and Notice of Workshop

To Whom It May Concern:

Waste Management, Inc. (WM) is pleased to comment on the NRC's request for comments on the scope of proposed rulemaking on Controlling the Disposition of Solid Materials. WM is the nation's largest operator of recycling and disposal facilities for industrial, commercial, and residential customers. We operate approximately 300 landfills, of which approximately 250 are municipal solid waste landfills subject to EPA regulations at 40 CFR Part 258 pursuant to Subtitle D of the Resource Conservation and Recovery Act (RCRA), and 5 hazardous waste landfills subject to 40 CFR Parts 260-272 pursuant to Subtitle C of RCRA. WM is also majority shareholder in the Recycle America Alliance, which processes approximately 6 million tons of commercial and residential recyclables through a national network of over 150 material recovery facilities. WM has considerable interest in the potential use of its facilities for the management of solid materials generated by NRC-licensed materials.

WM has no interest in managing material that is regulated as a radioactive waste by the federal government or by any individual state. However, WM is interested in providing environmentally responsible services to its customers. WM understands the interests of NRC licensees who generate solid material[1] to use safe and economic means for the disposition of the materials. In general, municipal waste landfills such as those owned and operated by WM have been used for the management of Naturally Occurring Radioactive Materials (NORM). Solid materials that have been released from NRC licensed facilities after the required surveys required by 10 CFR part 20 also may have been disposed into MSW landfills. Acceptance of the latter materials, sometimes unknowingly, by a landfill operator may cause state regulatory or local community concern for a number of reasons, which are detailed below. If NRC and its licensees wish to use the infrastructure of municipal and hazardous waste landfills for the future

[1] WM uses the term "solid material" consistent with the explanation in the NRC Notice, which is materials that have no, or very small amounts of, radioactivity resulting from licensed operations, and which do not contain appreciable amounts of radioactivity and therefore subject to existing regulations at 10 CFR part 61.

disposition of released solid materials, a number of improvements to the current system must be undertaken.

1. **NRC must establish a "bright line" for radioactivity in solid materials below which its disposition in landfills causes no additional risk or negligible risk.** Landfill owners and operators currently operate under strict rules for accepting waste streams, to include universal prohibitions against receipt of liquid, hazardous, or radioactive wastes, and site-specific or state-specific limitations or prohibitions on special wastes, such as biosolids from wastewater treatment plants. With reasonable diligence, compliance with such requirements is straightforward and can be accomplished by such means as visual inspections, knowledge of a customer's operations and waste streams, and radioactive detection equipment. When an NRC licensee releases solid materials into commerce based on a survey, however, the landfill operator may or may not know the origin of the waste or its radioactivity levels, and thus may accept wastes that he would otherwise be inclined to refuse. [2] In addition, even with knowledge of the radioactivity level, in the absence of a generally accepted no-risk or negligible risk standard, community concern or opposition may seriously impede the landfill's ability to continue even routine waste stream operations. This may also result in the demand by communities and regulators for additional and expensive monitoring of the landfill operation.

   The solution to this dilemma for the landfill operator is for the NRC and the federal and state governments to determine an appropriate threshold of radioactivity for released materials under which the public can be assured of negligible risk, and for which regulation as a radioactive waste is not warranted. In addition, *the NRC and its sister regulatory agencies must be prepared to defend that standard to the public whenever and wherever it is challenged.* It cannot be left to the landfill operator, who will be unschooled in the physics or risk sciences associated with radioactivity, to respond to public concerns. Secondly, the bright line must be enforced *at the point of generation* of the solid materials, as the generator must remain ultimately responsible for the proper disposition of his solid materials.

2. **NRC must justify its bright line by including landfills in its risk assessment process.** Public acceptance of landfilling of low activity solid material will require that the NRC risk assessment process specifically examine the fate and transport of the radioactive materials in a landfill that may lead to human exposure. The risk assessment must assume that landfills may receive NORM and potentially other sources of radioactive materials (smoke detectors, watches) in the municipal waste stream. The risk assessment must demonstrate that the addition of solid materials from NRC-licensed facilities will not create unacceptable cumulative levels of radioactivity at the landfill at established threshold levels of radioactivity.

3. **NRC must properly balance security issues with the landfill operator's right-to-know his customers and their waste streams.** WM's recent experience in California exemplifies the problem created when the source of released materials is kept from the waste service provider. In September 2002, the Governor of California issued an executive order imposing a moratorium on the disposal of decommissioned materials into

[2] The detection limits for any individual landfill's radioactivity detectors may be insufficient to screen all released solid materials.

Class III landfills,[3] which led to the issuance of implementing orders by the Regional Water Quality Control Boards. Those orders required landfill operators to provide notice to waste generators and place warning signs at their waste management units. However, WM was unable to identify the relatively small number of likely sources of decommissioned material. Indeed, the State Department of Health Services refused to release the names of licensed radioactive material facilities that would likely generate decommissioned waste, with the explanation that it could not compromise the security of these facilities. In order to comply with the orders, and at great expense and inconvenience, WM mailed over 190.000 notices to all its commercial and industrial customers, to be repeated every six months for the duration of the moratorium.[4] This demonstrates a serious imbalance between security needs and public health protection, if not common sense. It is imperative that a landfill operator knows the sources of any of his accepted waste if he is to be fairly held responsible for the protection of the environment.

In its notice, the NRC posed a number of questions regarding its consideration of landfill disposal. Following are WM's responses to those questions:

(a) and (b). Modern landfills operating in compliance with either RCRA Subtitle D or Subtitle C requirements provide for isolation of material from public exposure. The design and operating controls ensure long-term encapsulation through the use of impermeable liners and caps[5], and air and leachate collection systems ensure proper treatment and control of emissions and discharges for pollutants of concern. (Leachate is often managed off-site in publicly owned treatment works, however, and the threat of inadvertently generating a radioactive-contaminated leachate is of considerable concern to the landfill operator)[6]. These regulatory requirements for design and control systems are identified in permits subject to state and federal enforcement. Hazardous waste is subject to cradle-to-grave management through a manifest system, which provides a level of scrutiny absent from the non-hazardous and radioactive solid materials waste programs.

(c) As noted above, WM recommends the establishment of a risk-based dose level of radioactivity for landfill disposal, which would include consideration of worker safety as well as environmental exposure. WM believes that bright line approach will provide for public certainty regarding safety and will be implementable and enforceable. WM does not believe that the different design and operating standards for hazardous v. municipal waste landfills are of a degree to warrant setting different dose levels for different disposal regimes.

(d) WM does not believe NRC need be involved in permitting, licensing, or otherwise overseeing disposal facilities that accept released solid materials that meet the bright line test. With the

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[3] In California, Class III landfills are those landfills that may accept municipal solid waste but may not accept hazardous materials or other contaminated wastes that could threaten water quality.

[4] This number is about 10 times the total number of NRC and state-agreement licensed facilities in the United States.

[5] RCRA Subtitle C hazardous waste landfills must minimally use double composite liners. Subtitle D municipal solid waste landfills must use single composite liners or their performance equivalent. Industrial landfill and construction and demolition landfill standards are set at the state level. See 40 CFR part 264 and 40 CFR part 258 for hazardous and municipal waste landfills respectively.

[6] Recently, the California Department of Health Services suggested that the landfill leachate generated by one of WM's California landfills might become regulated as a radioactive waste if the radioactivity contained within the leachate could be demonstrated to be derived from decommissioned waste previously received at the facility. Fortunately, WM was able to demonstrate that the radioactivity associated with the leachate was explainable due to the presence of potassium – a common constituent of solid waste.

consensus acceptance of the bright line, state environmental regulators can proceed with the necessary oversight for receipt of complying waste. NRC should focus its oversight on generators of solid materials to ensure that proper protocols for releasing materials are followed. Those protocols should include a requirement to notify the recipient of the waste of its origin and test results. Manifesting released waste may be appropriate.

If NRC and EPA rulemaking were established in this area, WM would consider receipt of released solid material on a case-by-case and site-by-site basis, taking foremost into account State requirements and community interests.

If you have any questions regarding these comments, or desire additional information, please contact me at your convenience.

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