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Chief, Rules and Directives Branch
Mail Stop T6-D59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

- Re: Request for Comments on the Nuclear Regulatory Commission's Low Level Radioactive Waste Program, FR July 7, 2006 (Volume 71, Number 130)
- Re: Request for Comments on the Nuclear Regulatory Commission's Low Level Radioactive Waste Program; Extension of Comment Period, FR July 27, 2006 (Volume 71, Number 144)

Dear Sir:

EnergySolutions provides comments to the U.S. Nuclear Regulatory Commission (NRC) on the agency's Low-Level Radioactive Waste (LLRW) program as requested in the referenced Federal Register. Each of the topics and questions are stated below with our response provided.

EnergySolutions was created earlier this year to accommodate the merger of four key industry leaders - Envirocare of Utah, BNG America, the D&D division of Sciencetech, and Duratek. EnergySolutions now offers customers a full range of integrated services and solutions, including characterization, decommissioning, decontamination, site closure, transportation, nuclear materials management and the safe, secure disposition of nuclear waste. EnergySolutions also provides services that support uranium conversion and enrichment, fuel fabrication, nuclear reactor operations, spent fuel management and storage, reprocessing and HLW vitrification.

Regarding the Current LLW Disposal Regulatory System

1. What are your key safety and cost drivers and/or concerns relative to LLW disposal?

Worker safety and environmental protection are of primary concern to EnergySolutions' disposal operations at both the Clive, UT and Barnwell, SC facilities. Cost considerations are secondary to safe and compliant performance. The drivers are to meet all license, permit and regulatory obligations in the conduct of our operations. A key concern is that we continue to be able to provide safe, compliant and effective disposal of radioactive wastes based on a risk-informed approach.

SUNSI Review Complete

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2. What vulnerabilities or impediments, if any, are there in the current regulatory approach toward LLW disposal in the U.S., in terms of their effects on:

a. Regulatory system reliability, predictability, and adaptability;

At recent meetings of the Advisory Committee on Nuclear Waste (ACNW) discussing low level waste and decommissioning, a clear and risk-informed approach to regulating radioactive waste is a key to success. The reliance on origin-based definitions for radioactive materials and wastes leads to confusion and inordinate emphasis on where materials came from rather than the inherent risks related to disposal. As noted in the ACNW LLW Working Group, wholesale changes to the regulations for LLW (10 CFR 61) are not needed. The disposal system has been proven at Barnwell, SC and Clive, UT through disposal operations with current and future performance within regulatory requirements. Adaptability is provided in the regulations already.

b. Regulatory burden (including cost); and

By making the system of requirements more risk-informed, it is likely that the regulatory burden, and in turn the costs, will be reduced.

c. Safety, security, and protection of the environment?

EnergySolutions believes that its disposal operations are safe, secure and protective of workers and the environment and remain committed to these objectives. This has been accomplished in spite of changes in industry practices, the types and quantities of wastes being generated and the requirements for the disposal of emerging wastes.

Potential Alternative Futures

3. Assuming the existing legislative and regulatory framework remains unchanged, what would you expect the future to look like with regard to the types and volumes of LLW streams and the availability of disposal options for Class A, B, C, and greater-than-class-C (GTCC) LLW five years from now? Twenty years from now? What would more optimistic and pessimistic disposal scenarios look like compared to your "expected future"?

EnergySolutions has been able to understand changes in the technical requirements for management of radioactive wastes generated by its customers as the industry has evolved over the last several decades. Based on the merger of the companies that make up EnergySolutions, our capabilities are expected to improve into the future. We will continue to work with our customers and clients to develop risk-informed solutions for radioactive waste management and disposition.

4. How might potential future disposal scenarios affect LLW storage and disposal in the U.S., in terms of:

- a. Regulatory system reliability, predictability, and adaptability;**
- b. Regulatory burden (including cost); and**
- c. Safety, security and protection of the environment?**

Radioactive waste has been successfully managed, processed, stored, and disposed for 35 years at EnergySolutions facilities. While these management strategies have most often been driven by technical and cost management issues, they have sometimes been driven by political decisions that have impacted the availability of disposal capacity to generators based on their location in a given Compact or State.

Can the Future Be Altered?

5. What actions could be taken by NRC and other federal and state authorities, as well as by private industry and national scientific and technical organizations, to optimize management of LLW and improve the future outlook?

EnergySolutions was pleased to participate in the ACNW Low-Level Waste Working Group and agrees that the ACNW letter dated August 16, 2006 is on the right track to use a risk-informed approach to improve the path forward for the regulation of radioactive wastes. By making use of the existing flexibility provided in 10 CFR 61.58, 10 CFR 30.11; 10 CFR 40.14 and 10 CFR 20.2002 and related provisions, the NRC could develop or revise guidance for making waste determinations for current, new, or emerging radioactive wastes. As an example noted during the Working Group meeting, the NRC Branch Technical Position on Concentration Averaging and Encapsulation, January 17, 1995, could be re-evaluated using a risk-informed approach for sealed sources and irradiated hardware.

Which of the following investments are most likely to yield benefits:

- a. Changes in regulations;**

Changes to regulations are not needed. The disposal system outlined in Part 61 has become understood and been implemented effectively by generators, processors, and disposal operators.

b. Changes in regulatory guidance;

Enhanced risk-informed guidance as discussed in response to other questions in this letter would be welcomed.

c. Changes in industry practices;

Industry practices will continue to result in compliant and predictable waste forms at reasonable costs as has occurred over the last three decades.

d. Other (name).

6. Are there actions (regulatory and/or industry initiated) that can/should be taken in regard to specific issues such as:

a. Storage, disposal, tracking and security of GTCC waste (particularly sealed sources);

With appropriate credit given to robust waste disposal packaging and concentration averaging, many of the smaller and intermediate sealed sources may be classified as Class B or C waste, not greater than Class C waste. Risk-informing the classification methods for sealed sources could provide prompt, secure disposal for more of these materials.

b. Availability and cost of disposal of Class B and C LLW;

Should options for disposal of Class B and C waste be closed, interim storage of these wastes for some period of time can be carried out in a compliant manner. Some small generators may find storage to be a financial burden. The availability of disposal is a political question rather than a technical one. In addition as a further safeguard, the NRC has emergency access provisions to disposal should any eminent health and safety question arise.

c. Disposal options for depleted uranium;

This is a real opportunity to implement risk-informed approaches for disposal of particular wastes. Depleted uranium (particularly in metallic form) is overregulated. While currently regulated as a LLW, it seems more appropriate to consider its disposal with uranium mill tailings or other materials that have a comparable longevity and low intrinsic hazard and well established disposal requirements.

d. Extended storage of LLW;

Extended storage of LLW should not be encouraged. Permanent disposition is preferred to minimize worker dose and potential releases of radioactive materials to the general public, and to minimize overall waste management costs.

e. Disposal options for low-activity waste (LAW)/very low level waste (VLLW);

Subtitle C and D landfills regulated by the EPA or an authorized EPA State Program can be a viable option for disposal of some of these VLLW and LAW with proper evaluations for worker and environmental protection. EPA should be encouraged to pursue its rulemaking, and the NRC should cooperate in this effort. NRC should also complete its rulemaking on the Disposition of Solid Materials. This would establish a risk-informed approach to set national standards that could serve as a basis for these alternate disposal approaches.

f. On-site disposal of LLW;

On-site disposal defined as placement of wastes for permanent disposition by individual generators is generally not a good practice for commercial LLW. Permanent disposal should be performed in compliance with disposal regulations at facilities designed for permanent disposal. Temporary placement of wastes as a storage practice is reasonable though care must be taken to assure that temporary storage does not result in unacceptable releases of radioactive materials over time or the creation of a burden that would need to be addressed at decommissioning.

g. Other (name).

7. What unintended consequences might result from the postulated changes identified in response to questions 5 and 6?

By developing enhanced guidance and using the existing regulations, EnergySolutions does not foresee any problems or unintended consequences from implementing more risk-informed methods of LLW management.

Interagency Communication and Cooperation

8. Based on your observations of what works well and not-so-well, domestically and/or internationally, with regard to the management of radioactive and/or hazardous waste, what actions can the NRC and other Federal regulatory agencies take to improve their communication with affected and interested stakeholders?

EnergySolutions has participated in:

- o Public meetings and information gathering where NRC staff has made presentations on emerging regulations and guidance,
- o Working Groups Meetings of the ACNW,
- o Activities of the CRCPD and OAS where state regulators and NRC participants have given presentations,
- o Providing written comments on proposed rulemakings, and
- o Opportunities like this request for written comments.

All of these activities allow for members of the licensed community, as well as other stakeholders, to offer their views and insights. These efforts are productive and should be continued especially for developing enhanced guidance.

9. What specific actions can NRC take to improve coordination with other Federal agencies so as to obtain a more consistent treatment of radioactive wastes that possess similar or equivalent levels of biological hazard?

This is a multi-agency task that would require multi-agency cooperation to effectively develop regulations. Coordination with other federal agencies would involve technical, legal and administrative issues that are not likely to be easily resolved. The NRC should focus on making the bases for its regulations risk-informed and clear for the regulated communities and the public.

We appreciate the opportunity to provide these comments which are based on our 35 years of experience in radioactive waste management. We would be pleased to meet with the NRC to discuss these positions more completely. If you have any questions, please feel free to contact me at 803 758-1809.

Sincerely,

William B. House
Vice President, Regulatory Affairs