

# PUBLIC SUBMISSION

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Remediation of Residual Radioactivity During Operations

**Comment On:** NRC-2011-0162-0012  
Consideration of Rulemaking to Address Prompt Remediation of Residual Radioactivity During Operations:  
Public Webinar and Request for Comments

**Document:** NRC-2011-0162-DRAFT-0013  
Comment on FR Doc # 2013-13079

## Submitter Information

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78 FR 33008

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**Address:** United States,

## General Comment

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See attached file(s)

## Attachments

EnergySolutions LLC, Comments on Rulemaking to Address Prompt Remediation of Residual Radioactivity During Operations; Docket ID NRC-2011-0162

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**SUNSI Review Complete**  
**Template = ADM - 013**  
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**Add= J. Shepherd (5852)**

August 1, 2013

CD13-0224

Cindy Bladey, Chief  
Rules, Announcements, and Directives Branch (RADB)  
Office of Administration  
Mail Stop: TWB-05-B01M  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

**Subject: Considerations of Rulemaking to Address Prompt Remediation of Residual Radioactivity During Operations**

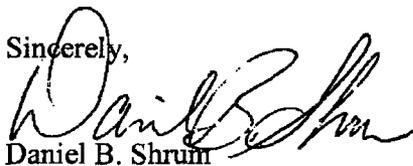
**Reference: Docket ID NRC-2011-0162**

Dear Ms. Bladey:

EnergySolutions hereby submits the comments contained in the attachment in response to the subject notice. We appreciate the opportunity to provide comments to consider in a rulemaking to 10 CFR Part 20. EnergySolutions believes that the NRC should proceed with this rulemaking and has provided comments.

Thank you again for this opportunity to comment. Questions regarding these comments may be directed to me at [\(801\)649-2109](tel:(801)649-2109) or [dshrum@energysolutions.com](mailto:dshrum@energysolutions.com).

Sincerely,



Daniel B. Shrum  
Senior Vice President  
Regulatory Affairs

Attachment

**Prompt Remediation Rulemaking  
Answers to Specific Questions from the Federal Register Notice**

1. Should the NRC proceed with rulemaking to address remediation of residual radioactivity during the operational phase? Why or why not?

*EnergySolutions* believes that the NRC should proceed with the rulemaking. Staff has presented a well-reasoned rationale for promptly addressing the presence of radioactive contamination at a licensed site prior to decommissioning under certain circumstances. Careful identification of the appropriate thresholds for action, discussed further below, will be critical to ensuring that the rule does not impose an unreasonable regulatory burden.

2. If the NRC does implement a rule that requires prompt remediation of radioactive spills and leaks, what concentration, dose limits, or other threshold limits should trigger prompt remediation? Should the thresholds differ for soil versus groundwater contamination?

*EnergySolutions* does not believe that there is justification for the imposition of concentration, dose limits, or other threshold limits that would trigger prompt remediation. As noted in the Technical Basis (p.7), NRC regulations in 10 CFR Part 20 provide dose limits for the protection of workers and members of the general public. Furthermore, also noted by staff, licensees are compelled by the principal of ALARA (as low as reasonably achievable) to reduce worker dose below regulatory limits. When a licensee wishes to terminate its license and release a site, it is regulated by the limits in the license termination rule. Thus no basis has been provided, nor does *EnergySolutions* find that a basis exists, for the imposition of new dose or concentration limits associated with the prompt remediation rulemaking.

3. Should the NRC allow licensees to justify delaying remediation under certain conditions when the contaminant level exceeds the threshold limit? If yes, then what conditions should be used to justify a delayed remediation?

Yes, there are cases when action can and should be delayed. NRC is principally basing its position (as articulated in the draft Technical Basis) that a new prompt decommissioning standard is required on the presumption that it is necessary, or at least useful, for controlling the cost of decommissioning at the time of license termination and reducing the probability of future legacy sites. As pointed out by staff, standards to protect workers and the public from radiation dose arising from licensed activities already exist. Thus, it is reasonable to presume that some cases are justified for delayed remediation.

EnergySolutions agrees that the factors identified in the Technical Basis and listed below in question four are sound reasons for delaying remediation.

4. Should factors such as safety, operational impact, and cost be a basis for delaying remediation?

Yes. In the Technical Basis (p. 8), staff correctly cites each of these reasons as providing a sound basis for delay. Principal among these justifications is cost. As staff also points out in the Technical Basis (pp. 6, 8, 12), existing NRC regulations suffice to provide adequate health and safety for both workers and the general public. Thus, there are two prime reasons a prompt remediation rule is warranted:

1. To address contamination that poses a health and safety risk for spreading in the environment,
2. To remediate contamination that left unaddressed would complicate or increase the cost of remediating a facility at the time of decommissioning.

The proper context for the consideration of prompt remediation is in contrast to the effort required to remediate the contamination at the time of license termination.<sup>1</sup> That is the case assuming that there is not a need to remediate the contamination to comply with other health and safety requirements in NRC regulations.

5. If the NRC implements a rule that allows licensees to analyze residual radioactivity to justify delaying remediation, then what should the licensee's analysis cover? For example, what kind of dose assessment, risk-assessments and/or cost-benefit analyses should be performed to justify delayed remediation? What other types of analyses are relevant?

A licensee should be obligated to justify delaying remediation by preparing a risk analysis that considers the two potential problems cited above in answer to question four. The risk analysis should address the prospect of the spread of the contamination over time. For example, if a spill or leak of contamination should contaminate groundwater, or pose the risk of contaminating groundwater, this may provide a basis for prompt remediation. The basis for taking action given the results of this risk analysis also is twofold:

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<sup>1</sup> While it is conceivable that the second of the considerations we list above could, in the extreme, lead to a legacy site, staff concedes that this is more a theoretical than practical problem (Technical Basis, p. 8).

1. Does the contamination pose the prospect for a violation of existing NRC regulations?
2. If not, how if at all would the contamination complicate the future remediation of the site at the time of decommissioning?

In the event that the contamination is likely to result in a violation of NRC regulations, then prompt remediation is warranted and should be required. If not, the risk assessment should be combined with a cost-benefit analysis to compare the advantage of prompt remediation with deferring remediation until the time of decommissioning. The results of this cost-benefit analysis should be used to determine if prompt remediation is justified.

6. If the NRC implements a rule that allows licensees to analyze residual radioactivity to justify delaying remediation, what role should the cost of prompt remediation versus remediation at the time of decommissioning play in the analysis?

For the purposes of a prompt remediation rule, presuming that there are no immediate threats to worker or public health and safety, cost should be the dominant consideration. In the Technical Basis (pp. 7-8), staff cites five reasons that support a new rule. Each of these supporting factors explicitly refers to the potential lack of resources or funds, or to increased cost that may be incurred, by deferring remediation to some future time. Given that staff seems to be justifying the rule largely on the basis of cost, it is prudent that cost should play a predominant role in the determination of the timing of remediation.

7. If the NRC implements a rule that allows licensees to analyze residual radioactivity to justify delaying remediation, what standards or criteria should a licensee use to demonstrate to the NRC that a sufficient justification to delay remediation has been met?

In our answer to question four, *EnergySolutions* proposes a two-part test for when a new prompt remediation standard should apply. The second is straight-forward and would require a comparison of the cost of prompt remediation with future remediation at the time of decommissioning. Such an analysis would rely on engineering economics principles for comparing present and future costs, combined with assumptions regarding the nature of the future decommissioning. Such assumptions and cost projections already are addressed in NRC regulations and guidance.

The first test, as to the potential for contamination to spread to the extent that existing regulatory dose standards might be exceeded, would rely on modeling and judgment. The application of these techniques is customary for demonstrating compliance with the license termination rule and poses no unreasonable challenge for compliance.

8. Are there any other alternatives beyond those discussed in the Draft Regulatory Basis document that the NRC should have considered to address prompt remediation?

*EnergySolutions* believes that the alternatives considered by the NRC are sufficient to bound the problem. Furthermore, we concur with the staff's preferred approach, "...to require licensees to evaluate site conditions and to establish and document a risk-informed course of action."

9. What other issues should the NRC staff consider in developing a technical basis for a rulemaking to address prompt remediation of residual radioactivity during site operations?

None