

Rulemaking1CEm Resource

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To: Rulemaking1CEm Resource
Subject: Comment on ANPR-26, 50, 52, 73, and 140 - Regulatory Improvements for Decommissioning
Attachments: NRC-2015-0070-DRAFT-0074.pdf

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Regulatory Improvements for Power Reactors Transitioning to Decommissioning

Comment On: NRC-2015-0070-0007

Regulatory Improvements for Decommissioning Power Reactors; Extension of Comment Period

Document: NRC-2015-0070-DRAFT-0074

Comment on FR Doc # 2015-32599

Submitter Information

Name: Daniel Shrum

General Comment

See attached file(s)

Sent on behalf of Daniel B. Shrum

Senior Vice President, Regulatory Affairs

EnergySolutions LLC

Attachments

CD16-054 EnergySolutions Comments on NR ANPR 3-15-16 To Carol Gallagher from Dan Shrum



March 15, 2016

CD16-0054

Carol Gallagher, Office of Administration
Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**Subject: Comment on Advanced Notice of Proposed Rulemaking
Regulatory Improvements for Decommissioning Power Reactors**

Reference: Docket No. NRC-2015-0070

Dear Ms. Gallagher:

EnergySolutions hereby provides comments on the Advanced Notice of Proposed Rulemaking for regulatory improvements for decommissioning power reactors. Our detailed responses to the questions in the Federal Register notice are provided in the attachment to this letter.

EnergySolutions is in favor of the U.S. Nuclear Regulatory Commission (NRC) initiating a rulemaking that would provide regulatory stability for nuclear power plants undergoing decommissioning. Regulatory requirements are necessary in order to replace the existing practice of obtaining dozens of exemptions to NRC regulations in order to allow a nuclear power plant to be decommissioned. The current practice of using exemptions to maintain compliance with NRC regulations is not efficient and is subject to interpretation on a case-by-case basis. Inadvertent consequences of maintaining regulatory compliance by exemption has found licensees in situations where enforcement discretion was required until the oversight was corrected or the decommissioning activity was completed. Thus formal regulatory control that eliminates the need for exemptions is appropriate.



Thank you for this opportunity to comment. Questions regarding these comments may be directed to Gerry van Noordennen at (224) 789-4025 or gpvannoordennen@energysolutions.com.

Sincerely,

Daniel B. Shrum
Senior Vice President
Regulatory Affairs

Enclosure: Comment on Advanced Notice of Proposed Rulemaking
 Regulatory Improvements for Decommissioning Power Reactors

**ENERGYSOLUTIONS COMMENTS ON NRC’s ADVANCED NOTICE OF PROPOSED
RULEMAKING (ANPR) ON
REGULATORY IMPROVEMENTS FOR DECOMMISSIONING POWER REACTORS**

ANPR Section/NRC Questions	EnergySolutions Comments
<p>FRN Section A. Questions Related to Emergency Preparedness Requirements for Decommissioning Power Reactor Licensees</p>	
<p>EP-1:</p> <p>a. What specific EP requirements in § 50.47 and appendix E to 10 CFR part 50 should be evaluated for modification, including any EP requirements not addressed in previously approved exemption requests for licensees with decommissioning reactors?</p> <p>b. What existing NRC EP-related guidance and other documents should be revised to address implementation of changes to the EP requirements?</p> <p>c. What new guidance would be necessary to support implementation of changes to the EP requirements?</p>	<p>No comment.</p> <p>No comment.</p> <p>No comment.</p>
<p>EP-2:</p> <p>a. What tiers and associated EP requirements would be appropriate to consider for this approach?</p> <p>b. What factors should be considered in establishing each tier?</p> <p>c. What type of basis could be established to support each tier or factor?</p> <p>d. Should the NRC consider an alternative to a tiered approach for modifying EP requirements? If so, provide a description of a proposed alternative.</p>	<p>ES endorses the NEI comments on these EP-2 questions regarding a tiered approach for modifying EP requirements.</p>
<p>EP-3:</p> <p>a. Presently, licensees at decommissioning sites must maintain the following capabilities</p>	<p>No comment.</p>

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<p>to initiate and implement emergency response actions: Classify and declare an emergency, assess releases of radioactive materials, notify licensee personnel and offsite authorities, take mitigative actions, and request offsite assistance if needed. What other aspects of onsite EP and respond capabilities may be appropriate for licensees at decommissioning sites to maintain once the requirements to maintain formal offsite EP are discontinued?</p> <p>b. To what extent would it be appropriate for licensees at decommissioning sites to arrange for offsite assistance to supplement onsite respond capabilities? For example, licensees at decommissioning sites would maintain agreements with offsite authorities for fire, medical, and law enforcement support.</p> <p>c. What corresponding changes to § 50.54(s)(2)(ii) and 50.54(s)(3). U.S. Federal Emergency Management Agency (FEMA)-identified offsite EP deficiencies and FEMA offsite EP findings, respectively) may be appropriate when offsite radiological emergency plans would no longer be required?</p>	<p>No comment.</p> <p>No comment.</p>
<p>EP-4:</p> <p>a. Should § 50.54(q) be modified to recognize that nuclear power reactor licensees, once they certify under § 50.82, "Termination of License," to have permanently ceased operation and permanently removed fuel from the reactor vessel, would no longer be required to meet all standards in § 50.47 and all requirements in appendix E? If so, describe how.</p>	<p>NRC should establish a standard, systematic, risk based path for Licensees to reduce EP capabilities to be commensurate with the risk reductions following permanent reactor shutdown.</p> <p>EnergySolutions agrees that once nuclear power reactor Licensees certify under § 50.82, "Termination of License," to permanently cease operation and permanently removed fuel from the reactor vessel, that the licensees should no longer be required to meet all standards in § 50.47 and all requirements in 10 CFR 50 Appendix E. This reduction is justified because the risk is significantly lower once a nuclear power plant is permanently shut down. The regulations should recognize that risk drops substantially once the fuel is removed from the reactor and drops</p>

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<p>----- -----</p> <p>b. Should nuclear power reactor licensees, once they certify under § 50.82 to have permanently ceased operation and permanently removed fuel from the reactor vessel, be allowed to make emergency plan changes based on § 50.59, "Changes, Tests, and Experiments," impacting EP related equipment directly associated with power operations? If so, describe how this might be addressed under § 50.54(q).</p>	<p>further as the used fuel cools down in the spent fuel pool.</p> <p>NRC should structure the applicability of Emergency Plan requirements such that the exemptions that have been routinely sought by licenses for regulatory relief after permanent shut down are no longer needed. One way to accomplish this would be to modify the specific requirements to have an exit path from compliance for a given a set of conditions at the plant. For example, once a licensee has certified under § 50.82 that it has permanently ceased operation and permanently removed fuel from the reactor vessel, then certain requirements in the regulations should no longer be applicable. Changes to the applicability statements may be an appropriate means to eliminate exemption requests.</p> <p>----- -----</p> <p>Yes, nuclear power reactor licensees that have certified under § 50.82 to have permanently ceased operation and permanently removed fuel from the reactor vessel should be allowed to make emergency plan changes that do not require prior NRC approval.</p> <p>These changes should be based on a revised accident analysis of record for the permanent shut down condition which would redefine the design basis events for the station in its defueled condition. The revised accident analysis would be reviewed using the § 50.59 process to document the acceptability of the analytical basis change against the § 50.59 criteria.</p> <p>Once the revised accident analysis has been prepared by the licensee, an emergency plan change that reflects the reduced risks at the shutdown unit could be prepared and approved by the licensee. Part of the review process would include an evaluation under § 50.54(q) to determine what portions of the emergency plan can be reduced or eliminated while still providing</p>

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	<p>for the protection of public health and safety. This would enable a licensee to incrementally reduce emergency requirements as risk is reduced. Compliance with § 50.54(q) could best be achieved by redefining the standard for <i>reduction of effectiveness</i> as given in § 50.54(q)(1)(iv) to establish that effectiveness is to be evaluated against a revised standard that acknowledges the reduction in risk at a permanently shut down and defueled reactor.</p> <p>Ultimately, the licensee should be able to remove the requirement for offsite response capability. To support this outcome, the revised accident analysis will also need to include a spent fuel heat-up evaluation as outlined in NUREG-1738, <i>Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants</i>, to determine when adequate response time is reached for the zirconium fire concern discussed in the NUREG. This evaluation, coupled with the accident analysis demonstrating that the dose from the most limiting event will not exceed the EPA Protective Action Guidelines (PAG), would allow the licensee to further change the emergency plan to eliminate the need for offsite emergency response.</p>
<p>EP-5: Should § 50.54(t) be clarified to distinguish between EP program review requirements for operating versus permanently shut down and defueled sites? If so, describe how.</p>	<p>Yes. ES endorses the NEI comments on EP-5 that propose removal of the requirement that the EP program review include an evaluation for adequacy of interfaces with State and local governments.</p>
<p>EP-6: What changes to § 50.72(b)(3)(xiii) should be considered for decommissioning sites?</p>	<p>No comment.</p>
<p>FRN Section B. Questions Related to the Physical Security Requirements for Decommissioning Power Reactor Licensees</p>	
<p>PSR-1: Identify any specific security requirements in § 73.55 and appendices B and C to 10 CFR part 73 that should be considered for change to reflect differences between requirements for operating reactors and permanently shut down and defueled reactors.</p>	<p>The following areas should be considered for change: 10CFR 673.55©(5); 10CFR 75.55(h)(3)(ii); 10CFR 73.55(i)(4)(i); 10CFR 73.55(i)(4)(i)(ii)(G); 10CFR 73.55(k)(5)(ii); 10CFR 73.55(k)(5)(iii); 10CFR 73.55(n)(i); 10CFR 73.55(n)(ii); 10CFR 73.55(n)(iii); 10CFR 73.55(p)(1)(i); 10CFR 73.55 (p)(ii). 10CFR 73.55 App B (IV) & (V).</p>

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<p>PSR-2: The physical security requirements protecting the spent fuel stored in the SFP from the design basis threat (DBT) for radiological sabotage are contained in 10 CFR part 73 and would remain unchanged by this rulemaking. However:</p> <p>a. Are there any suggested changes to the physical security requirements in 10 CFR part 73 or its appendices that would be generically applicable to a decommissioning power reactor while spent fuel is stored in the SFP (e.g., are there circumstances where the minimum number of armed responders could be reduced at a decommissioning facility)? If so, describe them.</p> <p>-----</p> <p>b. Which physical security requirements in 10 CFR part 73 should be generically applicable to spent fuel stored in a dry cask independent spent fuel storage installation?</p> <p>-----</p> <p>c. Should the DBT for radiological sabotage continue to apply to decommissioning reactors? If it should cease to apply in the decommissioning process, when should it end?</p>	<p>The following areas should be evaluated: Cyber Security Plan; Design Basis Threat; Force on Force; Target Sets; Performance Evaluation Program; Access Authorization; Insider Mitigation Program; Vital & Protected Areas; Search Programs; Illumination: Communication Requirements; Response Requirements; Suspension of Security Measures; Appendix B Training & Qualification Plan; Appendix C Safeguards Contingency Plan; Part 26 Requirements.</p> <p>-----</p> <p>10CFR 73.51.</p> <p>-----</p> <p>The DBT for radiological sabotage should be reviewed and revised for decommissioning reactors as the requirements (threats) are significantly different when a plant reaches this milestone. When a plant permanently defuels, the spectrum of postulated targets associated with the design bases threat scenarios of radiological sabotage is significantly reduced.</p>
<p>PSR-3: Should the NRC develop and publish additional security-related regulatory guidance specific to decommissioning reactor physical protection requirements, or should the NRC revise current regulatory guidance documents? If so, describe them.</p>	<p>The NRC should develop and publish new additional security-related regulatory guidance specific to decommissioning reactor physical protection requirements. There have been many similar documents and many revisions to these documents published throughout the years. A new document needs to be published to allow for common understanding across the industry.</p>
<p>PSR-4: What clarifications should the NRC make to target sets in § 73.55(f) that addresses permanently shut down and defueled reactors?</p>	<p>The NRC needs to clarify if in fact there is a regulatory requirement (Need for) target sets to be established and why. There have been exemptions to this rule allowed within the industry for permanently shut down and defueled reactors.</p>
<p>PSR-5: For a decommissioning power reactor,</p>	<p>(Part 1) A redundant secondary alarm station is</p>

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<p>are both the central alarm station and a secondary alarm station necessary? If not, why not? If both alarm stations are considered necessary, could the secondary alarm station be located offsite?</p>	<p>not necessary for a decommissioning power reactor because of the reduced radiological consequences from sabotage as the use of only a single alarm station is sufficient to provide reasonable assurance that an appropriate response to security events and alarms could occur. Previously within the industry, the NRC has not identified any design basis radiological sabotage threats which would endanger public health and safety due to the non-existence of a Secondary Alarm Station at a decommissioning power reactor. The requirement to maintain a Secondary Alarm Station would be an unnecessary regulatory burden for the Licensee.</p> <p>(Part 2) Yes, if the NRC requires that both alarm stations are considered necessary, the secondary alarm station could effectively be located offsite. There are companies who currently meet this standard.</p>
<p>PSR-6: a. Section 73.54 clearly states that the requirements for protection of digital computer and communications systems and networks apply to power reactors licensed under 10 CFR part 50 that were licensed to operate as of November 23, 2009. However, § 73.54 does not explicitly mention the applicability of these requirements to power reactors that are no longer authorized to operate and are transitioning to decommissioning. Are any changes necessary to § 73.54 to explicitly state that decommissioning power reactors are within the scope of § 73.54? If so, describe them. ----- b. Should there be reduced cyber security requirements in § 73.54 for decommissioning power reactors based on the reduced risk profile during decommissioning? If so, what would be the recommended changes?</p>	<p>No changes are necessary to 73.54 as this rule only applies to “a Licensee currently licensed to operate a nuclear power plant under part 50”. When a licensee is no longer authorized to operate a reactor or place fuel in the reactor core it should be clear in the regulations that at that time, Section 73.54 would not apply.</p> <p>----- ----- No, as this would be costly for the licensee to maintain.</p>
<p>PSR-7: Are there any concerns about changing the regulations to include the CFH as having the authority to suspend certain security</p>	<p>No, there are no concerns as this has been previously allowed within the industry and this writer has no knowledge of any issues relating to</p>

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measures during certain emergency conditions or during severe weather for permanently shut down and defueled reactor facilities? If so, describe them.	this previously allowed practice.
PSR-8 Are there any concerns related to changing the regulations in § 73.55(j)(4)(ii) to allow another communications system between the alarm stations and the shift manager/CFH in lieu of the control room at permanently shut down and defueled reactors? If so, describe them.	No, there are no concerns as this has been previously allowed within the industry and this writer has no knowledge of any issues relating to this previously allowed practice.
FRN Section C. Questions Related to Fitness for Duty (FFD) Requirements for Decommissioning Power Reactor Licensees	
<p>FFD-1:</p> <p>a. Should the NRC pursue rulemaking to describe what provisions of 10 CFR part 26 apply to decommissioning reactor licensees or use another method of establishing clear, consistent and enforceable requirements? Describe other methods, as appropriate. ----- -----</p> <p>b. As an alternative to rulemaking, should the drug and alcohol testing for decommissioning reactors be described in RG 5.77, with appropriate reference to the applicable requirements in 10 CFR part 26? This option would be contingent on an NEI commitment to revise NEI 03-12 to include the most recent revision to RG 5.77 (which would include the applicable drug and alcohol testing provisions) and an industry commitment to update their security plans with the revised NEI 03-12. ----- -----</p> <p>c. Describe what drug and alcohol testing requirements in 10 CFR part 26 are not necessary to fulfill the IMP requirements to assure trustworthiness and reliability.</p> <p>d. Should another regulatory framework be used, such as a corporate drug testing program</p>	<p>Yes, the NRC should describe what provisions of 10 CFR Part 26 apply to decommissioning reactor licensees. ----- -----</p> <p>No, it should be described in Part 26. If the NRC wants Part 26 to apply to decommissioning power plant as well as ISFSI's then the regulation must be revised. ----- -----</p> <p>The NRC must first describe what parts of Part 26 apply and if Part 26 does apply.</p> <p>If a company has a company FFD Program (e.g., <i>ZionSolutions</i>), then this may be an option for testing.</p>

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<p>modelled on the Department of Health and Human Services' Mandatory Guidelines for Federal Workplace Drug Testing or the Department of Transportation's drug and alcohol testing provisions in 49 CFR part 40? If this option is proposed, describe how (i) the laboratory auditing, quality assurance, and reporting requirements would be met by the proposal; (ii) licensees would conduct alcohol testing; and (iii) the performance objectives of 10 CFR 26.23(a), (b), (c), and (d) would be met.</p>	
<p>FDD-2:</p> <p>a. Should any of the fatigue management requirements of 10 CFR part 26, subpart I, apply to a permanently shut down and defueled reactor? If so, which ones? ----- -----</p> <p>b. Based on the lower risk of an offsite radiological release from a decommissioning reactor, compared to an operating reactor, should only specific classes of workers, as identified in § 26.4(a) through (c), be subject to fatigue management requirements (<i>e.g.</i>, security officers or certified fuel handlers)? Please provide what classes of workers should be subject to the requirements and a justification for their inclusion. ----- -----</p> <p>c. Should the fatigue management requirements of 10 CFR part 26, subpart I, continue to apply to the specific classes of workers identified in respond to question b above, for a specified period of time (<i>e.g.</i>, until a specified decay heat level is reached within the SFP, or until all fuel is in dry storage)? Please provide what period of time workers would be subject to the requirements and the justification for the timing. ----- -----</p> <p>d. Should an alternate approach to fatigue management be developed commensurate</p>	<p>Section 26.205 Work Hours could apply to Decommissioning Power Reactors as well as ISFSI's, excluding the language for "Outages". ----- -----</p> <p>No.</p> <p>----- -----</p> <p>Unknown, an evaluation would have to be conducted relating to the appropriate time to terminate the requirement for 10 CFR part 26, subpart I at a decommissioning power reactor. Licensees have been previously exempted from these parts as the requirement for Part 26 did not apply to plants decommissioning or for ISFSI's. ----- -----</p> <p>Unknown, Licensees have been previously exempted from these parts as the requirement for Part 26 did not apply to plants decommissioning or for ISFSI's.</p>

ANPR Section/NRC Questions	<i>EnergySolutions</i> Comments
<p>the content and format of a CFH training/retraining program that could be made applicable to CFH training?</p> <p>g. Should the requirements for CFH training programs be incorporated into an overall decommissioning rule, or addressed using other regulatory vehicles such as associated NUREGs, regulatory guides, standard review plan chapters or sections, and inspection procedures?</p>	
<p>FRN Section E. Questions Related to the Current Regulatory Approach for Decommissioning Power Reactor Licensees</p>	

ANPR Section/NRC Questions	EnergySolutions Comments
<p>REG-1:</p> <p>a. Should the current options for decommissioning—DECON, SAFSTOR, and ENTOMB—be explicitly addressed and defined in the regulations instead of solely in guidance documents, and how so?</p>	<p>EnergySolutions believes the NRC should explicitly address and define in regulation the three current options to decommission nuclear power reactors. They are DECON, SAFSTOR and ENTOMB. Codifying these options will provide a stronger basis for licensee decision-making and reduce the likelihood of disruptive third party challenges during the decommissioning plan development and approval processes.</p> <p>The industries overriding goal of this rulemaking effort is simplify the decommissioning regulatory process. The current three options provide ample flexibility for licensees and should not be further restrained. A review of the current fleet of shutdown plants that have not yet terminated the Part 50 license, shows that many plants initially select SAFSTOR as the desired decommissioning option. Yet many of these plants later enter into a partial or full DECON period well before the time contemplated in their original Post Shutdown Activities Report (PSDAR). Many licensees change decommissioning plans based on internal management decisions that are often fueled by changes in market conditions and other factors. The fact remains that having the flexibility of entering SAFSTOR initially gives the Licensee time to better plan for the future. Given the flexibility of entering a partial or full DECON campaign at a later time has proven to be a successful strategy for many licensees.</p> <p>EnergySolutions believes that maintaining the flexibility to partially enter and exit DECON from SAFSTOR is in the best interest of the licensee and its stakeholders. This flexibility gives the licensee the ability to eliminate a significant portion of the radioactive components and sources at a shutdown nuclear facility on a time table that best suits the owner. Such a campaign to reduce source term also reduces certain liabilities for the owner which may also be favorable for the owner and associated stakeholders. With a stable regulatory environment, competitive market pricing of waste disposal, and sufficient decommissioning trust funds available, a licensee is likely to initiate a campaign to remove and</p>

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<p>b. Should other options for decommissioning be explored? If so, what other technical or programmatic options are reasonable and what type of supporting documents would be most effective for providing guidance on these new options or requirements?</p>	<p>EnergySolutions believes that the NRC staff should contemplate if there are other decommissioning options available for power reactor licensees. The SAFSTOR and DECON options have served the industry well to date. The industry recognizes that the ENTOMB option does not have much applicability to power reactors as long lived nuclides will still be of concern after 60 years. While ENTOMB is no longer a reasonable option for commercial reactors, it is applicable for other materials licensees. For this reason, we suggest that EMTOMB not be discarded.</p> <p>The staff may wish to consider a modified version of SAFSTOR where in licensees could enter a long term lay-up option for power reactors, without declaring permanent shutdown. This would be structured to have the benefit of reducing the immediate regulatory and staffing burden on the licensee and have the added advantage of not foreclosing on a potential restart of that unit at a later date. This option would be worthy of industry discussion in this era of climate change concerns. We would expect nuclear energy to be a major contributor to reduce greenhouse gas emissions. In fact, we see nuclear units shutting down permanently due to depressed electrical costs in the current environment of surplus natural gas and emerging sustainable energy supplies. In 5 or 10 years, the market conditions could change and Licensees may have interest in restarting a unit in long term lay-up.</p> <p>-----</p> <p>-----</p>

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<p>c. The NRC regulations state that decommissioning must be completed within 60 years of permanent cessation of operations. A duration of 60 years was chosen because it roughly corresponds to 10 half-lives for cobalt-60, one of the predominant isotopes remaining in the facility. By 60 years, the initial short-lived isotopes, including cobalt-60, will have decayed to background levels. In addition, the 60-year period appears to be reasonable from the standpoint of expecting institutional controls to be maintained. Completion of decommissioning beyond 60 years will be approved by the NRC only when necessary to protect public health and safety. Should the requirements be changed so that the timeframe for decommissioning is something other than the current 60-year limit? Would this change be dependent on the method of decommissioning chosen, site specific characteristics, or some other combination of factors? If so, please describe.</p>	<p>EnergySolutions believes that the requirement in § 50.82 allowing a 60 year time frame after permanent cessation of operations allowed by the current guidance for a licensee to complete the license termination process is reasonable and equitable for licensees. The logic for the existing duration of using the half-life of cobalt-60 over a 10 half-life time period does provide a logical duration to allow sufficient radioactive decay and complete the decommissioning of the facility.</p> <p>This duration is a significant period of time and raises issues that EnergySolutions believes the rulemaking should consider. While 60 years would significantly reduce the radioactive source term in shut down power reactors, the remaining activated and contaminated materials will still have considerable detectable radioactive materials contained within or on the structures, systems and components. This radioactive material will eventually require disposal in a licensed disposal facility. Two factors can change that could affect the ability to dispose of the decommissioning materials over such a long time period. First, it is uncertain what the demolition, packaging, transportation and disposal rates will be over such a time period. These costs may escalate such that there may be insufficient funding available to dispose of all the materials at the actual time of the demolition. Secondly, while the U.S. currently has a stable radioactive waste disposal market, actions by states could cause that market to change significantly and become unpredictable and unavailable to decommissioning efforts. To prevent a condition were there are many plants at or approaching the 60 year license termination period, with little or no disposal facility available to them, EnergySolutions believes that licensees should be motivated to reduce radioactive sources at plants in long term SAFSTOR well ahead of the 60 year license termination period to ensure permanent disposal of legacy materials.</p>

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<p>REG-2:</p> <p>a. Is the content and level of detail currently required for the licensee’s PSDAR, adequate? If not, what should be added or removed to enhance the document?</p> <p>-----</p> <p>b. Should the regulations be amended to require NRC review and approval of the PSDAR before allowing any “major decommissioning activity,” as that term is defined in § 50.2, to commence? What value would this add to the decommissioning process?</p>	<p>Yes, the regulations as currently written are adequate to address the requirements for the PSDAR. However, while the regulations may be adequate, EnergySolutions believes there should be more guidance to the industry on what is to be included in the PSDAR. This guidance could be provided by the NRC or by industry guidance documents on this topic and not necessarily by inclusion in regulations. The required information in the PSDAR should include a discussion on the overall plan for the reactors decommissioning including more details about the first 5 years of the shut down on topics of interest to stakeholders including used fuel storage plans, interim waste disposal strategy, emergency preparedness plans, and communication forums. The PSDAR should also provide insights on how long the Licensee expects the reactor to remain in SAFSTOR, the logic for remaining in SAFSTOR for that period, and the intended repurposing plan for the site. This information is generally sought by key stakeholders and should be available early in the decommissioning process such that those stakeholders have knowledge of the future plans for the reactor.</p> <p>-----</p> <p>No, NRC review and approval of a PSDAR should not be required prior to a licensee performing any major decommissioning activities as defined in § 50.2. EnergySolutions believes the key objective of this rulemaking should be to improve regulatory effectiveness, in particular to revise the regulations governing the transition from power operations to decommissioning to eliminate the need for regulatory exemptions not necessary to protect human health and safety. Adding a requirement for NRC approval of the PSDAR would be contrary to that key objective - making the PSDAR and any changes to the PSDAR - a document requiring regulatory submittal for review and approval by the agency. This action would further complicate</p>

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	<p>the decommissioning process by unnecessarily making the PSDAR process more difficult. The current process required in § 50.82(a)(4) provides sufficient controls to manage the PSDAR and inform the agency and public on the licensee's plans for decommissioning the reactor. The process also provides information to the public through the NRC notice of receipt of the PSDAR and posting of the PSDAR for public comment. The NRC also schedules and conducts a public meeting in the vicinity of the licensee's facility upon receipt of the PSDAR. Further, the NRC publishes a notice of the public meeting in the Federal Register and in local forums readily accessible to individuals in the vicinity of the site. These provisions have worked well to date and should be maintained in their current form.</p>
<p>REG-3:</p> <p>a. Should the current role of the States, members of the public, or other stakeholders in the decommissioning process be expanded or enhanced, and how so?</p> <p>b. Should the current role of the States, members of the public, or other stakeholders in the decommissioning process for non-radiological areas be expanded or enhanced, and how so? Currently, for all non-radiological effluents created during the decommissioning process, licensees are required to comply with EPA or State regulations related to liquid effluent discharges to bodies of water.</p> <p>c. For most decommissioning sites, the State and local governments are involved in an advisory capacity, often as part of a Community Engagement Panel or other organization aimed at fostering communication and information exchange between the licensee and the public. Should the NRC's regulations mandate the formation of these advisory panels?</p>	<p>No comment.</p> <p>No comment.</p> <p>No comment.</p>
<p>FRN Section F. Questions Related to the Application of Backfitting Protection for</p>	

ANPR Section/NRC Questions	EnergySolutions Comments
Decommissioning Power Reactor Licensees	
<p>BFP-1:</p> <p>a. When a licensee's licensing basis for operations continues to apply during decommissioning until: (1) The licensee changes the licensing basis, (2) the NRC's regulations set forth generic criteria delineating when changes can be made to the licensing basis, or (3) the NRC takes a facility-specific action that changes the licensee's licensing basis. Why would backfitting protection apply in this area?</p> <p>b. When a licensee engages in an activity during decommissioning for which no prior NRC approval was provided. The activity could be required by an NRC regulation or new NRC approval (through an order or licensing action). Why would backfitting protection apply in this area?</p>	<p>No comment.</p> <p>No comment.</p>
<p>BFP-2:</p> <p>Should the NRC propose amendments to § 50.109 consistent with the preliminary amendments proposed in SECY-00-0145 that would have created a two-section Backfit Rule: one section that would apply to nuclear power plants undergoing decommissioning and the other section that would apply to operating reactors?</p>	<p>EnergySolutions believes that the NRC should revise the regulations to create a two-section Backfit Rule by adding a new subsection to § 50.109. In SRM-SECY-98-253, the Commission approved development of a Backfit Rule specifically addressing nuclear power facilities undergoing decommissioning, and directed the staff to apply the current Backfit Rule to facilities undergoing decommissioning in the interim. Augmenting § 50.109 would implement existing Commission direction.</p> <p>The Backfit Rule, as currently written, applies to all decommissioning plants. A modified version of that rule was proposed in SECY-00-145 by the staff, but was never acted on. The modified draft rule should be incorporated into this decommissioning Rule making. Affects 10 CFR 50.109.</p>
FRN Section G. Questions Related to	

ANPR Section/NRC Questions	EnergySolutions Comments
Decommissioning Trust Funds	
<p>DTF -1:</p> <p>Should the regulations in §§ 50.75 and 50.82 be revised to clarify the collection, reporting, and accounting of commingled funds in the decommissioning trust fund, that is in excess of the amount required for radiological decommissioning and that has been designated for other purposes, in order to preclude the need to obtain exemptions for access to the excess monies?</p>	<p>The Regulations need to recognize and acknowledge that the licensee’s decommissioning trust funds are intended to fund the three work scope areas required to decommission the unit and allow the licensee’s to withdraw funds to pay for all three areas without the need for an exemption. Those areas are removal of radiological source term, spent fuel management, and site restoration. This primarily affects 10 CFR 50.75 and 10 CFR 50.82(a)(8)(i)(A).</p>
<p>DTF -2:</p> <p>a. What changes should be considered for §§ 50.2 and 50.82(a) (8) to clarify what constitutes a legitimate decommissioning activity?</p>	<p>EnergySolutions proposes that the regulations in § 50.82(a)(8) be revised to permit the conduct of a major decommissioning activity as defined in § 50.2 at an operating nuclear power plant. The principal effect of this change would be to permit the disposal of retired major radioactive components (MRCs) as defined in § 50.2. (“...the reactor vessel and internals, steam generators, pressurizers, large bore reactor coolant system piping, and other large components that are radioactive to a comparable degree”) prior to the permanent cessation of operations at a nuclear power plant.</p> <p>In previous decommissioning rulemakings and other regulatory actions, the NRC has concluded that disposal of these retired components should be considered an operating expense; however, this reasoning fails to recognize that such components typically are stored onsite until decommissioning and that decommissioning trust funds are accrued specifically for the purpose of their disposal. It also is inconsistent with the NRC’s own regulations in § 50.2 that define their disposal as a decommissioning activity:</p> <p><i>Major decommissioning activity</i> means, for a nuclear power reactor facility any activity that results in permanent removal of major radioactive</p>

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<p>----- ----- b. Regulations in § 50.82(8)(ii) states that 3</p>	<p>components, permanently modifies the structure of the containment, or results in dismantling components for shipment containing greater than Class C waste in accordance with § 61.55 of this chapter.</p> <p>Permitting the disposal of MRC's at an operating nuclear power plant would facilitate the disposal <i>only</i> of waste that is by regulation decommissioning waste. It would not allow the disposal of operational waste streams using decommissioning trust funds.</p> <p>It is not only reasonable, but in the best interests of human health and safety, to dispose of this waste sooner in those cases where decommissioning trust funds have been accumulated <i>specifically for the purpose of their disposal</i>, and, importantly, where doing so would not jeopardize the future funding of the decommissioning of the plant. NRC regulations currently protect against this eventuality by placing limitations on the withdrawal of decommissioning trust funds in § 50.82(a)(8)(i)(B):</p> <p>The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise.</p> <p>Rather than relying on the funding assurance formula in § 50.75(c), NRC should hold licensees that propose to conduct major decommissioning activities at an operating power plant to higher standard by requiring that they have prepared a site-specific decommissioning cost estimate that includes costs of the MRC's to be disposed. This would protect against any potential shortfall that could occur by relying on the generic formula¹.</p> <p>In order to accomplish this change, we propose that the wording in § 50.82(a)(8)(i)(A) be revised as shown (proposed addition in bold):</p>

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<p>percent of the decommissioning funds may be used during the initial stages of decommissioning for decommissioning planning activities. What should be included or specifically excluded in the definition of “decommissioning planning activities?”</p>	<p>(8)(i) Decommissioning trust funds may be used by licensees if—</p> <p>(A) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning and/or the definition of major decommissioning activity in § 50.2;</p> <p>We further propose the addition of a new paragraph § 50.82(a)(8)(i)(D) to protect against shortfalls in funding (proposed addition in bold):</p> <p>(D) Any licensee proposing withdrawals for expenses for legitimate decommissioning activities at an operating nuclear power plant shall demonstrate compliance with § 50.82(a)(8)(i)(B) by the preparation of a site-specific decommissioning cost estimate.</p> <hr/> <p>¹ For example, the formula in § 50.75(c) was derived based on the disposal of only one set of steam generators for any given power plant. When it was developed, it was not expected that these components would fail to last for the entire operational life of the plant.</p> <p>-----</p> <p>The Regulations should be revised to permit as a legitimate decommissioning activity, the disposal of large components (e.g. Reactor Heads, Steam Generators, Pressurizers, Steam Dryers, etc.) that have been replaced during the life of the nuclear units due to aging or other issues while a plant is operating. The disposal of these components is a legitimate decommissioning activity as they will ultimately need to be disposed of during some phase of the units decommissioning. This will provide owners with the option to dispose of these liabilities when markets are most favorable.</p>
<p>FRN Section H. Questions Related to Offsite</p>	

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<p>Liability Protection Insurance Requirements for Decommissioning Power Reactor Licensees</p>	
<p>LPI-1:</p> <p>a. Should the NRC codify the current conservative exemption criteria (<i>i.e.</i>, 10 hours to take mitigative actions) that have been used in granting decommissioning reactor licensee exemptions to § 140.11(a)(4)?</p> <p>b. As an alternative to codifying the current conservative exemption criteria (<i>i.e.</i>, 10 hours to take mitigative actions), should the NRC codify a requirement to allow decommissioning reactor licensees to generate site specific criteria (<i>i.e.</i>, time period to take mitigative actions) based upon a site specific analysis?</p> <p>c. The use of \$100 million for primary liability insurance level is based on Commission policy and precedent from the early 1990s. The amount established was a qualitative value to bound the claims from the Three Mile Island accident. Should this number be adjusted?</p> <p>d. What other factors should be considered in establishing an appropriate primary insurance liability level (based on the potential for damage claims) for a decommissioning plant once the risk of any kind of offsite radiological release is highly unlikely?</p>	<p>No comment.</p> <p>No comment.</p> <p>This number should be adjusted once all spent fuel and GTCC waste has been moved to the ISFSI. Any remaining decommissioning accidents such as a dropped resin liner or dropped large component meet the EPA PAG requirements. The level should be reduced by at least 50 percent at this point in decommissioning.</p> <p>Once all Class B and C radioactive waste has been shipped to a disposal facility, the liability level should be further reduced to \$25 million. When the only radiological structure remaining is the ISFSI, the liability insurance should be reduced to \$10 million.</p>
<p>FRN Section I. Questions Related to Onsite Damage Protection Insurance Requirements for Decommissioning Power Reactor Licensees</p>	
<p>ODI-1:</p> <p>a. Should the NRC codify the current exemption criteria that have been used in granting decommissioning reactor licensee exemptions from § 50.54(w)(1)? If so, describe why.</p>	<p>No comment.</p> <p>This number should be reduced to \$25 million once</p>

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<p>b. The use of \$50 million insurance level for bounding onsite radiological damages is based on a postulated liquid radioactive waste storage tank rupture using analyses from the early 1990s. Should this number be adjusted? If so, describe.</p> <p>c. Is the postulated rupture of a liquid radioactive waste storage tank an appropriate bounding postulated accident at a decommissioning reactor site once the possibility of a zirconium fire has been determined to be highly unlikely?</p>	<p>all Class B and C radioactive waste has been shipped to a disposal facility and the radioactive content of any remaining liquid radioactive waste storage tanks meet 10 CFR 20 Appendix B and NPDES limits if inadvertently released to the environment. Once all remaining radiological structures have been removed or remediated and only the ISFSI is the remaining radiological structure, the insurance level should be further reduced to \$10 million.</p> <p>No comment.</p>
<p>FRN Section J. General Questions Related to Decommissioning Power Reactor Regulations</p>	
<p>GEN-1:</p> <p>What regulatory changes should be considered that address the performance or condition of certain long-lived, passive structures and components needed to provide reasonable assurance that they will remain capable of fulfilling these intended functions during the decommissioning period?</p>	<p>No comment.</p>
<p>GEN-2:</p> <p>Should minimum operations shift staffing at a permanently shutdown and defueled reactor be codified by regulation?</p>	<p>No comment.</p>
<p>GEN-3:</p> <p>What regulatory changes should be considered for a permanently shutdown and defueled reactor to prevent ambiguities concerning the meaning of the control room for decommissioning reactors and should minimum staffing levels be specified for the control room?</p>	<p>No comment.</p>

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<p>GEN-4:</p> <p>Are there any other changes to 10 CFR Chapter I, “Nuclear Regulatory Commission,” that could be clarified or amended to improve the efficiency and effectiveness of the reactor decommissioning process?</p>	<p>EnergySolutions believes that the definition of Operating License in applicability statements of regulations throughout 10 CFR 50 should not be applicable to reactors that have certified cessation of operations under 10 CFR 50.82. Applicability of a regulation, or portions of its requirements that are applicable to a permanently shut down facility, should be specifically stated in the regulation.</p> <p>Currently many requirements in 10 CFR 50 have statements of applicability for each Holder of an Operating License. Many of these requirements are not valid for permanently shutdown units. The decommissioning rulemaking should systematically assess all Regulations that use this applicability statement to determine if the specific requirements are in fact applicable to permanently shut down reactors. Further, the Rulemaking effort should provide a method to communicate to the industry which regulations remain in force post permanent shutdown and which stay in effect, or correct the applicability statement in each of the requirements to reflect not applicable to a permanently shutdown facility. Affects dozens of requirements in 10 CFR 50.</p> <p>Other regulations that should be revised to account for decommissioning are: 10 CFR 37.11(c) – The current requirements to protect large components are burdensome and not consistent with the underlying purpose of the regulation. The ZionSolutions docket should be reviewed for the detailed aspects of what portions of the regulation to revise.</p> <p>10 CFR 50 recordkeeping requirements (10 CFR 50.71(c), 10 CFR 50 Appendix A Criterion 1, 10 CFR 50 Appendix B Criterion XVII, 10 CFR 50.59(d)(3)) require records to be maintained for the life of the license. Exemptions are needed to remove these requirements for abandoned components.</p> <p>10 CFR 50 requirements (10 CFR 50.70(b)(2)) to</p>

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	maintain an NRC office onsite is not required once all large components and once all Class B and C radioactive waste have been removed from the site. The NRC staff typically performs inspection activities once per month after these activities have been completed. A small office with no specified square footage requirements can still be provided.
<p>GEN-5:</p> <p>Please provide estimated costs and benefits of potential changes in these areas from either the perspective of a licensee or from the perspective of an external stakeholder.</p> <p>a. From your perspective, which areas discussed are the most beneficial or detrimental?</p> <p>b. From your perspective, assuming you believe changes are needed to the NRC's reactor decommissioning regulatory structure, what are the factors that drive the need for changes in these regulatory areas? If at all possible, please provide specific examples (e.g., expected savings, expectations for efficiency, anticipated effects on safety, etc.) about how these changes will affect you.</p> <p>c. Are there any areas that are of particular interest to you, and for what reason?</p> <p>d. Please provide any suggested changes that would further enhance benefits or reduce risks that may not have been addressed in this ANPR.</p>	<p>No comment.</p> <p>No comment.</p> <p>No comment.</p> <p>No comment.</p> <p>No comment.</p>