



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

June 30, 2008

www.regulations.gov

Re: NRC-2008-0122, Informal Comments on Draft Preliminary Rule Language to Enhance the Nuclear Regulatory Commission's Emergency Preparedness Regulations

Dear Mr. and/or Ms. Regulation.gov:

On behalf of the following organizations and the Union of Concerned Scientists, I submit the attached comments on the Nuclear Regulatory Commission's draft preliminary rule language regarding emergency preparedness regulations:

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Sincerely,

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Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)

Document	Comment
<p>Ref. 1, enclosure, page 5 and Ref. 2, page 2, §50.47 (a)(1)</p>	<p>The schedule has the final rule published in March 2010 and the associated guidance documents published in September 2010. It is unacceptable for the guidance documents to be issued so long after the final rule is published. Doing so deprives external stakeholders of their ability of providing meaningful, informed comments on the rule.</p> <p>The guidance documents describe assumptions and methodology acceptable to the NRC staff in meeting the specific requirements in the final rule. But the NRC staff simply must have some inkling on these subjects in order to honestly develop the regulatory analysis needed for the rule to be finalized. Thus, if the NRC staff can develop the regulatory analysis on what and how the rule functions, the NRC staff could, and should, develop the regulatory guidance in parallel.</p> <p>The regulatory guidance document(s) must be developed in parallel with the draft rule language and associated regulatory analysis. Together, they form a regulatory trinity that is inseparable.</p> <p>Absent the draft regulatory guidance, external stakeholders can offer less meaningful, less constructive, and less informed comments on the draft rulemaking language. After all, it is the regulatory guidance that provides the fuller context for the requirements sought by the draft rule. External stakeholders deserve access to that fuller context.</p> <p>§50.47 (a)(1) states “Except as provided in paragraph (d) of this section, no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.”</p> <p>Based on the past, it is very likely that applicants will cite the NRC’s regulatory guidance in describing how they will meet these requirements and the NRC’s safety evaluation reports will also cite, or at least rely upon, the NRC’s regulatory guidance in explaining why they approved the applications. This history demonstrates that the information in regulatory guidance documents is inseparable from the requirements in the rules. Hence, the NRC staff’s preparation and issuance of regulatory guidance documents must not be separated from its preparation and issuance of the associated rules. External stakeholders must have access to draft regulatory guidance documents, for these documents alone explain what the NRC is seeking and will accept relative to draft rules.</p>

Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)	
Document	Comment
Ref. 2, general	<p>The PDF version of the draft preliminary language obtained from Regulations.gov was a red-lined, strikethrough version. This was helpful in identifying changes from the prior language.</p> <p>Except that when one prints this file to a black and white printer (i.e., the majority of printers in use nationwide), the red text vanishes like disappearing ink leaving behind unintentionally blank pages.</p> <p>The NRC should find some means of enabling its materials to be useful both on-screen and when printed.</p>
Ref. 2, page 1, footnote 5	<p>According to this footnote, applications can satisfy §50.34 by submitting a discussion “of similarities to and differences from, facilities of similar design for which applications have previously been filed with the Commission.”</p> <p>This would allow applications to reference/cite materials that are unreviewed, unapproved, and unaccepted by the NRC staff. Such materials merely need to have been mailed to the NRC in order to become suitable references.</p> <p>A somewhat higher standard should be applied by the NRC. The discussion of likes and unlikes should be relative to information both filed with and approved by the NRC, not simply the former.</p>
Ref. 2, page 2, paragraph (b)(2)	<p>The requirement “On-shift facility licensee responsibilities for emergency response are unambiguously defined, <u>adequate staffing to provide initial facility accident response in key functional areas is maintained at all times</u>...” [emphasis added] has been implemented based on the implicit assumption that events are <u>not</u> security initiated. For example and typical of other reactors’ technical specifications, Section 6.2.2, Unit Staff, of the technical specifications for the Shearon Harris nuclear plant (Docket No. 50-400) contains the minimum staff levels. Paragraph 6.2.2.c requires “An individual qualified as a Radiation Control Technician shall be on site when fuel is in the reactor.” When the entire reactor core has been offloaded to the spent fuel pool, no Radiation Control Technician is required to be onsite. Yet the irradiated fuel in the spent fuel pool could realistically be attacked by one or more plant workers (recall from NRC Information Notice 79-12 dated May 11, 1979, how workers tampered with 62 of 64 fuel assemblies at the Surry nuclear plant in Virginia) or intruders.</p>

Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)	
Document	Comment
	If the NRC revises its regulations to address security-initiated events, the NRC must also then enforce those regulations fully by ensuring licensees actually have adequate staffing at all times.
Ref. 2, page 3, paragraph (6)	Harkening back to comment 1 above, the requirement that “Provisions exist for prompt communications among principal response organizations...” is vague when de-coupled from associated regulatory guidance documents. What is meant by “prompt”? Is it within 15 minutes? A telegram? A text message? Or overnight delivery with early morning arrival? Such details are essential in determining whether reasonable assurance of adequate protection has been achieved. It is unreasonable to expect external stakeholders to provide meaningful comments on such vague, high-level requirements without access to the associated regulatory guidance.
Ref. 2, page 3, paragraph (12)	<p>Conceding that it approaches beating a dead horse, but the requirement that “Arrangements are made for medical services for contaminated injured individuals” is useless without context.</p> <p>For example, following 9/11, Hudson River Sloop Clearwater held an all-day workshop in West Chester County, New York. Among the presenters at the workshop was a doctor from the trauma room at the Westchester Medical Center, where contaminated injured individuals from Indian Point would be transported. This doctor described what had happened at the trauma center when a real worker with a real contaminated injury (abrasion to the ankle area) was transported to the trauma room. The collection tank receiving the water used to cleanse the worker’s injury was nearly filled. The doctor described other ways in which this one contaminated patient saturated the resources of this Level 1 trauma center.</p> <p>What if two or more contaminated injured workers were transported to a facility taxed by a single such patient?</p> <p>The regulatory guidance documents for this rule would, hopefully, describe how many contaminated injured persons would be expected to require treatment. External stakeholders need access to the regulatory guidance to evaluate whether the entire package of vague rule requirements and context in regulatory guidance is appropriate, too little, or too much.</p>
Ref. 2, page 4, paragraph (15)	Does the requirement that “Radiological emergency response training is provided to those who may be called on to assist in an emergency”

Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)	
Document	Comment
and Ref. 2, page 2, paragraph (b)(3)	apply to persons from outside the licensee's organization providing assistance resources at the Emergency Operations Facility?
Ref. 2, page 8, paragraph IV	<p>This section is being revised to require evacuation time estimates (ETEs) be provided to State and local government authorities and updated when conditions dictate.</p> <p>Since this rulemaking reportedly addresses security-initiated events, it is incomprehensible that the NRC's latest and greatest regulatory guidance document ^{*†} on ETEs issued more than three years after 9/11 is completely <u>silent</u> on security-initiated events and offsite antics that those responsible for security-initiated events might also initiate.</p> <p>The NRC simply cannot revise this rule to address security-initiated events if it relies in whole or in part on regulatory guidance documents that assume no security-initiated events occur.</p> <p>In addition, the requirement that licensees "shall review the infrastructure and demographic changes that occur within the EPZ and if the cumulative changes impact the most recently submitted ETE by at least 10%" is vague without regulatory guidance.</p> <ul style="list-style-type: none"> • Will the NRC accept demographic changes based on US census updates every 10 years, or is more frequent monitoring necessary? • If road construction and/or a multiple-vehicle traffic accident on a major artery results in a potential increase in ETE, must licensees evaluate whether that increase is, by itself or in combination with say 8 percent increases from other cause, greater than 10 percent? • Given that security-initiated events are not random but can be timed to occur by the person(s) involved, should the ETEs assume worst-case evacuation conditions (e.g., midst of a severe snow storm for northern reactors or midst of a hurricane/tornado/ice storm for southern reactors, moments before the kickoff of the Super Bowl when many responders' pagers may be dysfunctional, etc.)?
Ref. 2, page 9, paragraphs 7 and	These new requirements seek to ensure that offsite and onsite persons responding to a security-initiated event are dedicated to that response

* NUREG/CR-6863, "Development of Evacuation Time Estimate Studies for Nuclear Power Plants," January 2005.

† Having accessed this regulatory guidance document and used it to criticize NRC's proposed rule language, I perhaps understand why NRC would not want to divulge regulatory guidance documents until after rules are final, when it's too late for external stakeholders to meaningfully comment.

Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)	
Document	Comment
9	<p>task. These requirements are good and needed.</p> <p>But these requirements must be expanded to explicitly address a third group of persons – off-duty security force personnel who are likely to be called in to work or report to duty for previously scheduled shift coverage. Such personnel may also be employed by local law enforcement or the National Guard. They may be called to duty in such capacities, making them unavailable for work as security force personnel.</p>
Ref. 2, page 9, paragraph B	<p>The NRC proposes to expand the existing requirement for radiological assessment of releases and associated emergency action levels to explicitly address hostile action events.</p> <p>While the non-existent or unavailable regulatory guidance documents might provide the context, it’s not clear from this vague language if the “hostile action events” include the hostile persons engaging in offsite antics that impair radiological monitoring.</p> <p>For example, consider a scenario where hostile persons gain unauthorized access to the protected area of a nuclear power plant and damage some equipment with explosives. Concurrently, other hostile persons set off dirty bomb(s) nearby the site. The radiological assessment teams and devices offsite detect elevated radiation readings. It would be beneficial if the radiological assessments providing input to emergency action level decision-making could discern radiation released from the site versus that released from the dirty bomb(s). While radiation is radiation, the decision-making for radiation detected from dirty bombs might encompass sheltering whereas the same amount of radiation from reactor core damage could be the leading edge of a cloud warranting evacuation.</p> <p>The rule should be clear on whether radiological assessments need consider and discern offsite dirty bomb-type releases of radiation from releases occurring as a result of hostile actions to the plant itself.</p>
Ref. 2, page 16, paragraph (3)d	<p>The requirement that:</p> <p style="padding-left: 40px;">“A State should fully participate in the ingestion pathway portion of exercises at least once every six years. In States with more than one site, the State should rotate this participation from site to site.”</p> <p>seems insufficient from a safety perspective when x nuclear plant sites in the state are owned and operated by x or close to x companies</p>

Comments on NRC Emergency Preparedness Rulemaking (Docket No. 2008-0122)	
Document	Comment
	<p>and insufficient from an unnecessary burden perspective when x nuclear plant sites in the state are owned and operated by one or close to one company. In the former case, a State’s involvement in an exercise conducted by Outfit A are minor value if a real event were to occur at a facility operated by Outfits B, C, or D, with entirely different personnel and procedures involved. Conversely, in the latter case, a State’s involvement in an exercise conducted by Outfit A at any site within the state would seem to have nearly equal value if a real event were to occur at any site operated by Outfit A.</p> <p>The requirement should link state involvement with licensee response organizations rather than some potentially irrelevant geographic factoid.</p>
<p>Ref. 2, page 12, paragraph 3 (continued from page 11) and Ref. 2, page 8, paragraph IV</p>	<p>The NRC proposes to revise notification requirements such that:</p> <p>“The licensee shall demonstrate that the State or local officials have both the administrative and physical means for a backup method of public notification capable of being used in the event the primary method is unavailable. The backup method does not need to meet the 15-minute design objective for the primary prompt public notification system.”</p> <p>The NRC also proposes to require licensees to provide and periodically update Evacuation Time Estimates (ETEs).</p> <p>It’s not clear what constitutes time zero for the ETEs (i.e., when does the clock start?). The backup notification system used to get the public moving when necessary need not meet the 15-minute goal for the primary notification system. Do the ETEs assume public notification begins around 15 minutes or at some non-conservative later time, if the notifications must be made via the backup system?</p> <p>Again, the regulatory guidance document providing NRC’s expectations on this matter would inform external stakeholder comments on the proposed rule.</p>

References:

1. Memo dated April 17, 2007, from Luis A. Reyes, Executive Director for Operations, Nuclear Regulatory Commission, to Chairman and Commissioners, Nuclear Regulatory Commission, “Rulemaking Plan for Enhancements to Emergency Preparedness Regulations and Guidance.”

2. Draft Preliminary Rule Language dated February 2008, “Emergency Preparedness Rulemaking.”