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**Docket:** NRC-2016-0054

License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation

**Comment On:** NRC-2016-0054-0001

License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation;  
 Draft Regulatory Issue Summary for Comment

**Document:** NRC-2016-0054-DRAFT-0003

Comment on FR Doc # 2016-05813

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## Submitter Information

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## General Comment

See attached file(s)

Comments from Energy Compliance Consultants, LLC are noted in the attached document.

## Attachments

Comments on Draft RIS XX License Ammendment Requests for Changes to Emergency Response Organization Staffing and Augmentation

SUNSI Review Complete

Template = ADM - 013

E-RIDS= ADM-03

Add= T. Keene (59K1)



Energy Compliance Consultants, LLC

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April 11, 2016

U.S. Nuclear Regulatory Commission  
Office of Administration  
Cindy K. Bladey, OWFN-12-H08  
Washington, DC 20555-0001

**Subject:** Comments on Draft Regulatory Issue Summary *License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation* (Docket ID NRC-2016-0054) 81 Federal Register 13849 (March 15, 2016)

To the Office of Administration:

In accordance with the referenced Federal Register notice, Energy Compliance Consultants, LLC (EC2) is pleased to submit the attached comments on draft RIS-XX, License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation. In general, we feel that the proposed guidance in this document represents clarification on the application of Nuclear Energy Institute (NEI) document NEI 10-05, "*Assessment of On-Shift Emergency Response Organization Staffing and Capabilities*", dated June 3, 2011 (Agency Documents Access and Management System (ADAMS) Accession No. ML111751698). Our comments primarily address areas where wording changes are recommended to promote consistent understanding or unnecessary regulatory burden can be eliminated.

As an overarching comment, we believe that this RIS identifies the need for the development of additional methodologies for analysis of augmented emergency organization response times. Establishing a technical basis, supported by appropriate analysis for augmentation times, was discussed during the NRC/Industry public meeting held on July 16, 2015, and was a topic raised in the industry comments related to NUREG-0654/FEMA-REP-1, "*Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*", Revision 2, in October 2015. EC2 feels that the establishment of a technical basis supports the industry and regulators need for consistent application.

Questions concerning the attached comments should be directed to Monica Ray (623-518-6314; [mray@ec2llc.com](mailto:mray@ec2llc.com))

Sincerely,

Monica Ray

Attachment

## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
Criteria to be Considered for the On-Shift Staffing Analysis (p. 3 of 12)	Criteria to be Considered for the On-Shift Staffing Analysis (p. 3 of 12)
<p>Contrary to the guidance provided in NEI 10-05 for the on-site staffing analysis, the planning basis for Table B-1 of NUREG-0654 is based on a wide spectrum of events. For the purposes of complying with the regulations of Section IV.A.9 to Appendix E of 10 CFR Part 50, scenarios have been identified in NSIR/DPR-ISG-01 to facilitate these evaluations for analyzing on-shift staffing to determine if collateral duties exist that would impact the ability for the on-shift personnel to perform emergency planning functions. It should be noted that these specific scenarios are only applicable for performance of an on-shift staffing analysis, and are not applicable for evaluating ERO augmentation.</p>	<p><del>Contrary</del>Unlike to the guidance provided in NEI 10-05 for the on-site staffing analysis, the planning basis for Table B-1 of NUREG-0654 is based on a wide spectrum of events. For the purposes of complying with the regulations of Section IV.A.9 to Appendix E of 10 CFR Part 50, scenarios have been identified in NSIR/DPR-ISG-01 to facilitate these evaluations for analyzing on-shift staffing to determine if collateral duties exist that would impact the ability for the on-shift personnel to perform emergency planning functions. It should be noted that these specific scenarios are only applicable for performance of an on-shift staffing analysis, and are not applicable for evaluating ERO augmentation.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend replacement of 'contrary' with 'unlike'. Use of the term 'contrary' could imply incongruence between NRC endorsed documents. Use of the term 'unlike' points to the differing purposes behind the documents without suggesting that documents might contradict one another.</li> </ul>	



## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Notification and Communication (p. 5 of 12)</p> <p>To adequately support the proposed elimination or extension of the one 30-minute responder, licensees should show that equivalent capability is provided by on-shift staff to fill the responder's responsibility to notify licensee, State, local and Federal personnel, and maintain communication. For example, the 30-minute responder may be eliminated if an extra on-shift position is identified to fill this role. These on-shift positions should not be assigned other tasks that may prevent the timely performance of their assigned notification or communication functions as specified in the emergency plan. Alternatively, a licensee could demonstrate that installed communications technologies eliminate the need for an extra on-shift responder. NRC staff will consider whether the change basis adequately establishes that communication technologies employed by the proposed on-shift staff supports timely, effective, and reliable notifications. Additionally, the communications technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>	<p>Notification and Communication (p. 5 of 12)</p> <p>Table B-1 of NUREG-0654 assigns the major tasks of notify licensee, State, local and federal personnel and maintain communication to on shift personnel with a note that this major functional area may be performed by engineering aid to shift supervisor, with one individual available within 30 minutes. To adequately support the proposed elimination or extension of the one 30-minute responder, licensees should show that equivalent capability is provided by on-shift staff to fill the responder's responsibility to "notify licensee, State, local and Federal personnel", and maintain communication. For example, the 30-minute responder may be eliminated if an <del>extra</del> on-shift position is identified to fill this role. <del>Thiese</del> on-shift positions should not be assigned other tasks that may prevent the timely performance of their assigned notification or communication functions as specified in the emergency plan. Alternatively, a licensee could demonstrate that <del>installed</del> communications technologies eliminate the need for an <del>extra</del> on-shift responder. NRC staff will consider whether the change basis adequately establishes that communication technologies employed by the proposed on-shift staff supports timely, effective, and reliable notifications. Additionally, the communications technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend addition of reference wording from NUREG-0654 Table B-1 to beginning of the section to add consistency throughout the document.</li> <li>- Recommend removal of the word 'extra' as this term is undefined in relation to existing or SER approved staffing for a site. Removal of this word does not alter meaning or intent.</li> <li>- Reworded following sentence to align tenses with previous reference to an on-shift position.</li> <li>- Recommend removal of the word 'installed' as an unnecessary descriptor which could limit application of future communications technologies or the addition of 'or information technologies' as is used in the Offsite Dose Assessment section of this document so that advantage may be taken of future technical capabilities for support of on-shift emergency functions.</li> </ul>	



## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Offsite Dose Assessment (p. 6 of 12)</p> <p>To adequately support the proposed extension of the one 30-minute responder, licensees should identify an extra on-shift position as capable of initially filling the 30-minute responder's role of "off-site dose assessment." NRC staff will review whether this position is assigned other tasks that may prevent the timely performance of its assigned off-site dose assessment functions as specified in the emergency plan. Alternatively, a licensee could demonstrate that installed automated systems or information technologies eliminate the need for an added on-shift responder. NRC staff will consider whether the change basis adequately establishes how automated systems or information technologies employed by the proposed on-shift staff supports timely, effective, and reliable dose assessment. Additionally, the automated systems or information technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>	<p>Offsite Dose Assessment (p. 6 of 12)</p> <p>Table B-1 of NUREG-0654 assigns the major task of offsite dose assessment as requiring augmented support by one individual within 30 minutes. To adequately support the proposed elimination or extension of the one 30-minute responder, licensees should identify an <del>extra</del> on-shift position as capable of initially filling the 30-minute responder's role of "off-site dose assessment." NRC staff will review whether this position is assigned other tasks that may prevent the timely performance of its assigned off-site dose assessment functions as specified in the emergency plan. Alternatively, a licensee could demonstrate that installed automated systems or information technologies eliminate the need for an added on-shift responder. NRC staff will consider whether the change basis adequately establishes how automated systems or information technologies employed by the proposed on-shift staff supports timely, effective, and reliable dose assessment. Additionally, the automated systems or information technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend addition of reference wording from NUREG-0654 Table B-1 to beginning of the section to add consistency throughout the document.</li> <li>- Recommend adding the phrase 'elimination or' to the first sentence in order to maintain consistency in wording with the section on Notification and Communication and Repair and Corrective Actions.</li> <li>- Recommend removal of the word 'extra' as this term is undefined in relation to existing or SER approved staffing for a site. Removal of this word does not alter meaning or intent.</li> </ul>	



# Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Off-site Surveys / On-site (out of plant) / In-Plant Surveys (p. 6 of 12)</p> <p>Licensees may consider alternative approaches for staffing this functional area by training non-HP personnel to perform these tasks. The guidance provided in ANSI/ANS-3.8.5-1992, "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis," provides criteria for emergency radiological field monitoring for training personnel assigned to perform radiological surveys. Training should be provided on the nature of the radiological hazards and associated effects that the survey team members are likely to encounter. Periodic retraining, as well as participation in drills and exercises also should be specified as part of the training program. Job-specific training, both theoretical and hands-on, should be provided for all personnel assigned to radiological monitoring responsibilities. The training should include all phases of their emergency duties and the equipment that they may be required to operate to perform these duties. Task qualified personnel assigned to these survey teams should follow the direction of a fully qualified HP personnel, as discussed in NUREG/CR-5569, "The Health Physics Positions [HPPOS] Data Base," Revision 1 (ADAMS Accession No. ML093220108), HPPOS-238, "Health Physics Position on Task Qualification of HP Technicians."<sup>2</sup></p>	<p>Off-site Surveys / On-site (out of plant) / In-Plant Surveys (p. 6 of 12)</p> <p>Licensees may consider alternative approaches for staffing this functional area by training non-HP personnel to perform these tasks. The guidance provided in ANSI/ANS-3.8.5-1992, "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis," provides criteria for emergency radiological field monitoring for training personnel assigned to perform radiological surveys. Training should be provided on the nature of the radiological hazards and associated effects that the survey team members are likely to encounter. Periodic retraining, as well as participation in drills and exercises also should be specified as part of the training program. Job-specific training, both theoretical and hands-on, should be provided for all personnel assigned to radiological monitoring responsibilities. The training should include all phases of their emergency duties and the equipment that they may be required to operate to perform these duties. <del>Task qualified personnel assigned to these survey teams should follow the direction of a fully qualified HP personnel, as discussed in NUREG/CR-5569, "The Health Physics Positions [HPPOS] Data Base," Revision 1 (ADAMS Accession No. ML093220108), HPPOS-238, "Health Physics Position on Task Qualification of HP Technicians."</del><sup>2</sup></p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Deleted paragraph associated with task qualification as identified in HPPOS. Per the NRC Website, <i>"The Health Physics Positions (HPPOS) Database (NUREG/CR-5569, Rev. 1, 1994) is a compilation of NRC staff positions on a wide range of topics involving radiation protection (health physics). It consists of over 300 documents in the forms of letters, memoranda, and excerpts from technical reports. The HPPOS Database was developed by NRC Headquarters and Regional Offices to help ensure uniformity in inspections, enforcement, and licensing actions. Many of the positions in the HPPOS Database are outdated, but the NRC staff has decided to make the database available to the public because it contains much valuable information on health physics issues related to regulation. The positions should not be considered authoritative by themselves and should not be relied on for regulatory compliance"</i>.</li> </ul>	



## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Technical Support (p. 6 of 12)</p> <p>To adequately support an extension of the one 30-minute technical support responder, the licensee should show that an on-shift position is identified as capable of initially filling the minute responder's role of "core/thermal hydraulics." Typically, this position will be the shift technical advisor. The licensee should show that this position has the necessary expertise with "core/thermal hydraulics," and possesses the ability to offer adequate functional oversight to assess core conditions. The licensee should show that the request adds support for core/thermal hydraulics expertise within an appropriate time frame. NRC staff will review whether the justification identifies procedure and information technology advances since the implementation of NUREG-0654 such as improvements that allow using a symptom-based emergency operating procedure network, and computerized or automated systems for the acquisition and display of parameters used to evaluate core conditions.</p>	<p>Technical Support (p. 6 of 12)</p> <p>Table B-1 of NUREG-0654 assigns the major task of technical support to the shift technical advisor on-shift to perform core damage assessments and additional support with one individual within 30 minutes. To adequately support an elimination or extension of the one 30-minute technical support responder, the licensee should show that an on-shift position is identified as capable of initially filling the 30-minute responder's role of "core/thermal hydraulics." Typically, this position will be the shift technical advisor. The licensee should show that this position has the necessary expertise with "core/thermal hydraulics," and possesses the ability to offer adequate functional oversight to assess core conditions. The licensee should show that the request adds support for core/thermal hydraulics expertise within an appropriate time frame. NRC staff will review whether the justification identifies procedure and information technology advances since the implementation of NUREG-0654 such as improvements that allow using a symptom-based emergency operating procedure network, and computerized or automated systems for the acquisition and display of parameters used to evaluate core conditions.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend addition of reference wording from NUREG-0654 Table B-1 to beginning of the section to add consistency throughout the document.</li> <li>- Recommend adding the phrase 'elimination or' to the first sentence in order to maintain consistency in wording with the section on Notification and Communication and Repair and Corrective Actions.</li> <li>- Added '30-' to sentence to address a missing reference.</li> </ul>	

## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Radiation Protection (p. 8 of 12)</p> <p>Personnel assigned to perform this function should be fully qualified HP technicians as described in ANSI/ANS-3.1-1993, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants."<sup>3</sup> Personnel who are typically trained to a level of "meter qualified" to perform basic HP duties are not trained or do not have the necessary experience to perform complex HP duties, as discussed in HPPOS-0238, that would be necessary in a radiological emergency.</p>	<p>Radiation Protection (p. 8 of 12)</p> <p>Personnel assigned to perform this function should be fully qualified HP technicians as described in ANSI/ANS-3.1-1993, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants."<sup>3</sup> Personnel who are typically trained to a level of "meter qualified" to perform basic HP duties are not trained or do not have the necessary experience to perform complex HP duties, <del>as discussed in HPPOS-0238,</del> that would be necessary in a radiological emergency.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Deleted sentence associated with task qualification as identified in HPPOS. HPPOS documents should be eliminated as they are an inappropriate reference. Per the NRC Website, "<i>The Health Physics Positions (HPPOS) Database (NUREG/CR-5569, Rev. 1, 1994) is a compilation of NRC staff positions on a wide range of topics involving radiation protection (health physics). It consists of over 300 documents in the forms of letters, memoranda, and excerpts from technical reports. The HPPOS Database was developed by NRC Headquarters and Regional Offices to help ensure uniformity in inspections, enforcement, and licensing actions. Many of the positions in the HPPOS Database are outdated, but the NRC staff has decided to make the database available to the public because it contains much valuable information on health physics issues related to regulation. The positions should not be considered authoritative by themselves and should not be relied on for regulatory compliance</i>".</li> </ul>	



## Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Notification and Communication (p. 8 of 12)</p> <p>To adequately support the elimination or extension of the two 60-minute responders, the licensee should show that two on-shift positions are identified to fill the 60-minute responders role to "Notify licensee, State, local and Federal personnel, and maintain communication." The licensee should show that these positions are not assigned other tasks that may prevent the timely performance of their assigned notification or communication functions as specified in the emergency plan. The licensee should discuss how communication technologies employed by the proposed on-shift staff will support timely, effective, and reliable notifications. Additionally, the communications technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>	<p>Notification and Communication (p.8 of 12)</p> <p>To adequately support the elimination or extension of the two 60-minute responders, the licensee should show that <del>two</del> on-shift positions are identified to fill the 60-minute responders role to "Notify licensee, State, local and Federal personnel, and maintain communication." The licensee should show that these positions are not assigned other tasks that may prevent the timely performance of their assigned notification or communication functions as specified in the emergency plan. The licensee should discuss how communication technologies employed by the proposed on-shift staff will support timely, effective, and reliable notifications. Additionally, the communications technologies should be referenced in the emergency plan to ensure that future changes are reviewed using the RG 1.219 change process, as they were used as the basis for the proposed change.</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend deletion of the reference to 'two' individuals. This will maintain consistency with wording in previous sections. Determination of the required number of individuals on-shift to perform the function while not being assigned other tasks that prevent timely performance of the assigned functions is completed by the site in accordance with 10 CFR 50 Appendix E IV.A.9.</li> </ul>	

# Attachment 1

Proposed RIS Wording	EC2 Suggested Wording
<p>Emergency Operations Facility Director (p. 9 of 12)</p> <p>Per the guidance in NUREG-0654 Table B-1, an augmented senior manager should fulfill the Emergency Operations Facility (EOF) Director major task at 60 minutes. A licensee requesting a change in staff augmentation requirements that would have the lead EOF manager unavailable to assume command and control within 60 minutes of the initial emergency declaration should show that the on-shift staff includes enough qualified supervision such that one supervisor will assume the emergency director role. The licensee should show that the on- shift supervisor performing the EOF manager actions will not have any additional duties (e.g., each unit under the direction of a unit supervisor, a shift manager providing oversight of the plant response, and a designated emergency director responsible for emergency plan implementation).</p>	<p>Emergency Operations Facility Director (p. 9 of 12)</p> <p>Per the guidance in NUREG-0654 Table B-1, an augmented senior manager should fulfill the Emergency Operations Facility (EOF) Director major task at 60 minutes. A licensee requesting a change in staff augmentation requirements that would have the lead <del>EOF</del> manager unavailable to assume command and control within 60 minutes of the initial emergency declaration should show that the on-shift staff includes enough qualified supervision such that one supervisor will assume the emergency director role. The licensee should show that the on-<del>shift</del> supervisor performing the <del>EOF</del> manager actions will not have any additional duties (e.g., each unit under the direction of a unit supervisor, a shift manager providing oversight of the plant response, and a designated emergency director responsible for emergency plan implementation).</p>
<p><b>Basis for comment –</b></p> <ul style="list-style-type: none"> <li>- Recommend deletion of EOF from sentence. Sites have identified additional resources which are available for performance of lead activities in response to events. Removal of this word maintains that flexibility and does not alter meaning or intent of the paragraph.</li> </ul>	