Interim Staff Guidance on Impact of Construction of New Nuclear Power Plants on Operating Units at Multi-Unit Sites

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COL-ISG-022

Earl Libby, Project Manager

2/7/2011

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Issuance Status:

Proposed

Purpose:

This interim staff guidance (ISG) is provided to assist the staff of the U.S. Nuclear Regulatory Commission (NRC) with the evaluation of combined license (COL) applicants' compliance with the requirements of 10 CFR 52.79(a)(31) and 10 CFR 73.58. 10 CFR 52.79(a)(31) requires, among other things, that COL applicants intending to construct and operate new nuclear power plants (NPPs) on multi-unit sites provide an evaluation of the potential hazards to structures, systems, and components (SSCs) important to safety for the operating units resulting from construction activities. 10 CFR 73.58 requires that COL applicants evaluate and manage the potential for adverse effects on safety and security, including emergency planning, before implementing changes to plant configuration, facility conditions, or security features. Construction activities need to be assessed for potential adverse effects on safety and security, including emergency planning. This ISG also provides guidance for COL applicants regarding the information that should be submitted in the COL application to address compliance with 10 CFR 52.79(a)(31) and 10 CFR 73.58. This ISG supplements the guidance contained in Regulatory Guide (RG) 1.206, Rev. 0, "Combined License Applications for Nuclear Power Plants (LWR Edition)." In addition, this ISG supplements the guidance provided for NRC staff review of COL applications contained in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (SRP) Chapter 1.0, dated November 2007.

Background:

10 CFR 52.79(a)(31) requires that COL applicants include the following information:

> For nuclear power plants to be operated on multi-unit sites, an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multi-unit sites.

The requirement in 10 CFR 52.79(a)(31) was included in the 2007 update to Part 52 (72 FR 49352) as part of the changes necessary to conform with Part 50 requirements. This requirement also exists for applicants for an operating license (OL) under Part 50 in 10 CFR 50.34(b)(6)(vii).

The requirement of 10 CFR 73.58 was included in the March 2009 update to Part 73 (74 FR 13987) as part of the changes to enhance the management of the safety/security interface. The interface between safety and security is an important element of both programs relative to ensuring public health and safety. The COL applicant should identify the process to address

plant activities that could compete or conflict with the capability of the site physical protection program to provide high assurance of adequate protection and common defense and security. Conversely, changes in the site physical protection program could adversely affect plant operations; safety-related structures, systems and components; operator actions; or emergency responses necessary to prevent or mitigate postulated design-basis accidents and to protect public health and safety and the environment. Regulatory Guide 5.74, "Managing the Safety/Security Interface," describes a method that the NRC staff considers acceptable for licensees to assess and manage changes to safety and security activities so as to prevent or mitigate potential adverse effects that could negatively impact plant safety or security, including emergency planning.

During the public workshops on the development of RG 1.206, discussions between the NRC and external stakeholders regarding compliance with the requirements in 10 CFR 52.79(a)(31) resulted only in the inclusion of a brief footnote in Section C.IV.1 of RG 1.206 that addresses the operating units. There was no guidance provided in RG 1.206 for COL applicants that clearly describes the type of information that should be included in a COL application to demonstrate compliance with 10 CFR 52.79(a)(31). Nevertheless, some COL applications under review by the NRC staff have included information to address compliance with this specific regulation. However, there does not appear to be sufficient clarity in the review guidance provided in SRP Chapter 1.0 for how the NRC staff should review information provided by a COL applicant to address the above requirement. Therefore, the NRC staff has sought additional guidance and clarification to assist their reviews of the COL applicant's information in order to assess the applicants' compliance with 10 CFR 52.79(a)(31).

Issue:

The guidance for COL applicants contained in RG 1.206 on the information that the NRC staff considers acceptable for use in complying with the requirements in 10 CFR 52.79(a)(31) requires amplification. In addition, the guidance provided to the staff in SRP Chapter 1.0 for review of COL applicant submittals to address compliance with 10 CFR 52.79(a)(31) warrants clarification and elaboration. This guidance for COL applicants is intended to address this requirement, consistent with the NRC's priority of ensuring the safety of operating nuclear plants. In addition, this guidance is intended for use by the NRC staff in reviewing information provided by COL applicants to address the requirements of 10 CFR 52.79(a)(31) and 10 CFR 73.58.

The requirement in 10 CFR 52.79(a)(31) can be viewed as having two subparts:

1. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for existing operating plants that are located at the site.

2. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for newly constructed plants that begin operation at the site.

This guidance is focused on the evaluation process of potential impacts of construction hazards at the site and is therefore differentiated from existing guidance for operating units that addresses the impacts from the design, construction and operation of a new facility on the existing operating unit(s). For example, this guidance does not address the impact on operating units of raising the water level of an existing ultimate heat sink (cooling pond or lake) for currently operating units in order to support the cooling needs of any new units. However, using the same example, this guidance does address construction activities that may adversely

impact the integrity of the existing ultimate heat sink and resultant potential hazards to the operating unit(s). This guidance presumes that additional mechanisms such as the 10 CFR 50.59 process, the 10 CFR 73.58 process, the Technical Specification change process, the emergency preparedness (EP) change process and the final safety analysis report (FSAR) update process that reflect consideration of new and/or updated hazards due to nearby military and/or industrial facilities will be used by the licensee for the operating unit(s) to address these considerations.

In addition, this guidance discusses the potential interfaces between the responsible organizations associated with construction of the new facility and operation of the existing unit(s) that the NRC staff considers important to ensure that appropriate managerial and administrative controls are identified and implemented to prevent or mitigate impacts to SSCs important to safety for the operating unit(s). This guidance also discusses the potential interfaces between the Office of New Reactors (NRO) and the Office of Nuclear Reactor Regulation (NRR) – the NRC offices associated with licensing new reactors and regulating existing operating units, respectively.

Discussion:

The underlying requirements contained in 10 CFR 52.79(a)(31) for COL applicants to evaluate the potential hazards to SSCs important to safety for operating NPPs from the construction activities associated with new NPPs are not new. These requirements were incorporated into the 2007 update to 10 CFR Part 52 (72 FR 49352) as part of the conforming changes to include Part 50 content of application requirements applicable to COLs in Part 52. The requirement for applicants for OLs to address potential hazards due to construction activities has been included in § 50.34(a)(ii) and 50.34(b)(6)(vii) for over 30 years.

The following discussion of the historical and regulatory basis is provided to explain the requirements for the license applications to address potential construction hazards.

On August 7, 1978 (43 FR 34764), the NRC published a rulemaking to include requirements for applicants for construction permits (CPs) and OLs of NPPs on multi-unit sites to address potential impacts of hazards due to construction activities. The basis for this rulemaking was a petition for rulemaking (40 FR 20371) that requested that the Commission amend its regulations to require licensees to shut down operating units of a NPP at multi-unit facilities during periods when work on a unit under construction could compromise the integrity of the engineered safety features on an operating unit or units. As a basis for the petition, the petitioner referred to the fire which occurred on March 22, 1975, in the electrical cabling at the Browns Ferry Nuclear Station.

The Commission approved the rulemaking noting that existing regulations covered the other (non-construction) activities, but since no regulation specifically addressed multi-unit sites, a specific regulation to do so was prudent. The Commission further noted that the new rule would divide responsibilities between the applicant for the new unit and the licensee for the operating unit and that further detailed guidance would be provided in an update to RG 1.70. Upon these bases, the Commission amended the Part 50 regulations to add <u>two</u> separate requirements:

> 10 CFR 50.34(a)(11) states: On or after February 5, 1979, applicants who apply for construction permits for nuclear power plants to be built on multiunit sites *shall identify potential hazards* to the structures, systems and components important to safety of operating nuclear facilities from construction activities. A discussion shall also be included of any managerial and administrative controls that will be used during construction to assure the safety of the operating unit. (*Emphasis added*)
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> 10 CFR 50.34(b)(6)(vii) states: On or after February 5, 1979, applicants who apply for operating licenses for nuclear power plants to be operated on multiunit sites *shall include an evaluation* of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites. (*Emphasis added*)

Both 10 CFR 50.34(a)(11) and 10 CFR 50.34(b)(6)(vii), which were the model for 10 CFR 52.79(a)(31), place the responsibility for protecting existing plants from the hazards of

constructing a new plant on the new plant licensee. However, some pre-construction activities do not require a license, and the licensee of the existing plant has the responsibility to assure that such activities do not pose a hazard to the existing plant. For example, the licensee of the existing plant may grant access within the exclusion area boundary (EAB), and 10 CFR 50.59 as well as 10 CFR 73.58 may require evaluation of the activities for which EAB access has been granted. Moreover, the existing plant licensee may well be in possession of information that is not available to the new plant applicant, or may be in a position to implement mitigation measures that are not available to the new plant applicant. Through development of this guidance, the underlying principle that the organizations responsible for construction and operation have a shared responsibility for ensuring the safety of the operating unit(s) through separate and distinct tasks is preserved and further highlighted. As written, the requirement in 10 CFR 52.79(a)(31) for a COL applicant to perform an *evaluation of potential hazards* due to construction activities presents several challenges:

- The operating unit(s) could be of different reactor designs than those referenced in the COL application, thus, the SSCs important to safety for the operating unit(s) may be unique or different than those for the COL unit.

- There are distinct responsibilities related to identifying potential hazards, evaluating potential hazards, and implementing managerial and administrative controls or measures to manage, preclude or mitigate the impacts of construction hazards.

- Implementing temporary or permanent construction barriers to prevent or mitigate the impacts of construction hazards.

To address these challenges, this guidance also discusses the coordination necessary between the construction and operating organizations.

Following the implementation of 10 CFR 50.34(a)(11) and 10 CFR 50.34(b)(6)(vii), operating plant licensees could carry out the requirements of these regulations by demonstrating that their existing programs sufficiently addressed the identification and evaluation of these construction activities hazards on the SSCs important to safety. These programs included administrative and/or managerial controls, and the design change control processes under 10 CFR 50.59 and later 10 CFR 73.58 that required evaluations to address potential hazards due to construction activities and interim plant configurations. In addition, the guidance in RG 1.181 “Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)” (ML992930009) discusses that FSAR updates should reflect consideration of new and/or updated hazards due to nearby military and/or industrial facilities, etc. All of these programs called for either identification of procedural controls to preclude adverse impacts and/or identification and implementation of compensatory measures or mitigation features to prevent adverse impacts on the operating unit(s). This guidance also discusses the NRC staff’s consideration of these programs in conjunction with their reviews for compliance with the requirements of 10 CFR 52.79(a)(31). For example, it may be sufficient for the COL applicant to identify the construction activities that create potential hazards and demonstrate appropriate communication and coordination of construction activities with the operating unit organization, while the operating unit organization commits to the evaluation of the identified potential hazards to SSCs important to safety in accordance with their existing programs. The COL applicant could also commit to coordination and collaboration with the operating unit(s) organization on implementation of any managerial and administrative controls, including construction schedule constraints, and

temporary or permanent construction barriers to preclude or mitigate the effects of construction hazards on the operating unit(s).

In addition, it is necessary to provide a distinction between the two areas of shared responsibility for ensuring the safety of operating units:

(1) The information to be submitted by COL applicants that is necessary for NRC staff review to make a reasonable assurance finding regarding compliance with the specific regulatory requirement and issuance of the combined license.

(2) The post-licensing activities that must be identified and implemented by the operating unit(s) and inspected by the NRC that are necessary to manage, mitigate or preclude the potential hazards to the SSCs important to safety for an operating unit from the construction activities of another unit on a multi-unit site.

To provide clarity and guidance for COL applicants for a combined license, the following section is proposed as a supplement to RG 1.206, Sections C.I.1, C.III.1, and C.III.2. In addition, the NRC staff review guidance in SRP Chapter 1.0 will be supplemented to provide additional guidance for review of the COL applicant's information.

Interim Staff Guidance:

The NRC will revise RG 1.206 by adding the following guidance to Sections C.I.1, C.III.1, and C.III.2 of RG 1.206:

C.I.1.10 Construction of New Nuclear Power Plants on Multi-Unit Sites

The regulation at 10 CFR 52.79(a)(31) requires, in part, applicants for a combined license (COL) intending to construct and operate new nuclear power plants (NPPs) on multi-unit sites to provide an evaluation of the potential hazards to the structures, systems, and components (SSCs) important to safety for operating units resulting from construction activities on the new units. The term site refers to the contiguous real estate on which nuclear facilities are located and for which one or more licensees has the legal right to control access by individuals and to restrict land use for purposes of limiting the potential doses from radiation or radioactive material during normal operation of the facilities. The requirement in 10 CFR 52.79(a)(31) can be viewed as having two subparts:

1. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for existing operating plants that are located at the site.

2. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for newly constructed plants that begin operation at the site.

COL applicants should provide the following construction impact evaluation plan to demonstrate that the limiting conditions for operation of an operating unit are not exceeded in accordance with the requirements of 10 CFR 52.79(a)(31) as a result of construction activities at multi-unit sites:

- A discussion of the construction activity identification process and the impact evaluation criteria used to evaluate the construction activities that may pose potential hazards to the SSCs important to safety for operating unit(s).

- A table of those construction activities and the potential hazards that are identified using that construction impact evaluation plan, the SSCs important to safety for the operating unit potentially impacted by the construction activity, and proposed mitigation methods.

- Identification of the managerial and administrative controls, such as proposed license conditions that may involve construction schedule constraints or other restrictions on construction activities, that are credited to manage the safety/security interface and to preclude and/or mitigate the impacts of potential construction hazards to the SSCs important to safety for the operating unit(s).

- A discussion of the process for communications and interactions planned and credited between the construction organization and the operations organization to ensure appropriate coordination and authorization of construction activities and implementation of the prevention or mitigation activities as necessary.

- A memorandum of understanding or agreement (MOU or MOA) between the COL applicant and the operating unit(s) licensee as a mechanism for communications, interactions, and coordination to manage the impact of the construction activities and to manage the safety/security interface including emergency programs.

- An implementation schedule corresponding to construction tasks or milestones to ensure the plan is reviewed on a recurring basis and maintained current as construction progresses.

Although Part 52 requires a COL for the construction and operation of a new unit, the NRC staff does not consider a newly licensed unit under Part 52 to be an operating unit until the Commission makes the 10 CFR 52.103(g) finding. Therefore, the operating unit(s) discussed above includes both existing operating unit(s) and new construction unit(s) that have commenced operation in accordance with 10 CFR 52.103(g). In addition, in performing the evaluations required under 10 CFR 52.79(a)(31) and 10 CFR 73.58, appropriate consideration should be given to the following:

- The extent to which potential construction hazards to the SSCs important to safety for the existing operating unit(s) may be influenced by the operating status of the operating unit(s) and their limiting conditions for operation as specified in Technical Specifications.

- The extent to which the COL applicant needs to evaluate the potential construction hazards to SSCs important to safety for a new operating unit(s) due to construction activities on a second new unit may be influenced based on the scheduling of the units construction activities (e.g., the coordination of scheduled construction activities on one new unit with the start of operations of another new unit may be limited by the timing of the 10 CFR 52.103(g) finding and, therefore, the range of construction activities evaluated may also be limited).

- The extent to which potential construction hazards to the SSCs important to safety for the new operating unit may also be influenced by the operating status (e.g., power level) of the subject unit and their limiting conditions for operation as specified in Technical Specifications.

The following two discussions provide examples of anticipated construction scenarios and reasonable measures with respect to the construction hazards in those situations.

In the situation where a COL application is for construction and operation of a single new NPP on a site where an existing operating unit is located:

> The COL applicant should identify the construction activities which may impose potential hazards to the operating unit, qualitatively using the best available information, and provide this information to the licensee for the operating unit. The operating unit licensee would provide assistance, in whole or in part, to the COL applicant in the evaluation of the impacts on the operating unit due to the potential construction hazards identified by the COL applicant. It is expected that the operating unit licensee would evaluate the identified construction activities using their existing programs, including but not limited to 10 CFR

50.59 and 10 CFR 73.58, and then coordinate and collaborate with the COL applicant to control, preclude, prevent, and/or mitigate the effects of the construction activity.

The COL applicant should be able to demonstrate to the NRC staff that their managerial and administrative controls for construction activities (including through existing programs of the operating unit) are adequate to control, preclude, prevent, and/or mitigate the identified potential construction hazards due to construction activities on the COL unit. This would include demonstrating adequate and appropriate communication, interactions and coordination with the governing authorities of the operating unit for authorization of commencement of construction activities on the COL unit.

Completion of activities that are determined to be the responsibility of the operating unit(s) should not form the basis for decision making on issuance of a COL. However, the COL applicant must demonstrate that they have established an arrangement with the existing plant licensee to integrate consideration of such activities into the planning and decision making functions for the operating unit.

In the situation where a COL application is for construction and operation of several new nuclear power plants on a site where an existing operating unit may or may not be located:

The COL applicant should identify the potential hazards to operating units (existing units and new combined license units) due to construction activities and provide this information to the licensee(s) for the operating unit(s). The existing operating unit licensee(s) performs the same actions as discussed above.

The COL applicant should be able to demonstrate to the NRC staff that their managerial and administrative controls are also adequate to control, preclude, prevent, and/or mitigate the identified potential hazards due to construction between or among the COL unit(s) during the transition of one or more units to an operating status. This would include coordination with the governing authorities of the operating COL unit(s) for authorization of commencement of construction activities on COL unit(s) still under construction. The COL applicant must demonstrate that it has established an arrangement with the existing plant licensee to integrate consideration of such activities into the planning and decision-making functions for the operating COL unit(s). To ensure this coordination, the COL applicant should also identify to the staff its plans for communication and coordination of their construction and operation activities between and among the COL units.

The NRC will revise SRP Chapter 1.0, as follows:

For Item 10, Nuclear Power Plants to be Operated on Multi-Unit Sites, in Section I. AREAS OF REVIEW, add the following statement:

10. Nuclear Power Plants to be Operated on Multi-Unit Sites

Operating units include both existing operating units on the multi-unit site and those newly licensed units that have transitioned from construction status to operating status in accordance with the Commission authorization for operation per 10 CFR 52.103(g). The term site refers to the contiguous real estate on which nuclear facilities are located and for which one or more licensees has the legal right to control access by individuals and to restrict land use for purposes of limiting the potential doses from radiation or radioactive material during normal operation of the facilities.

Revise the discussion in Item 3, Potential hazards from construction to SSCs important to safety on an operating reactor, in Section III. REVIEW PROCEDURES, as follows:

3. Potential hazards from construction to SSCs important to safety on an operating unit

The NRC licensing project manager will coordinate the review of the construction impact evaluation plan by consulting with the organizations responsible for the review of site hazards, management and technical support organization, operating organization, and any others as necessary. At the minimum, these organizations include:

- CHPB – Health Physics Branch
- COLP – Operations Licensing and Human Performance Branch
- EEB – Electrical Engineering Branch
- NSIR/NRLB – New Reactor Licensing Branch
- NSIR/RSRLB – Reactor Security Rulemaking and Licensing Branch
- RGSI – Geosciences and Geotechnical Engineering Branch
- RHEB – Hydrologic Engineering Branch
- RSAC – Siting and Accident Consequence Branch
- SEB 1 & 2 – Structural Engineering Branch

In addition, the COL project manager should coordinate with the impacted operating unit project manager(s) to verify that the proposed communications and interactions that are identified and credited between the COL applicant and the operations organization ensure appropriate coordination and authorization of construction activities. The COL project manager should also coordinate with the operating unit project manager to ensure that any actions necessary on the part of the operating unit to manage, mitigate, or preclude the potential hazards to the SSCs important to safety are appropriately communicated and documented.

Implementation and completion of activities that are the responsibility of the operating unit licensee should not factor into the staffs decision to issue a license to the COL applicant.

Additional guidance for the staff in performing these reviews is provided in Attachment B.

The following review guidance should be included as Attachment B to SRP Chapter 1.0:

Guidance for NRC Review
of
Impact of Construction of New Nuclear Power Plants on
Operating Units at Multi-Unit Sites

Background:

10 CFR 52.79(a)(31) requires that combined license (COL) applicants include the following information:

> For nuclear power plants to be operated on multi-unit sites, an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multi-unit sites.

Variations may exist among COL applicants regarding their plans for construction following issuance of a license; therefore, the evaluation required by this regulation may also vary in detail in accordance with the COL applicant's plans for construction. The following provides broad guidance to the NRC staff for reviewing information provided by a COL applicant to address the requirement in 10 CFR 52.79(a)(31).

Regulatory Requirements:

The underlying basis of the requirements contained in 10 CFR 52.79(a)(31) for COL applicants to evaluate the potential hazards to structures, systems, and components (SSCs) important to safety on operating NPPs from the construction activities associated with new NPPs are not new. These requirements were incorporated into the 2007 update to 10 CFR Part 52 (72 FR 49352) as part of the conforming changes to include Part 50 requirements into Part 52. Although similar requirements for applicants to address potential hazards due to construction activities existed in 10 CFR Part 50, those requirements are specified separately in 10 CFR 50.34 for applicants for a construction permit and applicants for operating licenses:

> 10 CFR 50.34(a)(11) states: On or after February 5, 1979, applicants who apply for construction permits for nuclear power plants to be built on multiunit sites *shall identify potential hazards* to the structures, systems and components important to safety of operating nuclear facilities from construction activities. A discussion shall also be included of any managerial and administrative controls that will be used during construction to assure the safety of the operating unit. (*Emphasis added*)
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> 10 CFR 50.34(b)(6)(vii) states: On or after February 5, 1979, applicants who apply for operating licenses for nuclear power

> plants to be operated on multiunit sites *shall include an evaluation* of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites. (*Emphasis added*)

Both 10 CFR 50.34(a)(11) and 10 CFR 50.34(b)(6)(vii), which was the model for 10 CFR 52.79(a)(31), place the responsibility for protecting existing plants from the hazards of constructing a new plant on the new plant licensee. However, some pre-construction activities do not require a license, and the licensee of the existing plant has the responsibility to assure that such activities do not pose a hazard to the existing plant. For example, the licensee of the existing plant may grant access within the exclusion area boundary (EAB), and 10 CFR 50.59 as well as 10 CFR 73.58 may require evaluation of the activities for which EAB access has been granted. Moreover, the existing plant licensee may well be in possession of information that is not available to the new plant applicant, or may be in a position to implement mitigation measures that are not available to the new plant applicant. The underlying principle is that the organizations responsible for construction and operation have a shared responsibility for ensuring the safety of the operating unit(s) through separate and distinct tasks. As written, the requirement in 10 CFR 52.79(a)(31) for a COL applicant to perform an *evaluation of potential hazards* due to construction activities presents several challenges:

- The operating unit(s) could be of different reactor designs than those referenced in the COL application, thus, the SSCs important to safety for the operating unit(s) may be unique or different than those for the COL unit.

- There are distinct responsibilities related to identifying potential hazards, evaluating potential hazards, and implementing managerial and administrative measures to manage, preclude or mitigate the impacts of construction hazards.

- Implementing temporary or permanent construction barriers to prevent or mitigate the impacts of construction hazards.

To overcome the inherent challenges for COL applicants in addressing the two separate requirements that are the basis for 10 CFR 52.79(a)(31), the staff will use the following definition for evaluation as it pertains to the above regulation:

> Evaluation is the process of determining whether a particular construction activity associated with a new nuclear power plant on a multi-unit site results in a potential hazard to the structures, systems, and components important to safety for the operating unit(s); identifying those construction activities that create potential hazards; and identifying the SSCs important to safety on the operating unit(s) that could be impacted.

The requirement for COL applicants in 10 CFR 52.79(a)(31) can be viewed as having two subparts:

1. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for existing operating plants that are located at the site.

2. The COL applicant must evaluate the potential hazards from constructing new plants on SSCs important to safety for newly constructed plants that begin operation at the site.

The guidance that follows provides clarification on the information necessary for staff review for acceptability regarding COL applicant compliance with 10 CFR 52.79(a)(31). In addition, the guidance that follows provides clarification on post-licensing activities that may be necessary to be performed to manage, mitigate or preclude the potential hazards to the SSCs important to safety for an operating unit from the construction activities of another unit on a multi-unit site.

Review Guidance:

In reviewing applications, the NRC staff should ensure that the following construction impact evaluation plan is provided by the COL applicants, as necessary, to demonstrate compliance with the requirements of
10 CFR 52.79(a)(31) (i.e., that the limiting conditions for operation are not exceeded as a result of construction activities at multi-unit sites that create potential hazards to SSCs important to safety on the operating unit(s)).

- A discussion of the construction activity identification process and the impact evaluation criteria used to evaluate the construction activities that may pose potential hazards to the SSCs important to safety for operating unit(s).

- A table of those construction activities and the potential hazards that are identified using that construction impact evaluation plan, the SSCs important to safety for the operating unit potentially impacted by the construction activity, and proposed mitigation methods.

- Identification of the managerial and administrative controls, such as proposed license conditions that may involve construction schedule constraints or other restrictions on construction activities, that are credited to manage the safety/security interface and to preclude and/or mitigate the impacts of potential construction hazards to the SSCs important to safety for the operating unit(s).

- A discussion of the process for communications and interactions planned and credited between the construction organization and the operations organization to ensure appropriate coordination and authorization of construction activities and implementation of the prevention or mitigation activities as necessary.

- A memorandum of understanding or agreement (MOU or MOA) between the COL applicant and the operating unit(s) licensee as a mechanism for communications, interactions, and coordination to manage the impact of the construction activities.

- An implementation schedule corresponding to construction tasks or milestones to ensure the plan is reviewed on a recurring basis and maintained current as construction progresses.

The staff review should ensure an appropriate balance between the information necessary to issue a COL and the information and specific activities to be implemented and inspected following issuance of the COL.

Although a combined license under Part 52 is necessary for the construction and operation of the new unit, the NRC staff should consider in its review that under Part 52 a newly licensed unit is not deemed to be an operating unit until the Commission makes the finding required by 10 CFR 52.103(g). Therefore, the operating unit(s) discussed above includes both existing operating unit(s) and any new unit(s) that have commenced operation in accordance with 10 CFR 52.103(g).

Final Resolution:

This issue will be resolved in the next revision to RG 1.206 and to SRP Chapter 1.0.

Applicability:

This ISG is applicable to all COL applicants.

Backfit Determination:

This ISG does not constitute a backfit. This ISG does not contain any new requirements for COL applicants. Rather, it contains additional guidance and clarification for COL applicants and the NRC staff on compliance with existing regulations in 10 CFR 52.79(a)(31) and 10 CFR 73.58.

References:

(1) NRC, NRR OI No. LIC-100, "Control of Licensing Bases for Operating Reactors," Revision 1, January 7, 2004 (ML033530249).

(2) RG 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," June 2007 (ML070720184).

(3) RG 1.181, "Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)," September 1999 (ML992930009).

(4) RG 5.74, "Managing the Safety/Security Interface," March 2009 (ML091690036).

(5) NUREG-0800, "Standard Review Plans for the Review of Safety Analysis Reports for Nuclear Power Plants," March 2007 (ML070660036).

(6) NRC Regulatory Information Summary 2001-09, "Control of Hazard Barriers," April 2, 2001 (ML003768935).

(7) BL 79-18, "Audibility Problems Encountered on Evacuation of Personnel from High Noise Areas," August 7, 1979 (ML031220105).

(8) IN 02-14, "Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner Controlled Area," April 8, 2002 (ML020980006)

(9) IN 04-19, "Problems Associated with Back-up Power Supplies on Emergency Response Facilities and Equipment," November 4, 2004 (ML042730010)

(10) IN 05-19, "Effect of Plant Configuration Changes on the Emergency Plan," July 18, 2005 (ML051530520).

(11) 40 FR 20371, Petition for Rulemaking, Docket No. PRM-50-13, Business and Professional People for the Public Interest, May 9, 1975.

(12) 42 FR 36268, Notice of Proposed Rulemaking, “Maintaining Integrity of Structures, Systems, and Components Important to Safety During Construction at Multi-Unit Sites,” July 14, 1977.

(13) 43 FR 34764, Notice of Final Rule, “Maintaining Integrity of Structures, Systems, and Components Important to Safety During Construction at Multi-Unit Sites,” August 7, 1978.