

**Analysis of RIS 2005-02 Examples of Potential Changes resulting in a
Decrease in Effectiveness of the Emergency Plan**

Reference: NRC Regulatory Issue Summary 2005-02, "Clarifying the Process for Making Emergency Plan Changes" was the source of NRC examples.

NRC Example	NEI Category
<p>Following an Alert declaration for a carbon dioxide discharge into the facility, the licensee implemented a series of corrective actions including the revision of the EALs pertaining to toxic gas events at several stations. These changes were primarily based on the licensee's assessment that the conditions did not meet the definition of an Alert. The licensee's change to the EALs would reduce the number of declarable events because not only was the presence of gas required but the effect on plant operations needs to be considered. (With the revised EALs, no emergency classification would have been made.) The emphasis of the EAL shifted from personnel safety to the impact on plant conditions or operations.</p>	<p>Change eliminates or negates the regulatory basis for a previous NRC decision on Emergency Planning. (Approval of the EAL Scheme) Could also be functionality of Margin (reduce the number of Classifications)</p> <p>Explanation: <i>NRC approval of the EAL scheme was based on the reduction in potential classifications caused by restricting the emphasis to plant operations and excluding personnel safety</i></p>
<p>A significant deviation in the EAL scheme from the NRC-approved version. The deviation involved changes to eight EALs that decreased the effectiveness of the emergency plan in that emergency conditions that would have resulted in classification at the General Emergency, Alert, and Notification of Unusual Event levels under the prior NRC approved plan would now result in a lesser classification or no classification.</p>	<p>Functionality of Margin – Reduces and/or lowers Classification level</p> <p>Explanation: <i>NRC approval of the EAL scheme was based on the reduction in potential classifications caused by the changes from the originally approved EAL scheme.</i></p>
<p>A licensee proposed to reduce the number of personnel on-shift with emergency preparedness responsibilities as described in the emergency plan. As a result of difficulties associated with augmenting the on-shift staff during an actual emergency, the licensee determined it needed to increase its on-shift staffing in order to ensure adequate response capability. The proposed measures to compensate for the reduction in on-shift staffing were not sufficient to ensure that the planning standard would be met. In addition, the change would result in a decrease in the effectiveness of the emergency plan due to a lack of timeliness in response and a degraded capability to respond.</p>	<p>Substantially alters assumptions or analyses previously used to establish emergency planning functionality</p> <p>Explanation: <i>The original approval of the staffing plan assumed a level of response, in this case, a number of personnel, capable of responding within a period of time to perform emergency response functions. The compensatory actions taken by the utility were inadequate to balance the assumptions on which the previous approval was made in that some functions could no longer be performed within the existing approved structure.</i></p>
<p>Changes that reduce the coverage of or increase the activation time of Alert and Notification Systems without review and</p>	<p>Substantially alters assumptions or analyses previously used to establish emergency planning functionality or as written could be to</p>

<p>approval by offsite agencies and/or FEMA. " Equipment is removed from the Emergency Response Facility (ERF) and the plan such that the capability to communicate among the ERFs or offsite agencies is reduced or no longer exists.</p>	<p>no longer meet 50.47. Explanation: <i>Licensee/Emergency Response capabilities were significantly altered in such a way that functions required by the plan and/or critical functions supporting approval of the plan were no longer maintained.</i></p>
<p>Changes are made that reduce or eliminate the capability to notify ERO responders.</p>	<p>Substantially alters assumptions or analyses previously used to establish emergency planning functionality Explanation: <i>The ability to notify augmented responders was a critical assumption plan response functions. The licensee reduced/eliminated that function without sufficient compensatory measures.</i></p>
<p>Procedures are revised such that a range of offsite protective actions or adequate protective actions for onsite personnel who are not members of the ERO would not be recommended or implemented.</p>	<p>Change does not meet 50.47 as the example is written. If less significant then: Substantially alters assumptions. Explanation: <i>10 CFR 50.47(b)(10) requires a full range of protective actions be available for the General Public (RSPS) and protective measures be in place for onsite workers. In this case, inadequate measures were in place to protect onsite personnel not a member of the ERO in conflict with the requirement of 50.47(b)(10).</i></p>
<p>Procedures are revised such that follow-up notifications do not take into account previous Protective Action Recommendations.</p>	<p>Hard to categorize because the NRC made up this example in the 2004 RIS. It would fall under the altered assumption grouping. Explanation: <i>RIS 2004-13 provided guidance to the industry that Protective Actions once recommended could not be rescinded based on changes in future PAR requirements. Elimination of this provision from an existing requirement reduces an existing NRC assumption critical to adequacy of the Emergency Plan.</i></p>
<p>Changes are made such that personnel in the owner-controlled area are not informed of the need to evacuate or shelter.</p>	<p>Substantially alters assumptions or analyses previously used to establish emergency planning functionality Explanation: <i>10 CFR 50.47(b)(10) requires a full range of protective actions be available for the General Public (RSPS) and protective measures be in place for onsite workers. In this case, inadequate measures were in place to protect onsite personnel not a member of the ERO in conflict with the requirement of 50.47(b)(10).</i></p>
<p>Increase in augmentation response times.</p>	<p>Change would alter a specific numerical parameter such that it is no longer bound the function</p>

	<p>Explanation: <i>NRC approval of the plan was contingent on the capability to augment Emergency Response functions within a certain period of time. An increase in that augmentation time alters the numerical parameter such that the assumptions related to approval are no longer bounded.</i></p>
<p>Increase in facility activation time.</p>	<p>Change would alter a specific numerical parameter such that it is no longer bounded</p> <p>Explanation: <i>NRC approval of the plan was contingent on the capability to augment Emergency Response functions within a certain period of time. An increase in that augmentation time alters the numerical parameter such that the assumptions related to approval are no longer bounded.</i></p>
<p>Removal of current emergency responders (a) or alterations of an NRC-approved Alternative (b).</p>	<p>Change would alter a specific numerical parameter such that it is no longer bounded or invalidate specific commitments affecting the Emergency Plan</p> <p>Explanation: <i>(a) NRC approval of the plan assumed emergency responders capable of performing certain functions. Elimination of those responders without sufficient means to demonstrate adequacy of the function (including timeliness) reduces the margin of approval.</i></p> <p><i>(b) The licensee obtained NRC approval of an alternative means of demonstrating compliance. This specific approval was subsequently altered without appropriate demonstration of equivalence.</i></p>