

NEI Reactor Oversight Process Whitepaper

Change to the NEI 99-02 Text for the Drill/Exercise Performance Indicator – Initial Notification Form Accuracy

Introduction

Industry operating experience has indicated that the elements of a form used to support initial emergency notifications to an Offsite Response Organization (ORO) may be bifurcated into entries of greater and lesser risk significance. The distinction rests on whether an ORO considers a form entry necessary to make a protective action decision (PAD) for public protective actions, or is information provided for other purposes. While all the information on an initial notification form is important, form entries not necessary for protective action decision-making are less risk significant than the other entries, and that distinction should be reflected in the guidance contained in NEI 99-02, “Regulatory Assessment Performance Indicator Guideline.”¹

Currently, the criteria in NEI 99-02, Revision 7², for assessing the accuracy of an initial notification form consider all listed form entries to have equal risk significance. This conclusion is drawn from the fact that an error in any one of them will result in a missed performance indicator (PI) opportunity. Thus, a licensee is guided to report as a Drill/Exercise Performance (DEP) opportunity failure an incorrect form entry that may not impact the ability of an ORO to make a PAD (i.e., an entry of lesser risk significance).

NEI 99-02 Section Affected

The guidance affected by the proposed changes involves the criteria for assessing the accuracy of an initial notification form for alerting an ORO of an emergency. The affected text is found in the following pages and lines of NEI 99-02, Revision 7: page 47, lines 38 through 43; and page 48, lines 1 through 5 and lines 19 and 24.

Discussion

The proposed resolution is to revise the guidance for assessing the accuracy of initial notification forms. The revised accuracy criteria identify form entries that are generally required for an ORO PAD (i.e., more risk significant entries) and those that may not be critical to such decisions (i.e., potentially less risk significant). To implement the revised criteria, a licensee would need confer with the appropriate ORO and determine the use of the potentially less risk significant form entries in protective action decision-making. If a form entry is not required to make a PAD, then the entry is less risk significant and need not be assessed for DEP PI accuracy. The licensee will need to document the determination and retain the documentation for inspection.

It is recognized that the proposed approach could result in sites having different explicit form accuracy criteria; however, the current guidance in NEI 99-02 already establishes de facto site-specific criteria through the stipulation that “initial notification forms are negotiated with offsite authorities. If the approved form does not include these elements, they need not be added.” Sites do not have uniform ORO notification forms; therefore, a site with a form containing an element listed in NEI 99-02 is

¹ For clarity, it is important to note that NEI 99-02 defines DEP PI “Opportunities” for notifications as those related to “each initial notification of an emergency class declaration” and “each initial notification of PARs or change to PARs.” For this reason, the proposed changes discussed in this white paper are not relevant to other types of emergency notifications (e.g., those made to a first responder agency such as a fire department).

² A line-in/line-out version of NEI 99-02, Revision 7, dated August 31, 2013 and showing the changes from Revision 6 to Revision 7, is available on the NRC web site at <https://www.nrc.gov/docs/ML1326/ML13261A116.pdf>.

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required to assess that entry for accuracy while another site without that entry is not. In addition, other performance indicators also provide guidance allowing for site-to-site differences in PI assessment criteria (e.g., reporting of Mitigating Systems PI data is premised on site-specific technology and design considerations).

To improve the consistency of the guidance in NEI 99-02, the term “Protective Action Recommendation,” or PAR, should replace two of the current initial notification form elements, “Whether offsite protective measures are necessary” and “Potentially affected population and areas.” This change should be made because a PAR transmits the offsite protective measures identified as necessary for a potentially affected population or area (e.g., evacuate a subarea or shelter a town) – a PAR is therefore functionally equivalent to the two listed elements. Further, the DEP indicator “Clarifying Notes” section already uses the term PAR in a manner consistent with its addition to the form accuracy criteria.

Finally, the proposed change does not alter the existing NEI 99-02 guidance that a licensee should critique all initial notification form elements, including elements not assessed for DEP PI accuracy, and address errors through a corrective action system. In particular, form entries removed from a site’s DEP PI accuracy criteria under this change would still need to be critiqued with errors addressed in a corrective action system.

Proposed Changes to NEI 99-02

Starting on page 47 at line 38, replace existing text with the following new text:

- *Initial notification form completed appropriate to the event to include (see clarifying notes):*
 - *Class of emergency*
 - *EAL number**
 - *Description of emergency**
 - *Wind direction and speed**
 - *Protective Action Recommendation (PAR)*
 - *Whether a release is taking place*
 - *Date* and time of declaration of emergency*
 - *Whether the event is a drill or actual event*
 - *Plant and/or unit* as applicable*

On page 48, replace the existing paragraph in lines 19 through 24 with the following new text, and renumber the lines as needed:

It is understood that initial notification forms are negotiated with Offsite Response Organization (ORO) authorities, and that one or more of the above form elements may not appear on a form and need not be added. When included on a form, the elements listed above without an asterisk should be assessed for DEP PI accuracy. Any of the other elements, identified with an asterisk, appearing on a form should also be assessed for DEP PI accuracy if required by an ORO to make a PAD (i.e., asterisked elements identified by an ORO as not necessary to formulating a PAD do not need to be assessed for DEP PI accuracy). This determination should be made in conjunction with the appropriate ORO and documented. Examples of cases where a DEP PI accuracy assessment would

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not be required are presented below.

- *“EAL number” and/or “Description of emergency:” The ORO uses the “Class of emergency” entry (e.g., a General Emergency has been declared) to make a PAD, and considers the “EAL number” and/or “Description of emergency” to be supplemental information.*
- *“Wind direction and speed:” The ORO uses the “PAR” entry (e.g., evacuate and shelter specified subareas) to make a PAD, and considers the “Wind direction and speed” entries to be supplemental information.*
- *“Date and time of declaration of emergency:” The ORO determines that an incorrect date would not impede a PAD. The “time of declaration of the emergency” entry is NOT asterisked and should be retained as a DEP PI accuracy criterion.*
- *For “Plant or unit as applicable:” The ORO determines that incorrect unit identification would not impede a PAD. This determination should consider potential PAD impacts caused by an emergency occurring at different facilities or technologies on a site (e.g., a PWR unit and a BWR unit, two units with different PWR technologies, etc.). The “Plant” entry is NOT asterisked and should be retained as an accuracy criterion.*

The documentation supporting a determination to not include an asterisked form element within the site-specific DEP PI accuracy criteria should be retained for inspection.

If an initial notification form includes elements in addition to those listed above, they need not be assessed for DEP PI accuracy. It is, however, expected that any entry errors involving the asterisked form elements not assessed for DEP PI accuracy or additional elements will be critiqued and addressed through a corrective action system.

One editorial change to NEI 99-02 is needed to incorporate the above text – move the sentence currently on page 48, lines 16 and 17, to a location immediately below the new text shown above and carry with it the three bullets on lines 26 through 33. A markup of the affected text is shown on the next two pages.

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- Initial notification form completed appropriate to the event to include (see clarifying notes):
 - Class of emergency
 - EAL number*
 - Description of emergency*
 - Wind direction and speed*
 - ~~Whether offsite protective measures are necessary~~
 - ~~Potentially affected population and areas~~ **Protective Action Recommendation (PAR)**
 - Whether a release is taking place
 - Date* and time of declaration of emergency
 - Whether the event is a drill or actual event
 - Plant and/or unit* as applicable

Clarifying Notes

While actual event opportunities are included in the performance indicator data, the NRC will also inspect licensee response to all actual events.

As a minimum, actual emergency declarations and evaluated exercises are to be included in this indicator. In addition, other simulated emergency events that the licensee formally assesses for performance of classification, notification or PAR development may be included in this indicator (opportunities cannot be removed from the indicator due to poor performance).

It is understood that initial notification forms are negotiated with Offsite Response Organization (ORO) authorities, and that one or more of the above form elements may not appear on a form and need not be added. When included on a form, the elements listed above without an asterisk should be assessed for DEP PI accuracy. Any of the other elements, identified with an asterisk, appearing on a form should also be assessed for DEP PI accuracy if required by an ORO to make a PAD (i.e., asterisked elements identified by an ORO as not necessary to formulating a PAD do not need to be assessed for DEP PI accuracy). This determination should be made in conjunction with the appropriate ORO and documented. Examples of cases where a DEP PI accuracy assessment would not be required are presented below.

- **“EAL number” and/or “Description of emergency:”** The ORO uses the “Class of emergency” entry (e.g., a General Emergency has been declared) to make a PAD, and considers the “EAL number” and/or “Description of emergency” to be supplemental information.
- **“Wind direction and speed:”** The ORO uses the “PAR” entry (e.g., evacuate and shelter specified subareas) to make a PAD, and considers the “Wind direction and speed” entries to be supplemental information.
- **“Date and time of declaration of emergency:”** The ORO determines that an incorrect date would not impede a PAD. The “time of declaration of the emergency” entry is NOT asterisked and should be retained as a DEP PI accuracy criterion.
- **For “Plant or unit as applicable:”** The ORO determines that incorrect unit identification would not impede a PAD. This determination should consider potential PAD impacts caused by an emergency occurring at different facilities or technologies on a site (e.g., a PWR unit and a BWR unit, two units with different PWR technologies,

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etc.). The “Plant” entry is NOT asterisked and should be retained as an accuracy criterion.

The documentation supporting a determination to not include an asterisked form element within the site-specific DEP PI accuracy criteria should be retained for inspection.

If an initial notification form includes elements in addition to those listed above, they need not be assessed for DEP PI accuracy. It is, however, expected that any entry errors involving the asterisked form elements not assessed for DEP PI accuracy or additional elements will be critiqued and addressed through a corrective action system.

The following information provides additional clarification of the accuracy requirements described above:

- ~~It is understood that initial notification forms are negotiated with offsite authorities. If the approved form does not include these elements, they need not be added. Alternately, if the form includes elements in addition to these, those elements need not be assessed for accuracy when determining the DEP PI. It is, however, expected that errors in such additional elements would be critiqued and addressed through the corrective action system.~~
- The description of the event causing the classification may be brief and need not include all plant conditions. At some sites, the EAL number is the description.
- “Release” means a radiological release attributable to the emergency event.
- Minor discrepancies in the wind speed and direction provided on the emergency notification form need not count as a missed notification opportunity provided the discrepancy would not result in an incorrect PAR being provided.