

## 2.4 EMERGENCY PREPAREDNESS CORNERSTONE

The objective of this cornerstone is to ensure that the licensee is capable of implementing adequate measures to protect the public health and safety during a radiological emergency. Licensees maintain this capability through Emergency Response Organization (ERO) participation in drills, exercises, actual events, training, and subsequent problem identification and resolution. The Emergency Preparedness performance indicators provide a quantitative indication of the licensee's ability to implement adequate measures to protect the public health and safety. These performance indicators create a licensee response band that allows NRC oversight of Emergency Preparedness programs through a baseline inspection program. These performance indicators measure onsite Emergency Preparedness programs. Offsite programs are evaluated by FEMA.

The protection of public health and safety is assured by a defense in depth philosophy that relies on: safe reactor design and operation, the operation of mitigation features and systems, a multi-layered barrier system to prevent fission product release, and emergency preparedness.

The Emergency Preparedness cornerstone performance indicators are:

- Drill/Exercise performance (DEP),
- Emergency Response Organization Drill Participation (ERO),
- Alert and Notification System Reliability (ANS)

### DRILL/EXERCISE PERFORMANCE

#### Purpose

This indicator monitors the ability to make accurate and timely emergency classifications, protective action recommendations (PARs), and notifications to offsite authorities, and when presented with opportunities during performance enhancing activities such as drills, exercises and real events. It is the ratio, in percent, of timely and accurate performance of those actions to total opportunities.

#### Indicator Definition

The percentage of accurate and timely emergency classifications, protective action recommendations (PARs), and notifications to offsite authorities performed by Key Positions, as defined in the ERO Drill Participation performance indicator, during the previous eight quarters.

#### Data Reporting Elements

The following data are required to calculate this indicator:

- The number of drill, exercise, and actual event opportunities during the previous quarter.
- The number of drill, exercise, and actual event opportunities performed timely and accurately during the previous quarter.

The indicator is calculated and reported quarterly. (See clarifying notes)

## **Calculation**

The site average values for this indicator are calculated as follows:

$$\left[ \frac{\text{\# of timely \& accurate classifications, notifications, \& PARs from DE \& AEs * during the previous 8 quarters}}{\text{The total opportunities to perform classifications, notifications \& PARs during the previous 8 quarters}} \right] \times 100$$

\*DE & AEs = Drills, Exercises, and Actual Events

## **Definition of Terms**

*Opportunities* include:

- each initial declaration of an emergency classification level
- each PAR developed
- each initial notification of a declared emergency classification level
- each initial notification of a PAR

*Timely* means:

- classifications are made within 15 minutes after the availability of indications that an emergency action level has been met
- PARs are made within 15 minutes after the availability of indications that PAR decision criteria have been met
- offsite notifications are initiated within 15 minutes of an emergency declaration and/or completion of PAR development

*Accurate* means:

- The emergency classification and/or PAR are appropriate to the event conditions as specified in the site emergency plan and implementing procedures (see clarifying notes)
- The initial notification form is completed appropriate to the event, to include (see clarifying notes):
  - Class of emergency
  - EAL number\*
  - Description of emergency\*
  - Wind direction and speed\*
  - 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 unit\* as applicable

The meaning of the asterisks (\*) is addressed below in the clarifying notes.

## Clarifying Notes

At a minimum, performance opportunities from an evaluated exercise or an actual declared emergency, including those for which the event notification made pursuant to 10 CFR 50.72 is later retracted per the guidance in NUREG-1022, are to be included in this performance indicator (PI). In cases where the licensee retracts the event notification, the success or failure of the opportunities associated with the emergency (e.g., emergency classification and notifications) should be determined by evaluating the information available to the decision-maker at the time of the event. Even though it may provide a basis for retracting the event notification of the emergency declaration, information learned after the event has no relevance to the assessment of the opportunities. The reporting of PI opportunities notwithstanding, the NRC will inspect licensee responses to all actual emergencies and exercises.

Beyond evaluated exercises and actual declared emergencies, opportunities from a performance-based activity conducted by the licensee to enhance the proficiency of ERO Key Members (i.e., a performance enhancing activity) may also be included in the DEP indicator data at the licensee's discretion. The licensee should identify, in advance, the opportunities from a performance enhancing activity (PEA) that will be included in the DEP indicator data; the method of identification should be available for NRC review. Once identified and performed, an opportunity cannot be discarded from the indicator data (i.e., not counted) due to poor performance. The criteria for an acceptable PEA are provided under the Clarifying Notes for the ERO PI.

A licensee may also identify, in advance, the opportunities that will not be included in the DEP indicator data; the method of identification should be available for NRC review. For example, the drill opportunities associated with an Alert declaration will be included but those from a subsequent Site Area Emergency declaration will not. Or that emergency classifications will be included but notifications will not. This provision facilitates training and practice on the response to more challenging events and use of alternative/contingency measures.

If a controller intervenes with an individual performing an opportunity (e.g., coaching or prompting), then that opportunity should be considered a failure.

### Linkage between DEP and ERO PIs

If an individual is receiving ERO PI credit for participation in a PEA, then any DEP indicator opportunities performed by the individual during the activity must also be included in the DEP indicator data. For example, if an individual assigned to the ERO as a Shift Communicator performs an initial notification during a drill, then the opportunity must be credited to both the DEP indicator and the ERO PI.

When DEP indicator opportunities occur before the performing individual is fully qualified for their ERO position (e.g., the opportunity is provided as part of the qualification process), the opportunities identified in advance should be included in the DEP indicator data for the quarter in which the individual is placed on the active ERO roster. This approach obviates the need to process changes to previously submitted DEP indicator data. The individual's participation date, as tracked by the ERO PI, should be the actual opportunity performance date.

### Emergency Classification

The regulatory requirement concerning emergency classification may be found in 10 CFR 50, Appendix E, section C.2. NRC staff expectations related to the 15-minute emergency classification

requirement can be found in NSIR/DPR-ISG-01, “Interim Staff Guidance, Emergency Planning for Nuclear Power Plants.” Refer to Section IV.H, “Emergency Declaration Timeliness.” This guidance may be used to inform the assessment of emergency classification opportunities.

An emergency classification is completed when the designated ERO Key Position, identified in the site emergency plan, declares (i.e., announces) the emergency classification to the staff in a facility. When the announcement is made, the DEP classification opportunity is considered complete for both accuracy and timeliness. Any subsequent change made to an incorrect or correct declaration within the 15-minute declaration window would not alter the determination of the DEP classification opportunity as a failure or success, respectively.

The failure to make an accurate emergency classification does not affect the assessment of the subsequent PAR and/or notification opportunities (i.e., the classification failure is not carried forward and causes only one DEP failure). The associated PAR and/or notification opportunities should be assessed for timeliness and accuracy in all other respects, i.e., excluding the inaccurate classification. Additionally, if an accurate classification is changed to an inaccurate classification within the 15-minute declaration window, then the initial notification of the incorrect classification is considered inaccurate and thus a DEP notification failure (because classification opportunity is counted as successful so the change to an inaccurate classification does carry forward to the notification opportunity).

A scenario could present events resulting in two or more emergency action levels (EALs) being exceeded during a 15-minute classification assessment period. In these cases, an opportunity may be counted as successful provided the highest expected emergency classification level is declared based on one of the EALs listed in the scenario guide and all other applicable opportunity success criteria are met.

An emergency classification may not always occur in the way described in a scenario guide. Situations can arise in which the assessment of a classification opportunity becomes subjective due to the deviation from the expected scenario path. This could occur for several reasons including conservative decision-making, a judgement-based declaration by the Emergency Director, or a scenario with plant or personnel response-dependent “forks” in the timeline. In such cases, the opportunity should be evaluated to determine if it was a success or failure. The evaluation should be documented, include a rationale that is consistent with the site emergency plan and implementing procedures, and retained for NRC inspection.

If an expected emergency classification is missed because the met EAL was not recognized within 15 minutes of indication availability and the same emergency classification level is subsequently (i.e., beyond the original 15-minute assessment period) declared based on a EAL not described in the scenario guide, then the subsequent emergency classification is not considered to be a DEP indicator opportunity. This is because the subsequent classification was not timely with respect to the original 15-minute clock. This approach ensures that a DEP failure is assessed for missing the first/expected EAL but not for the second/unexpected classification, which would not have been timely.

If an event occurs and results in an emergency classification when no EAL was met, then the incorrect classification should be considered a missed opportunity. The subsequent notification should be considered an opportunity and assessed for timeliness and accuracy, excluding the inaccurate emergency classification.

An emergency classification (and the associated notification) that is a downgrade from a previously higher emergency classification level is not counted as an opportunity. This position reflects the fact that downgrades could occur during an event with plant or offsite conditions that exceed multiple lower-level EALs. It is therefore impractical to evaluate these opportunities.

If a licensee discovers after-the-fact (greater than 15 minutes) that an event or condition had existed which exceeded an EAL, but no emergency had been declared and the EAL is no longer exceeded at the time of discovery, then the following guidance applies:

- If the indication of the event or condition was not available to the operator, then the event should not be evaluated for DEP indicator purposes.
- If the indication of the event was available to the operator but not recognized, then it should be considered a failed classification opportunity.
- In either case, the licensee should assess the event notification requirements of 10 CFR 50.72 and the associated guidance in NUREG-1022; if an event notification is made, it should not be evaluated as a DEP opportunity.

### Emergency Notification

Notification opportunities associated with emergency classifications and PARs may be included in this indicator if they are performed to the point of filling out the appropriate forms and demonstrating sufficient knowledge to make the actual notification. The demonstration of sufficient knowledge entails the performance of the procedurally required notification actions in the facility, and the use of communications equipment to contact designated Offsite Response Organizations (OROs) and transmit the notification information in accordance with site-specific procedures. Performance of follow-up notifications are not included in the DEP indicator data.

The notification timeliness criterion is met when the licensee makes contact with the first State or local governmental agency within 15 minutes of an emergency declaration or PAR approval. If a computer application is used to send an electronic notification message, then the notification timeliness criterion is met by a confirmation that the message was accessed (e.g., a read or opened receipt, or other acknowledgement that the notification message was displayed, or validation of receipt by an independent phone call) by at least one agency within 15 minutes. This success criterion normalizes the notification capabilities of licensees, regardless of the number of site-specific offsite notification requirements. As such, NRC and licensees can assess a site's specific capability to a common industry baseline to identify the possible need for additional inspection resources. Further, the notification opportunity provides the NRC assurance that a licensee is conducting the notification process in its entirety and evaluating compliance with the regulatory offsite notification requirement of 10 CFR 50, Appendix E, Section IV.D.3.

It is not expected that OROs will be available to support all the PEAs conducted by a licensee; therefore, notification opportunities may be provided using simulated ORO communicators. The licensee should have provisions in place to reasonably simulate ORO contacts and support the use of communications equipment by the participants.

Some licensees have specific arrangements with their ORO authorities that provide for different notification time requirements than those prescribed by this PI (e.g., within one hour instead of 15 minutes). In these instances, the licensee should determine the success of an opportunity against the time requirements described in the site emergency plan.

It is recognized that ERO Key Positions in the Control Room may not perform the actual communication with offsite agencies as part of the notification process, and that personnel filling non-key positions for contacting offsite agencies (e.g., a phone-talker) may not be available during simulator training. If an evaluator role-plays a phone-talker during a simulator session, then an actual phone-talker is required to complete the notification process during an out-of-sequence activity (e.g., the notification form completed in the simulator is provided to a phone-talker at a later time and the phone-talker demonstrates the use of the telephone equipment to an evaluator). Expected interactions between the appropriate ERO Key Position, simulated by an evaluator, and the phone-talker (e.g., receiving instruction, discussion of the notification and correction of errors in the notification form) should be demonstrated. The total time of the notification opportunity is determined by adding the time required to complete the notification form (in the simulator) to the time required by the phone-talker to interact with the simulated ERO Key Position and perform the notification using the appropriate communications equipment. DEP notification credit is given once for each completed notification form regardless of how many phone-talkers use the form (i.e., cannot receive more than one DEP credit if multiple phone-talkers perform notification actions using the same form).

It is understood that initial notification forms are negotiated with ORO authorities, and that one or more of the form elements listed above under the accuracy criteria may not appear on a form and need not be added. When included on a form, the notification accuracy elements listed above without an asterisk should be assessed for DEP indicator accuracy. Any of the other elements, identified with an asterisk, appearing on a form should also be assessed for DEP indicator accuracy if required by an ORO to make a protective action decision (PAD) (i.e., asterisked elements identified by an ORO as not necessary to formulating a PAD do not need to be assessed for DEP indicator accuracy). This determination should be made in conjunction with the appropriate ORO and documented. Examples of cases where a DEP indicator 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 indicator accuracy criterion.
- For “Plant and 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 indicator 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 indicator accuracy. It is, however, expected that any entry errors involving the asterisked form elements not assessed for DEP indicator accuracy or additional elements will be critiqued and addressed through a corrective action system.

The following information provides additional clarification on the topic of notification accuracy:

- 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 entered on the emergency notification form need not count as a missed notification opportunity provided the discrepancy would not result in an incorrect PAR.
- The assessment of the “Whether the event is a drill or actual event” accuracy criterion should be made consistent with the expectations of the licensee’s emergency preparedness program and/or the applicable training program. Not marking either “drill” or “actual event,” regardless of expectations, is a failed opportunity.

### Protective Action Recommendations

All PARs associated with a General Emergency (i.e., initial and any subsequent changes) should be counted towards the DEP indicator. Although not a regulatory requirement, the development of a PAR is expected to be completed within 15 minutes after the availability of indications to plant operators that a PAR is warranted in accordance with the licensee’s PAR scheme. The 15-minute goal is a reasonable period of time to develop or change a PAR, and should not be interpreted as a grace period in which the licensee may attempt to restore conditions and avoid making a PAR. Plant conditions, meteorological data, field monitoring data, and/or radiation monitor data should provide sufficient information to determine the need for initial or changed PARs. When onsite data sources are sufficient for a PAR assessment, it is not appropriate to wait for field monitoring results to become available to confirm the need to issue or change a PAR.

A PAR notification is counted separately from a concurrent notification associated with an emergency classification. For example, an initial General Emergency declaration would represent a total of 4 opportunities: 1 for classification of the General Emergency, 1 for notification of the General Emergency to the OROs, 1 for development of a PAR, and 1 for notification of the PAR to the OROs.

PARs issued at the Site Area Emergency (SAE) classification level should be counted as opportunities only when 1) they are described in the site emergency plan, and 2) require assessment and decision-making to develop. SAE PARs requiring minimal or no assessment and decision-making (e.g., a default/automatic PAR) should not be included in the DEP indicator data. A notification opportunity associated with an SAE PAR should be included in the DEP indicator data only when the PAR opportunity is included (i.e., notifications of a default/automatic PAR do not count towards the indicator).

PARs associated with the ingestion exposure pathway (e.g., livestock or crops) should not be counted.

If the objectives for a PEA (e.g., a drill) identify that EPA Protective Action Guidelines (PAGs) will be exceeded beyond the 10-mile plume exposure pathway emergency planning zone (EPZ) boundary, then the assessment of this condition would constitute a DEP indicator opportunity. In addition, there is a DEP indicator opportunity associated with the timeliness of the notification of the PAR to offsite agencies. Essential to understanding that these opportunities exist is realizing that it is a regulatory requirement for a licensee to develop and communicate a PAR when EPA PAG doses may be exceeded beyond the 10-mile plume exposure pathway EPZ. However, a licensee always has the latitude to identify, in advance, which DEP opportunities from a PEA will or will not be included in the indicator data. Thus, a licensee may choose to not include a PAR beyond the 10-mile EPZ in the DEP indicator data.

## Common ERO Facilities

If an ERO Key Position supports units at more than one site (e.g., at a common EOF), then the DEP indicator opportunities performed by the position (successes and failures) should be credited to all sites potentially served by that ERO Key Position, in addition to the specific site participating in the PEA. A failed opportunity may be assigned to only the participating site if the failure was solely caused by a performance deficiency at the site (i.e., performance at the common facility did not contribute to the failure). For example, if a site provides inaccurate information to a response facility common to multiple sites and that information is transmitted during a notification opportunity, then the associated notification failure should be reported only for the participating site. This provision promotes an accurate portrayal of performance in the ROP EP Cornerstone by not assigning a DEP opportunity failure to the non-participating sites.

FAQs incorporated into this revision of the DEP PI:

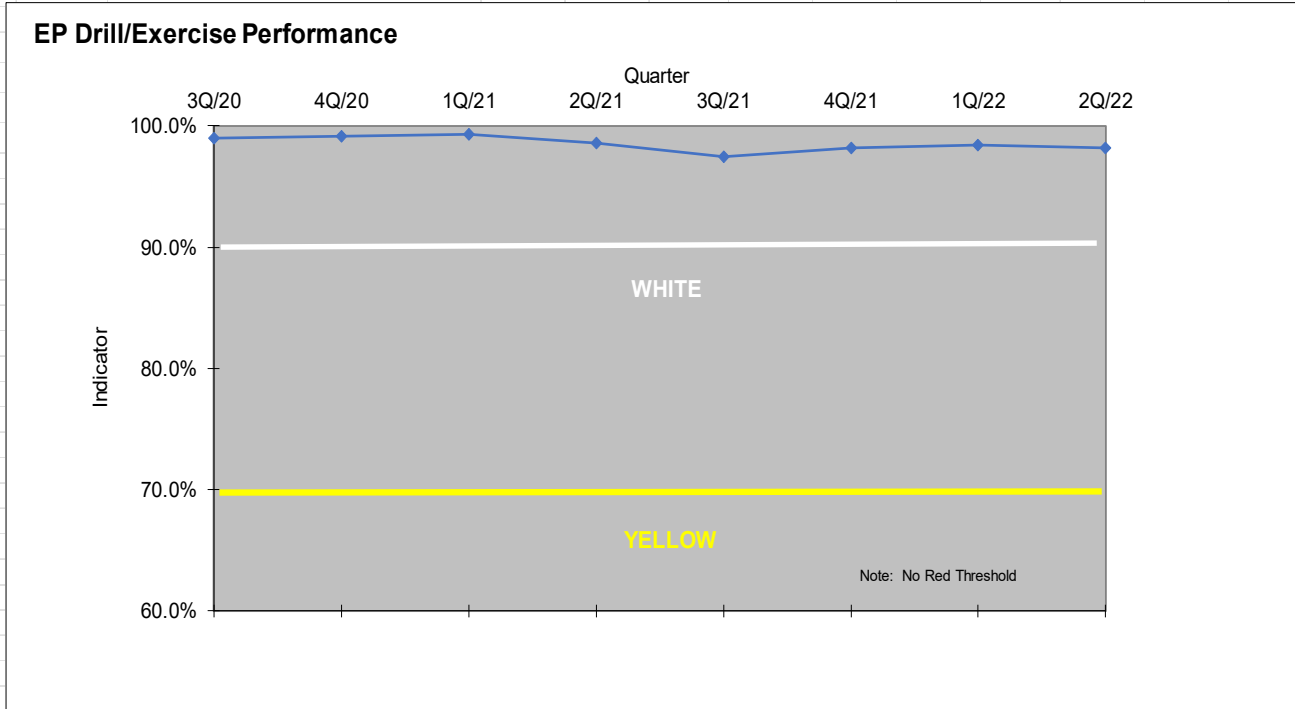
- 13-07, Correctly Scoring Classification Opportunities (DCPP) (ML16285A323)
- 19-01, Initial Notification Form Accuracy (ML19169A262)
- 20-04, Crediting Automated Notifications in the DEP PI (ML20335A061)
- 21-02, Counting DEP Opportunities from an Emergency Following Retraction of the NRC Emergency Notification (ML21048A140)



**Data Example**

|  | 3Q/20 | 4Q/20 | 1Q/21 | 2Q/21 | 3Q/21 | 4Q/21 | 1Q/22 | 2Q/22 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful Classifications, Notifications & PARs over qtr  | 7     | 72    | 14    | 27    | 31    | 14    | 24    | 29    |
| Opportunities to Perform Classifications, Notifications, & PARs in qtr                                 | 7     | 72    | 14    | 29    | 32    | 14    | 24    | 30    |
| Total # of successful Classifications, Notifications, & PARs in 8 qtrs                                 | 200   | 238   | 154   | 141   | 116   | 165   | 189   | 218   |
| Total # of opportunities to perform Classification, Notifications & PARs in 8 qtrs                     | 202   | 240   | 155   | 143   | 119   | 168   | 192   | 222   |
| Indicator expressed as a percentage of Opportunities to perform Classifications, Communications & PARs | 99.0% | 99.2% | 99.4% | 98.6% | 97.5% | 98.2% | 98.4% | 98.2% |

| Threshold |                |
|-----------|----------------|
| Green     | ≥ 90%          |
| White     | < 90%          |
| Yellow    | < 70%          |
| Red       | Not Applicable |



## EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION

### Purpose

This performance indicator (PI) tracks participation in performance enhancing activities by individuals filling ERO Key Positions and, through linkage to the DEP indicator, ensures that the performance of the risk-significant functions of emergency classification, notification, and PAR development are evaluated and included in the PI process. This indicator measures the percentage of ERO members assigned to fill Key Positions who have participated recently in performance-enhancing activities such as drills, exercises, or actual events.

### Indicator Definition

The percentage of ERO members filling Key Positions that have participated in a performance enhancing activity, such as a drill, exercise or actual event, during the previous eight quarters, as measured on the last calendar day of the quarter.

### Data Reporting Elements

The following data are required to calculate this indicator and are reported:

- total number of ERO members assigned to fill Key Positions
- total number of ERO members assigned to fill Key Positions that have participated in a performance enhancing activity in the previous eight quarters

The indicator is calculated and reported quarterly, based on participation over the previous eight quarters (see clarifying notes).

### Calculation

The site indicator is calculated as follows:

$$\frac{\text{\# of ERO members assigned to Key Positions that have participated in drill, exercise or actual event the previous 8 qrts}}{\text{Total number of Key Positions assigned to ERO Members}} \times 100$$

### Definition of Terms

Key Positions are defined below

- Control Room
  - Shift Manager (Emergency Director) – Supervision of reactor operations, responsible for classification, notification, and determination of protective action recommendations
  - Shift Communicator – provides initial offsite (state/local) notification
- Technical Support Center (TSC)
  - Senior Manager – Management of plant operations/corporate resources
  - Key Operations Support

- Key Radiological Controls – Radiological effluent and environs monitoring, assessment, and dose projections
- Key TSC Communicator- provides offsite (state/local) notification
- Key Technical Support
- Emergency Operations Facility (EOF)
  - Senior Manager – Management of corporate resources
  - Key Protective Measures – Radiological effluent and environs monitoring, assessment, and dose projections
  - Key EOF Communicator- provides offsite (state/local) notification
  - Operational Support Center (OSC)Key OSC Operations Manager
  - Assigned: Those ERO personnel filling Key Positions listed on the licensee duty roster on the last day of the quarter of the reporting period.

### **Clarifying Notes**

An individual may receive ERO PI credit for participation in a performance-based activity that provides a meaningful opportunity to enhance their proficiency with assigned ERO functions (i.e., a performance enhancing activity). At a minimum, ERO PI credit shall be extended for participation in an evaluated exercise and an actual declared emergency, including those for which the NRC notification is later retracted in accordance with NUREG-1022. Additional performance enhancing activities may include, but are not limited to, a simulator exam, a functional or facility drill, a tabletop drill, or a mini-drill; it is the licensee's decision to include participation in any of these activities in the ERO PI data.

ERO PI credit may be granted for participation as a player, controller, evaluator, mentor, or coach, but not as an observer. Multiple assignees to a given Key Position could take credit for the same performance enhancing activity (PEA) if their participation is a meaningful opportunity to gain proficiency.

A PEA need not include all ERO facilities or staff; however, the activity should reasonably simulate the interactions between appropriate facilities and/or individuals that would be expected to occur during an emergency. For example, controllers could simulate the TSC and offsite agencies during an EOF facility drill, or the TSC and damage control teams during an OSC facility drill. In the simulator, instructors could play the role of offsite agencies notified by the Control Room.

Should an external event beyond the licensee's control (e.g., a public health emergency) inhibit the safe conduct of PEAs, then it is acceptable to grant a reasonable extension of the ERO PI end date for each key responder, beyond the normal eight-quarter window. The amount of time that is considered reasonable is event-specific and will be provided by the NRC to ensure consistent application and understanding. The permitted time will consider the nature of the external event (e.g., ending a public health emergency) and the amount of time needed to schedule and implement necessary PEAs. Extensions of ERO PI end dates for specific events will be documented in NRC-approved ROP FAQs.

### **Linkage between DEP and ERO PIs**

When the participation of a Key Position in a PEA includes the performance of a Drill/Exercise Performance (DEP) indicator opportunity (i.e., emergency classification, notification, and PAR

formulation), the individual may be granted ERO PI credit only if the opportunity also contributes to the DEP indicator.

As stated in the DEP indicator Clarifying Notes, a licensee can declare in advance which performance opportunities presented during a PEA will be included in the DEP indicator data (i.e., each one, some, or none). In all cases, the individuals filling ERO Key Positions that do not perform DEP indicator opportunities may receive ERO PI credit for participation in the PEA. For example, if the licensee declares that emergency classification opportunities performed during a PEA will not contribute to the DEP indicator, then all individuals in Key Positions can receive participation credit for the ERO PI except those in positions responsible for performing emergency classifications.

### Participation Credit/Counting

If an ERO member has participated in more than one PEA during the eight-quarter period, then the ERO PI data should use the most recent participation date.

All individuals qualified as a Control Room “Shift Manager (Emergency Director)” and currently qualified to stand watch should be included in this PI.

The Communicator positions are the ERO positions that fill out the initial notification form, seek Emergency Director approval, and transmit the information to offsite agencies. Senior managers who do not perform these duties should not be considered Communicators even though they may approve the form and supervise the work of a Communicator. There may be cases where a senior manager fills out a notification form and, after approval, hands it off to a phone-talker to transmit the information to offsite agencies. In these cases, the senior manager is the Communicator for ERO PI purposes. Individuals filling phone-talker positions that do not have form completion responsibilities are not Communicators and do not need to be tracked for this PI.

To receive ERO PI credit as a Communicator, an individual must demonstrate the ability to perform a notification of an emergency declaration and/or a PAR to required offsite agencies as discussed in the Clarifying Notes for the DEP indicator. This means that either the Communicator performs the notification, or the Communicator completes the notification form and the notification is performed by a phone-talker, either during the same PEA or as a separate (subsequent) activity. Documentation of the opportunity should be sufficient to allow an Inspector to independently reach the conclusion that the opportunity was adequately performed.

If a change occurs in the number of ERO members filling Key Positions, this change should be reflected in both the numerator and denominator of the indicator.

Some hostile action-based (HAB) drills or exercises may have all DEP indicator opportunities performed solely in the Control Room (e.g., initial declaration of a Site Area Emergency with escalation to a General Emergency prior to activation of other ERO facilities), while others could have initial opportunities performed in the Control Room and subsequent opportunities performed in the TSC and/or EOF. ERO credit can be granted to Key Positions for participation in a DEP-evaluated HAB drill or exercise without a DEP opportunity for all Key ERO positions as long as the Key Positions are observed evaluating the need to upgrade to the next higher classification level and/or evaluating the need to change protective action recommendations. The key TSC Communicator and Key EOF Communicator may be granted participation credit as long as the communicator performs a minimum of one offsite (ORO) update notification. If an individual participates in more than one Security-related drill or exercise without a DEP opportunity in a three-year period, then only one of the HAB drills/exercises can be

credited. A station cannot run more than one credited HAB drill or exercise that does not include DEP opportunities for the TSC and/or EOF personnel in any consecutive 4-quarter period. There is no credit limitation on HAB drills and exercises that include DEP opportunities for the TSC and/or EOF personnel. ERO participation credit should be assigned in the normal manner for these drills and exercises. Objective evidence shall be documented to demonstrate the above requirements were met.

When an ERO member is assigned to multiple Key Positions, the individual's participation should be counted separately for each Key Position (i.e., participation in one Key Position does not provide credit for other assigned Key Positions). This means an individual assigned to more than one Key Position is counted in the denominator for each position held and in the numerator only for the positions for which there has been participation over the previous 8 quarters. This approach ensures that the ERO member is provided an opportunity to participate in a PEA for each assigned Key Position or else the PI will reflect the lack of participation in one or more assigned positions. A single PEA may be credited as participation in two or more Key Positions provided the performance skill set between the Key Positions is similar. For example, an individual assigned as both a Shift Communicator and a Key TSC Communicator may receive credit for both positions through drill participation in either position provided the communications forms and equipment are essentially the same in the Control Room and TSC.

An individual may receive ERO PI credit for participation in a PEA that occurred prior to their assignment to the ERO (e.g., drill participation is a position qualification requirement). The participation date should be tracked by the indicator when the individual is placed on the active ERO roster. The intent to count the participation should be documented in advance of the activity and the documentation should be available for NRC inspection. Any associated DEP opportunities performed by the individual during the activity must contribute to the DEP indicator; refer to the DEP PI Clarifying Notes for guidance in counting these DEP opportunities

If an ERO member assignment is changed from one Key Position to a different Key Position, then the last PEA participation date from the old position may count towards the new position provided the skills needed to perform the functions of each position are similar. If the skills needed to perform the functions of the two positions are significantly different, then the last participation date from the old position would not count towards to new position.

### Scenario Confidentiality

Scenarios used in PEAs credited towards the ERO PI should be maintained with a reasonable level of confidentiality. A licensee need not develop a new scenario for each PEA or each ERO team; however, it is expected that the confidentiality of a scenario shared between two or more PEAs will be maintained such that the activities provide valid participation opportunities. Practices that challenge scenario confidentiality include assigning an individual to play in a drill and the individual served as a controller, evaluator, or mentor, in a recent (i.e., within the past 12 months) drill that used the same scenario.

In some cases, a PEA could provide a valid participation opportunity even if a portion of the scenario were inadvertently revealed in advance. Corrective measures could include statements signed by players attesting that they do not know the scenario, documentation that controllers made a confidentiality inquiry to the players, or revising the scenario to vary at least one EAL or the failure mechanisms meeting an EAL. If a scenario has been sufficiently compromised (e.g., most or all the events are known by players in advance), then the associated PEA is not a valid opportunity and participation in it should not be credited towards the ERO PI.

## Common ERO Facilities

An individual may receive ERO PI credit for different sites provided that 1) they participate in a facility that supports more than one site (e.g., a common EOF) and 2) the skills necessary to perform the position functions are similar across all the supported sites. In this case, participation in a PEA may be credited towards the ERO PI of all the sites supported by the common facility. Skills are considered similar when the procedures, processes, and protocols necessary to accomplish a response function are essentially the same across the supported units and sites. Examples of similar skills are provided below. The counting of the associated DEP opportunities is discussed in the Clarifying Notes for the DEP indicator.

### *Emergency Classification*

The skills for classification of emergencies are similar when emergency classification procedures, processes and protocols are essentially the same. For example, all units use an emergency classification scheme based on NEI 99-01 or, in the case of an advanced passive light water reactor unit, NEI 07-01. Training for individuals filling the ERO Key Positions responsible for emergency classification must include the unit-specific and/or technology-specific aspects of the site emergency classification schemes (e.g., ISFSI layouts, unique site hazards, design considerations, etc.).

### *Dose Assessment*

The skills for dose assessment are similar when dose projection methodologies and tools (e.g., dose projection software) are essentially the same. The definition of a radiological release during an emergency must also be essentially the same. Training for ERO Key Positions performing this function must include unit-specific differences in effluent monitors and release pathways, local meteorological regimes and topography effects, and how these differences impact dose assessment.

### *Protective Action Recommendations (PARs)*

The skills for PAR determination are similar when protective action strategy procedures, processes and protocols are essentially the same. For example:

- Decision-making aids such as flow charts may differ (e.g., because of population differences among the sites) but serve the same purpose and are used in the same way.
- Protective action areas/zones may differ but the process used to identify the recommended action for an area/zone is essentially the same.
- Implementation of potassium iodide (KI) strategies may differ based on the implementation strategies of the responsible OROs, but the procedures, processes and protocols used to determine if KI is warranted should be essentially the same.
- PAR development discussion strategies should be essentially the same for each site.

### *Emergency Notifications*

The skills for emergency notifications are similar when procedures, processes and protocols use notification forms that have essentially the same design and content. Emergency communicators are trained on all notification procedure, process and protocol differences including, but not limited to, offsite contacts, form content, methods, and equipment.

Performance deficiencies identified at a common facility during a PEA should be entered into a corrective action program (or programs, depending on the fleet quality assurance requirements). Corrective actions and lessons learned from the PEA should be shared with all the sites served by the common facility. In addition, this material should be reviewed with the individuals staffing the affected ERO Key Positions in the common facility.

FAQs incorporated into this revision of the ERO PI:

- 15-04, Clarification on Granting Participation Credit During a HAB Drill/ Exercise (ML16285A336)
- 20-02, EP ERO Performance Indicator (ML20352A482)

**Data Example**

**Emergency Response Organization (ERO) Drill Participation**

|   |  |  |  |  |  |  |  | 4Q/21 | 1Q/22 | 2Q/22 | 3Q/22 |
|---|--|--|--|--|--|--|--|-------|-------|-------|-------|
| <b>Total number of Key ERO personnel</b>  |  |  |  |  |  |  |  | 56    | 56    | 64    | 64    |
| <b>Number of Key personnel participating in drill/event in 8 qtrs</b>               |  |  |  |  |  |  |  | 48    | 52    | 54    | 53    |
|   |  |  |  |  |  |  |  | 4Q/21 | 1Q/22 | 2Q/22 | 3Q/22 |
| <b>Indicator percentage of Key ERO personnel participating in a drill in 8 qtrs</b> |  |  |  |  |  |  |  | 86%   | 93%   | 84%   | 83%   |

| <b>Thresholds</b> |      |
|-------------------|------|
| Green             | ≥80% |
| White             | <80% |
| Yellow            | <60% |
| No Red Threshold  |      |

